S. HRG. 107–442

Senate Hearings

Before the Committee on Appropriations

Departments of Veterans Affairs and Housing and Urban Development and Independent Agencies Appropriations

Fiscal Year 2002

107*th* CONGRESS, FIRST SESSION

H.R. 2620/S. 1216

CORPORATION FOR NATIONAL AND COMMUNITY SERVICE
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
DEPARTMENT OF VETERANS AFFAIRS
ENVIRONMENTAL PROTECTION AGENCY
FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
NEIGHBORHOOD REINVESTMENT CORPORATION
NONDEPARTMENTAL WITNESSES

VA, HUD, and Independent Agencies Appropriations, 2002 (H.R. 2620/S. 1216)

S. HRG. 107–442

DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2002

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

ON

H.R. 2620/S. 1216

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND FOR SUNDRY INDEPENDENT AGENCIES, BOARDS, COMMISSIONS, CORPORATIONS, AND OFFICES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2002, AND FOR OTHER PURPOSES

Corporation for National and Community Service
Department of Housing and Urban Development
Department of Veterans Affairs
Environmental Protection Agency
Federal Emergency Management Agency
National Aeronautics and Space Administration
National Science Foundation
Neighborhood Reinvestment Corporation
Nondepartmental witnesses

Printed for the use of the Committee on Appropriations

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U.S. GOVERNMENT PRINTING OFFICE

70–873 PDF WASHINGTON : 2002

For sale by the Superintendent of Documents, U.S. Government Printing Office
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[1] Committee and subcommittee memberships—January 25, 2001 to June 6, 2001.

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DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, APRIL 25, 2001

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:15 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Christopher S. Bond (chairman) presiding.

Present: Senators Bond, Mikulski, and Johnson.

CORPORATION FOR NATIONAL AND COMMUNITY SERVICE

STATEMENT OF WENDY ZENKER, ACTING CHIEF EXECUTIVE OFFICER

ACCOMPANIED BY:

WILLIAM ANDERSON, DEPUTY CHIEF FINANCIAL OFFICER

GARY KOWALCZYK, COORDINATOR, NATIONAL SERVICE PROGRAMS

OPENING STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Good morning. The Subcommittee of VA, HUD, and Independent Agencies will come to order.

This morning, our subcommittee will begin its first hearing of the fiscal year 2002 budget. We begin with two independent agencies, the Corporation for National and Community Service and the Neighborhood Reinvestment Corporation. We will hear, first, from the Corporation's Acting Executive Officer and Chief Operating Officer, Ms. Wendy Zenker. The subcommittee will then hear from the NRC.

We are beginning a new era under a new Administration. And with a new Administration, there are new and different spending and policy priorities. However, despite a balanced budget and the availability of surplus funds, there are many demands on the amount of funds that are available for discretionary spending under the Federal budget. Moreover, the VA/HUD Subcommittee, in particular, expects to face another year of difficult budget decisions due to the continually growing funding needs for VA medical care, Section 8 housing assistance contract renewals, and FEMA disaster assistance.

For the Corporation for National and Community Service, the President has requested a slight decrease of funding. Specifically,

$416.5 million has been requested, which is a decrease of $46 million from the $462.5 million provided in fiscal year 2001. The decrease is mainly due to a reduction in needed funds for the National Service Trust Fund due to surplus funds accumulated from previously appropriated funds.

Under the President's budget request, the Corporation's AmeriCorps program would be maintained at its current membership level of 50,000 participants. In addition, the President has proposed two new initiatives under the AmeriCorps program to expand service to senior citizens and veterans. Further, the President expects the Corporation to be heavily involved with his new faith-based initiative.

Before I delve into the policy and program issues, I commend the Corporation for turning the corner on its long-standing management problems. The Corporation received its first clean opinion on its fiscal year 2000 financial statements and reduced its material weaknesses from six to two. The former head of the Corporation, our former colleague, Harris Wofford, and you, Ms. Zenker, and the rest of the management team deserve a great deal of credit.

We have criticized to you in the past, and now I think it is appropriate that we commend you for your success. Further, I would be remiss in—in not mentioning the vigilance and hard work of the Inspector General, Ms. Luise Jordan, and her auditing team, including Ms. Karyn Molnar of KPMG. I do not think that all of this could have happened without your good work. And we sincerely appreciate your efforts.

Before we declare victory, however, we need to ensure that the Corporation continues its management reform efforts under the new Administration. This means ensuring that the Administration select a new CEO and CFO, who are truly sensitive to the Corporation's management history and capable of resolving, fully, its systemic problems.

I remain concerned about the Corporation's grant management system that continues to be identified as a material weakness. I understand that a lot of progress in the area has been made, but clearly more needs to be done. Accountability for the use of funds is critical to the future credibility and viability of the Corporation. I look forward to working with and assisting the new leadership on this important matter.

Now, in regards to policy matters, the President's budget proposal includes a more significant role for the Corporation in the President's faith-based initiative. As part of this effort, President Bush has asked Stephen Goldsmith to serve on the Corporation's board. I had the pleasure of discussing some issues yesterday with Mr. Goldsmith, and I am interested in learning more about the faith-based initiative as the details are developed.

As we mentioned earlier, the President's budget also includes two new tutoring and mentoring programs. The new seniors program, called Silver Scholarships, would be funded at $10 million per year with an additional $10 million annually to pay for volunteer support.

The second initiative would fund a new Veterans program to—at the tune of $15 million per year.

While both of these programs have merit, I need to know more about how they would be administered by the Corporation and what sort of outcomes the Corporation expects from these programs. I strongly support the Corporation's current efforts, such as America Reads to promote literacy and mentoring programs. I would like to learn how these new initiatives complement existing programs. Also, as a new member of the authorizing committee for the Corporation, I will be interested in how these programs are handled through the reauthorization of the Corporation.

I believe that child literacy should be a major function of the Corporation, and I was very troubled to read the results of the 2000 National Assessment of Educational Progress, known as the "Nation's report card," which showed that the reading performance of fourth graders in our country have not improved significantly. I was disturbed to learn, also, the gap in reading scores between the highest-and lowest-achieving students grew in many States, including my home State of Missouri.

I appreciate the efforts of the Corporation to improve child literacy. More needs to be done, because failure to ensure the literacy of our children exacts a staggering cost, not only for the child who is unable to read or read well, but for the community and our entire society. In this country 21 percent of the adult population—more than 40 million Americans over the age of 16—have only rudimentary reading and writing skills. Children who cannot read become adults who cannot read.

Soon I will be introducing a bill I call VITAL—Volunteers Interested in Taking Action for Literacy, a proposal aimed at increasing the involvement of parents, youth, and communities in locally driven literacy initiatives. Organizations, such as the Girl Scouts, the local Y, 4–H clubs, and Parents as Teachers, would have access to resources from the Corporation to assist in youth-to-youth mentoring activities and the Parents as Teachers National Literacy initiative.

I would note, parenthetically, that as bad as the scores are for fourth grade reading in my State of Missouri, where 200,000 children, age zero to three, are in the Parents as Teachers program, our literacy failure rate is 12 percent below the national average. And I think that working with those children at an early level has probably had a great deal to do with it.

Now, it is a pleasure to turn to my ranking member, Senator Mikulski for her statement and comments.

STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Thank you very much, Mr. Chairman. First of all, it is wonderful that we are starting our hearings. I know it is April 25, but it was the best that we could do, given the transition, which I felt was a very excellent transition in the Administration. And—but I feel like I am going to burst into that old cowboy/cowgirl song, "Back in the Saddle, Again."

Senator BOND. Oh, please, I will play drums, if you want to sing. I will accompany you.

Senator MIKULSKI. And we will look forward, once again, to working with you in the tradition of bipartisanship that this subcommittee has enjoyed, because I do believe that we will be facing budgetary challenges as we go through this.

I want to also note that we are joined by a new member of our subcommittee, Mr. Tim Johnson. And Senator Johnson we really welcome you and look forward to your participation.

I want to, moving on to the hearing, welcome Wendy Zenker, the Acting CEO of National Service and look forward to her testimony as we move ahead.

My priorities, both in the hearing and also as we work on our appropriations, are two-fold. One, I want to ensure that we keep National Service strong, and that we continue to be committed to that as we, perhaps, even take a step back and look at where we are and where we should go, so we can continue to create the habits of the heart in young people, help them reduce their student debt, and yet provide very vital services at the local level.

I am sorry that we do not have a new CEO, but I believe that the President will give us a good person. And we think you have been doing a very good job in the interim.

The appointment of Mr. Goldsmith to the board, I think, is also going to give us a very refreshing member, with his background; first of all, hands-on as a mayor, and I understand, quite a reformer in Indianapolis, and at the same time, we will be taking the initiative on faith-based organizations.

But we want to keep National Service strong. And the other is—two specific aspects I will be looking at is how National Service will participate with education and other programs to ensure that we do not have a digital divide in this country, meaning not only access to technology, but access to those who know how to teach technology.

I am not looking for National Service to provide technology, but I am looking for National Service to see how we can play an important role in communities, in constituencies left out and left behind on how to move them ahead.

The other will be the integration of faith-based organizations into the work of National Service. I have been a long-time supporter of faith-based organizations. At one point in my career, I worked for one, Associated Catholic Charities. I know, in our work with HUD and others, that faith-based linkages with the Federal Government can meet constitutional compliance and at the same time bring a great deal of compassionate service to our communities.

So, Mr. Chairman, I mean, we can—I am going to ask unanimous consent that my full statement be placed in the record, but a couple of flashing yellow lights. When we look at keeping National Service strong, we need to make sure that we maintain—I know that the Bush Administration does not want to expand the number of volunteers. For the purposes of this year, I am not going to challenge that assumption. I think what we need to do is be able to stay the course, examine the new programs and also perhaps see how we could expand the others.

But I am concerned that in order to keep National Service strong, that there are certain budget shifts going on within AmeriCorps, itself, that could weaken it. And I will have specific questions for you in that, Ms. Zenker.

In terms of the E-Corps, last year I did an earmark encouraging National Service to really look at how we could establish an E-Corps or digital opportunity funding to be able to go into our communities.

I want to hear more about it. I note that President Bush's budget eliminated that as an earmark. Well, I do not know if we will do an earmark or not, but I do not want to eliminate the concept, because I think every private sector person I meet talks about a worker shortage. I do not believe we have a worker shortage. I believe we have a skill shortage and an opportunity shortage in teaching young people, and even retraining adults, for the digital world.

Faith-based initiative, I have already said, my commitment to really working with the President in this. As long as we meet constitutional compliance and do not have mission creep over into evangelism, I think we are going to be fine, and look forward to hearing more about it.

But today I came not to listen to myself talk, but Ms. Zenker.

Senator BOND. And I assure you that when we and Congress have legitimate needs that need to be designated, I do not necessarily agree with the Administration that Congress has no role in determining appropriate objects for spending or particular programs that need to be included.

So, we will—we will—I expect we will be working on that one. And we will——

Senator MIKULSKI. Well, I need your commitment to digital opportunity.

Senator BOND. Yes. And we are going to—we are going to make sure that we provide appropriate guidance where it is necessary.

I join with you in welcoming Senator Johnson. And we are delighted to have you with us. And I call on you for any opening remarks that you wish to make, Senator.

STATEMENT OF SENATOR TIM JOHNSON

Senator JOHNSON. Thank you, Mr. Chairman. Just—very briefly, as a new member of the committee, it is an extraordinary honor for me to have this opportunity to serve on this subcommittee. And I cannot think of two better people than Senator Bond and Senator Mikulski to have leading this subcommittee.

My role as a new member is primarily one of learning and listening, but I do appreciate this opportunity to participate in the deliberations. I look forward to the testimony from Ms. Zenker.

Obviously, the Corporation for National Service has a constructive and positive consequence in every State in the Nation. Although a lot of the attention has been given to volunteerism and youth—in my State—the Corporation for National Service is best known for its senior service programs; particularly RSVP.

I am looking forward to the analysis from the Administration and the leadership here. It is my understanding that the budget requests for 2002 involves a decrease in funding of about $46 million below 2001, yet with two new initiatives being proposed at a cost of around $35 million.

I look forward to the discussion here today about how that works and what trade-offs are entailed. I also look forward to discussion on the faith-based aspects. Again, we have a number of organizations in this Nation that have long provided quality social services, partnering with the Federal Government. I want to see that continue. And there may be ways that we can expand on that foundation, but yet, at the same time, obviously, within the restrictions of the church and State divisions mandated by our Constitution.

So, I look forward to that discussion, and look forward to working very closely with the leadership of this subcommittee.

Thank you, Mr. Chairman.

Senator BOND. Thank you very much, Senator.

And now, I would call on Ms. Zenker. As you know, as our normal practice, we will make your full statement a part of the record and ask that you summarize those parts of it which you think are—are appropriate and ask that you keep that summary to about 10 minutes.

STATEMENT OF WENDY ZENKER

Ms. ZENKER. Good morning. Thank you, Mr. Chairman, Senator Mikulski, and Senator Johnson.

My name is Wendy Zenker. And I am now the Acting Chief Executive Officer of the Corporation for National Service. It is my honor to testify before you today on the Administration's budget request for the Corporation and the programs authorized under the National and Community Service Act. As you know, Mr. Chairman, I previously appeared before this subcommittee in my capacity as the Corporation's Chief Operating Officer.

Thank you for placing my written statement into the record.

Appearing with me today are Gary Kowalczyk, who is the Coordinator for National Service Programs, and Bill Anderson, who is the Corporation's Deputy Chief Financial Officer.

Mr. Chairman, in this budget, President Bush has affirmed this Nation's long commitment to helping individuals, families, and communities. Volunteerism and service have played a vital role in defining America. And the President has made the promotion of volunteerism and service one of the fundamental goals of his Administration. This budget request supports the Corporation's important contributions towards this goal.

The President has announced his intention to expand the role of faith-based and small community organizations in addressing the Nation's needs. The Corporation has a long history of working with faith-based organizations. Of the 50,000 AmeriCorps members who are now serving, more than 6,000 are serving with faith-based organizations.

Whether it's the 600 AmeriCorps members that made it possible for Habitat for Humanity to build 2,000 more houses than it otherwise could, or the 2,000 AmeriCorps members that recruited 35,000 volunteers for organizations affiliated with the Catholic Network of Volunteer Service, AmeriCorps members help expand the capacity and effectiveness of these groups in meeting critical needs in their communities.

Mr. Chairman, I know you have a special interest in literacy. You will be pleased to know that literacy is the number one focus of AmeriCorps. We estimate that we will provide a total of $85 million under the AmeriCorps State and National Program for direct tutoring.

An independent evaluation attached to my written statement documents the effectiveness of AmeriCorps tutoring programs in helping children learn to read. We look forward to continuing our work with you on this issue.

On another front, AmeriCorps is bridging the digital divide. In fiscal year 2000——

Senator MIKULSKI. How can I follow your testimony? I mean——

Ms. ZENKER. I'm sorry.

Senator MIKULSKI. No. Please, I just wonder—and I am glad we submitted it all, but I do not know how to follow the testimony.

Ms. ZENKER. I have—if I may, I can provide, right now, a copy of my oral statement for you. I think we can grab enough copies——

Senator MIKULSKI. It would be easier for me——

Ms. ZENKER [continuing]. For everyone.

Senator MIKULSKI [continuing]. Than trying to go through this to figure it out. I do not mean to be abrupt, but I am thumbing through. We all have revised and extended——

Ms. ZENKER. Sure.

Senator MIKULSKI [continuing]. Ms. Zenker——

Ms. ZENKER. Thank you. And my apologies, Senator.

Senator MIKULSKI. Please. I am sorry if I interrupted.

Ms. ZENKER. Okay. Thank you.

On another front, AmeriCorps is bridging the digital divide. In fiscal 2000, we made $12.5 million in grants to over 30 organizations as a down payment on Senator Mikulski's E-Corps. This year, we will be awarding up to $25 million to support computer technology initiatives, and the budget request for 2002 continues this commitment.

As our programs have continued their successes, our organization has grown stronger. For the first time, the Corporation has received an unqualified or clean opinion on its fiscal 2000 audit. This subcommittee has supported our management reforms through appropriations over the past several years, making this success possible. And we thank you for that support.

As we move forward, the Corporation continues its strong commitment to management improvement. We are using technology to improve our systems and better serve our members and grantees. We are currently developing a new integrated grants management system that will provide comprehensive management information for all grants and cooperative agreements.

The budget request before this subcommittee totals more than $411 million. This funding level, while $46 million below the fiscal 2001 budget, will allow the Corporation to maintain its current program commitments and support two new initiatives.

The budget supports 50,000 AmeriCorps members by providing nearly $237 million for the AmeriCorps State and National Grant Program and $21 million for their National Civilian Community Corps. The Learn and Serve Program that effectively links education and service is continued at $43 million.

The overall budget reduction results from the fact that we do not need new resources in the National Service Trust to support the next class of AmeriCorps members.

Two new initiatives in the budget request were announced by President Bush during the campaign, and will expand service opportunities for America's seniors. There is $20 million for a Silver Scholarships Program to expand the involvement of seniors in tutoring and mentoring. In exchange for 500 hours of service, seniors will receive a scholarship that they can transfer to a child, grandchild, or other deserving young person.

The second initiative is a $15 million program called the Veterans' Mission for Youth, and it is aimed at tapping the vast experience of America's veterans as mentors and tutors.

The budget also continues support for the Points of Light Foundation and America's Promise. We have very successful partnerships with these two organizations and will continue these efforts in the future.

PREPARED STATEMENT

Mr. Chairman, again, I would like to thank you and the subcommittee for your support of the Corporation for National Service and our programs. We are available to answer your questions.

[The statement follows:]

PREPARED STATEMENT OF WENDY ZENKER

INTRODUCTION

Mr. Chairman, Ranking Member Mikulski, members of the Subcommittee, my name is Wendy Zenker and I am the Acting Chief Executive Officer of the Corporation for National Service. Thank you very much for inviting us to testify on the President's fiscal year 2002 budget request for the Corporation for National Service and the programs funded by this Subcommittee: AmeriCorps, including the National Civilian Community Corps (NCCC), the service-learning activities supported under Learn and Serve America, and two new senior initiatives that we will discuss today. As you know, I have appeared before the Committee previously in my role as Chief Operating Officer for the Corporation. Joining me on the panel today are William Anderson, the Corporation's Acting Chief Financial Officer, and Gary Kowalczyk, the Coordinator of National Service Programs for the Corporation.

The President's Budget Blueprint reaffirms our nation's long and honorable commitment to helping individuals, families, and communities that have not fully shared in America's prosperity. Volunteerism is an integral part of this commitment and the President has made the promotion of volunteerism one of the fundamental goals of his Administration. The Blueprint notes:

"Volunteerism and community service have been a strong and important tradition in America ever since its founding. Across the country, faith-based groups, national and local nonprofit organizations are on the front lines, working to improve lives in some of the hardest pressed communities in America."

The President's commitment to promoting volunteerism and national service goes back to his time as Governor of Texas. As governor, the President supported the Texas Commission on Volunteerism and Community Service, the state agency responsible for administering the AmeriCorps*State grants in Texas. He also joined 48 of his fellow governors and the governors of three U.S. territories in signing a letter in support of the reauthorization of the National and Community Service Act and the Domestic Volunteer Service Act, the authorizing legislation for the Corporation for National Service. Governor Marc Racicot of Montana, a member of our Board of Directors and recently appointed Chairman of the Board of Directors of America's Promise, spearheaded the governors' letter effort. The governors' letter is attached.

The President has indicated his support for service and volunteerism not only in terms of the budget and his experience as governor, but also by the recent nomination of Stephen Goldsmith, former Mayor of Indianapolis, to the Corporation's Board of Directors. Mr. Goldsmith was the President's domestic policy advisor during the campaign. As Mayor, Mr. Goldsmith instituted the "Front Porch Alliance" initiative, a cooperative effort among city government, churches, synagogues and neighborhood organizations to enhance the community building work of these organizations. The Alliance is still at work in Indianapolis. A community outreach team was created as part of this initiative. The team met with local pastors, neighborhood leaders, and residents to determine how private and public resources could be matched with program needs. He has already met with many members of the national service community and we look forward to having the benefit of his experience on our Board of Directors once he is confirmed.

The Congress knows that, as part of his overall agenda, President Bush has announced plans to support the role of faith-based and community groups in their efforts to save and change lives. These organizations are making positive changes from the bottom up—one person, one family, one neighborhood at a time. Under this vision, these organizations will not replace Government, but will partner with government to make life better for those in need.

The Corporation supports this larger agenda through all of our programs, including those funded by this Subcommittee. We already have extensive experience working with faith-based organizations such as Habitat for Humanity, Lutheran Services in America, the Catholic Network for Volunteer Services, and the National Jewish Coalition for Literacy. In the days preceding this hearing, we brought together faith-based organizations—some currently receiving Corporation funding and some that are not—to discuss their relationships with the Corporation and how the Corporation can do a better job reaching those organizations that don't currently participate in national service. We look forward to continuing our work with the faith community as an integral part of the Administration's initiative.

Mr. Chairman, the Corporation and the national service programs under this Subcommittee's jurisdiction continue to meet the four strategic goals set by our bipartisan Board of Directors—solving the nation's critical needs, strengthening communities through service, improving the lives of those who serve through their experience, and developing a sound innovative organization that strengthens the service field. I'd like to highlight several accomplishments in these areas over the last year, all of which have been verified by independent reviews.

Solving critical needs.—AmeriCorps members are contributing to solving the critical need for literacy. A just-completed independent evaluation of AmeriCorps by Abt Associates found that the tutoring efforts supported by AmeriCorps members resulted in improved test scores for the tutored students. We are making the complete study available to the Subcommittee.

Strengthening communities through service.—According to an independent study, AmeriCorps members are helping strengthen communities by providing needed services, strengthening nonprofit organizations, and getting children, families, and others more involved in solving local problems. Several weeks ago, NCCC members helped lead 2,000 student volunteers during spring break working on Habitat for Humanity Collegiate Challenge projects building homes for low-income families. AmeriCorps Promise Fellows, a special leadership cadre of talented AmeriCorps members, have provided leadership in hundreds of communities' efforts to expand, enhance, and improve the delivery of the resources needed by all young people as identified at the Presidents' Summit for America's Future in April 1997.

Improving the lives of service participants.—Evaluations of our Learn and Serve program continue to demonstrate the positive benefits of service-learning on students. All Learn and Serve America programs—K–12 school- and community-based and higher education—integrate community service with academic curriculum or with out-of-school time and extracurricular learning opportunities. Student participants in these programs have demonstrated increased civic responsibility and academic achievement when their programs effectively link theoretical with practical knowledge to serve the educational, public safety, environmental and other human needs in their communities. The programs in which students serve over an extended period of time and in which effective connections are made to classroom curriculum have the greatest positive effects on student outcomes. In addition, Learn and Serve America programs encourage and foster collaboration among key societal sectors—schools, community-based organizations, institutions of higher education, and others—to meet community needs and to strengthen the fabric of local communities.

Creating a sound and innovative organization that strengthens the service field.—Mr. Chairman, I am also pleased to report that in March of this year the Corporation received an unqualified, or "clean" opinion on its fiscal year 2000 financial statement audit. We also reduced the number of material weaknesses from five to one. This is a tremendous accomplishment, the product of sustained management attention on the improvement of operational systems and the successful implementation of new technologies.

This Subcommittee has supported the Corporation's efforts in achieving a clean opinion, and I would like publicly to thank the Chairman, Senator Mikulski and all of the Members for the consistent, strong support that you and your staffs have given us as we worked to achieve this goal. The Subcommittee provided crucial funding for the Corporation's program administration budget during the past three years that was instrumental in producing the good result that we are sharing with you today.

I also want to acknowledge Harris Wofford, the Corporation's former Chief Executive Officer (CEO), and the contribution of his vision and leadership, and Tony Musick, our former Chief Financial Officer, who brought his extensive financial expertise to the Corporation and actively led our management improvement initiative. Our Board of Directors took an active role in monitoring our progress and advising us on where to focus our energies. The Corporation's Inspector General, Luise Jordan, and the outside auditors, KPMG, worked closely with us in achieving this result. Most of all, the credit for our success goes to the Corporation's staff whose hard work and dedication brought us to our goal. With the clean opinion, the Corporation is on sound footing to support future national service opportunities and the priorities outlined in our budget request.

BUDGET REQUEST SUMMARY

The 2002 budget request for the programs and administration authorized under the National and Community Service Act totals $411,480,000; this represents a decrease of $46,011,000 below the comparable level in 2001. In addition, the budget includes a $5 million request for the Corporation's Office of the Inspector General.

Two new presidential initiatives totaling $35 million are also contained in this request, the Silver Scholarship Program and the Veterans' Mission for Youth Initiative. Reductions in funding from fiscal year 2001 are shown under: the National Service Trust, reflecting the fact that we do not need new budget authority to cover the education award costs of members supported by the 2002 budget; and the elimination of earmarks in the 2001 bill.

In total, the fiscal year 2002 budget supports 50,000 AmeriCorps members, including the members funded through AmeriCorps*VISTA. We also continue support for service-learning activities under the Learn and Serve America Program. Additional details are provided below.

New Initiatives to Expand Senior Service

The budget requests $35 million in funding for two new programs to expand service by our nation's seniors: the Silver Scholarship program and the Veterans' Mission for Youth program. These new presidential initiatives will further the contribution of older Americans to national service.

Silver Scholarships

Under the Silver Scholarship program, seniors age 55 and older, who participate in 500 hours of service in a year will be eligible to receive a $1,000 scholarship that can be deposited in an education savings account for use by their children, grandchildren, or another child in need. The scholarship could only be used to pay tuition and fees and will be tax exempt. We have submitted the appropriations language necessary to establish the transferability and the tax-exempt status of the scholarship.

The Silver Scholarships will expand senior service opportunities for the rapidly growing population of older adults. With the aging of the baby boomers, the number of people aged 65 or older is estimated to double. The baby-boomers represent the best-educated, wealthiest, and healthiest group of older adults in history. Many will explore challenging opportunities following retirement, including volunteer service opportunities. Silver Scholarships will harness this resource in our efforts to solve pressing community needs.

The Corporation has extensive experience with senior service. Through the National Senior Service Corps we have seen the results of senior service demonstration programs funded by the Corporation and other organizations that provide strong evidence that seniors in retirement will commit to serving ten hours per week in well-run, well-structured projects that are getting important things done in communities. The demonstrations have also found that modest incentives to cover out-of-pocket costs work as an incentive for seniors to serve. The Silver Scholarship Program will build on these experiences and successes.

We anticipate making approximately 60 grants of approximately $325,000 each (including the funds reserved for the scholarships) for this purpose. It is anticipated that these grantees will make subgrants to local groups. A wide variety of organizations will be eligible to receive these grants, including consortia of small and faith-based nonprofit groups; national organizations, including faith-based groups, that operate in multiple states; and Indian Tribes and Territories. All organizations currently participating in any of our streams of service, including those currently funded through the Corporation's National Senior Service Corps, will be eligible to compete for these funds so long as they meet the requirements of the Silver Scholarship Program.

The budget request makes $20 million available for the program: $10 million will be appropriated to the National Service Trust to cover the cost of the scholarships, and $10 million for grants to cover the support costs for the volunteers. I have attached a more detailed description of the Silver Scholarships Program.

Veterans' Mission for Youth Program

The budget request also contains $15 million for a new program that will provide matching grants to community organizations that connect veterans and retired military personnel with America's youth through mentoring and tutoring programs. Approximately 15,000 veterans and retired military personnel will participate annually under the program to tutor and mentor about 50,000 youth.

Mr. Chairman, you have had an active interest in veterans' issues for quite some time. You know what veterans have to offer young people considering their experience in serving their country. Service in the armed forces can instill discipline, respect for others, a sense of the importance of teamwork, and comradeship. All of these qualities make veterans excellent mentors. Further, the Department of Defense supports significant community service opportunities for active duty personnel, and extending such opportunities to individuals after they leave military service will take advantage of their well-developed skills and interests.

In fiscal year 2002, the Corporation anticipates making approximately 100 grants, averaging approximately $150,000 for the Veterans' Mission for Youth program. The Corporation anticipates making these grants on a competitive basis to consortia of organizations within states, including consortia of small, faith-based, and veteran nonprofit groups; national nonprofit organizations, including veterans organizations, that operate in multiple states; and Indian Tribes and Territories.

The Veterans' Mission for Youth program is consistent with the Corporation's current program authority. We have discussed this initiative with officials at the Veterans' Administration and they are supportive of the Corporation's efforts. We have even begun to do outreach to nonprofit organizations that work with veterans and veterans' organizations for their input on recruiting and program design.

The Faith Community and National Service

Americans have often turned to their churches, synagogues, temples, and mosques for spiritual guidance, leadership, fellowship, and a helping hand during good times and bad in our nation's history. Across the country, faith-based and small community-based organizations are on the front lines working to improve lives in places that face tremendous social and economic difficulty. They are often dealing with these crises in innovative and creative ways.

President Bush proposes to use federal resources as a means to bring the commitment, creativity and innovation of community-based and faith-based organizations to scale. Mr. Chairman, AmeriCorps members and volunteers funded through the Corporation for National Service have been putting this model to work in some of the hardest pressed communities in our country. The National and Community Service Act (NCSA) broadly defines eligible grantees to include private nonprofit organizations, and explicitly defines a private nonprofit organization to include "a church or religious entity." Of the 50,000 AmeriCorps member positions in the current program year, more than 6,000 serve or will serve in faith-based organizations. In the 2000–2001 Program Year, AmeriCorps members, including AmeriCorps*VISTA and AmeriCorps*Promise Fellows, worked in 214 faith-based organizations—an investment of more than $27 million. This service hasn't replaced the important work of local volunteer efforts. AmeriCorps service enhances these efforts. AmeriCorps members provide value-added service to faith-based community assistance programs.

Let me illustrate with two examples. More than 600 AmeriCorps members, including VISTA, work with Habitat for Humanity to help build homes for low-income families across the nation. These members provide leadership on building projects, serving 1.3 million hours directly supervising 241,000 Habitat volunteers and helping recruit additional volunteers. Service by these AmeriCorps members multiplies what Habitat can do. They have made it possible for Habitat to build more than 2,000 additional houses that otherwise would not have been built.

Last year the Catholic Network for Volunteer Service placed over 2,000 AmeriCorps members through 120 national, state, and local faith-based organizations, including Jesuit Volunteer Corps, the Christian Appalachian Project, Lutheran Volunteer Corps, and Holy Cross Associates. These AmeriCorps members recruited an additional 35,000 volunteers, assisted over 30,000 homeless people, taught and/or tutored thousands of school children, and helped more than 8,000 low-income pregnant women access pre-natal care and other services. In many cases, these members worked in small organizations that have limited resources. With AmeriCorps assistance, a small church or community-based organization can make those limited resources go farther.

In all of our service activities with faith-based organizations, AmeriCorps members may not get involved in any religious activities. The National and Community Service Act recognizes a distinction between the religious activities of a faith-based organization and a non-religious national service program operated by such an organization. To ensure that Federal aid is not used impermissibly to advance religion, the law prohibits the use of Corporation assistance for religious instruction, worship service, or any form of proselytization. AmeriCorps members may not give religious instruction, conduct worship services, provide instruction as part of a program that includes mandatory religious education or worship, proselytize, or construct or operate facilities devoted to religious instruction or worship. In addition, national service programs operated by faith-based organizations must be open to participants regardless of their religion.

Mr. Chairman, AmeriCorps and the Corporation for National Service figured prominently in the President's faith-based initiative announcement. We have experience with a model that works. We are looking forward to continuing our work with the faith community and local community-based organizations.

*AmeriCorps*State/National*

Since 1993, more than 200,000 Americans have joined AmeriCorps serving with local, community-based nonprofit organizations in a variety of ways, from tutoring children to serving in community policing projects to building or rehabilitating housing for the homeless. Members receive a living allowance and are eligible to receive an education award for the successful completion of their service.

For fiscal year 2002, the Administration is requesting nearly $237 million for the AmeriCorps*State/National grant program, an increase of $6.5 million. The AmeriCorps*State program which provides grants to governor-appointed State Commissions will receive $190 million and $47 million will go to national nonprofit organizations conducting service programs in more than one state.

Literacy

Mr. Chairman, we appreciate that literacy has been an important issue to you and you have been a leader in Congress in this area. With the recent media attention on the education issue and knowing of your interest, the Corporation contracted with Abt Associates for a comprehensive study of the AmeriCorps*State/National program and its efforts in literacy. The study had two parts and was conducted between the spring of 1998 and the summer of 2000. The first phase of this project was a Descriptive Study of what was going on among our grantees. We knew that a large number of AmeriCorps members were serving in educational programs, but the Descriptive Study would give us a much more detailed picture of this activity. The second phase was a Reading Outcomes Study to measure what impact AmeriCorps service was having on those receiving the service.

The Descriptive Study made some very important findings about the size and scope of our commitment to literacy. Of the 961 total State/National programs, more than half (517 programs) were education-related programs, the majority of which (360 programs) involved direct literacy and tutoring. Sixty-one percent of the sponsoring agencies were community-based organization and 29 percent of the sponsors were educational institutions. The study also found that firmly established and experienced agencies are sponsoring AmeriCorps programs. The vast majority, 83 percent, have been operating for five or more years. The Descriptive Study also found that:

—AmeriCorps literacy service reached 260,000 individuals; 90 percent were children from infants and toddlers to elementary and high school children. Across all programs nationwide, the majority of students receiving literacy services were concentrated in grades 1 through 6.

—Over 10,000 AmeriCorps members were involved in literacy and they had recruited 40,000 volunteers to help provide literacy service.

—Almost all literacy programs provided training to members and volunteers in literacy instruction and in working with children. Typically, about 16 hours of training were provided before, and 20 hours were provided during, the delivery of literacy services.

AmeriCorps members in the 360 literacy and tutoring programs identified in the Descriptive Study are conducting a wide range of activities with their students, encompassing the full range of reading subskills: reading aloud, reading comprehension, and vocabulary development. Almost half of the tutoring programs used well-known and widely used instructional models. And most of the tutoring programs incorporated some of what educators and researchers believe are the most valuable strategies for achieving positive reading outcomes such as coordinating tutoring with classroom curricula; allowing adequate time for tutoring (1.5 hours/week); and providing training to tutors. These strategies helped produce improvements in test scores found in the follow-up Reading Outcomes Study.

After receiving the results of the Descriptive Study, the Corporation commissioned Abt to conduct a Reading Outcomes Study to measure the effect of AmeriCorps on student reading skills as measured by the Woodcock-Johnson Tests of Achievement. Data for the study were collected pre-test in the fall of 1999 and early winter of 2000, and post-test during the spring of 2000. The study found that students in AmeriCorps tutoring programs made impressive gains:

—The tutored students at all grade levels improved their reading performance from pre-test to post-test more than the gain expected for the typical child at their grade level.

—Reading comprehension and reading skills started out below grade level; by year's end students closed the gap and were reading at or near the grade-level expectation.

Mr. Chairman, the Abt studies confirm that AmeriCorps' literacy and tutoring programs are working, improving the reading abilities of children. I have attached the full Descriptive Study and the Reading Outcomes Study.

Digital Divide

In September 2000, the Corporation made grants to 32 programs designed to bridge the digital divide. This was a down payment on the E-Corps, Senator Mikulski's initiative to expand the digital knowledge of teachers and their students. More than 1,100 AmeriCorps members are working for a diverse range of local and national community based organizations, schools, community centers, and YMCA's helping children and adults succeed and thrive in the digital age. Most of these grant awards were only recently finalized and these programs are just beginning to get going with their projects.

We have received a number of very innovative digital divide grant proposals for the 2001 appropriations. The proposals have ranged from those using AmeriCorps members to assist in delivering technology access to low-income individuals and families or helping to train school teachers and staff in community organizations so that they will become adept at using technology in their work with young people, to programs that build the technology skills of those Americans, especially children, who have not yet been exposed to computers and programs that use technology to meet the needs of communities. We will devote up to $25 million to this emphasis area under the AmeriCorps*State and National activity.

In addition to these grants, the Corporation has a number of partnerships with leading technology companies and nonprofits such as America Online, IBM, the United Way, and America's Promise to bring these resources to bear on the problem. Our recent public service announcement campaign focuses on the digital divide.

*Education Awards Program and AmeriCorps*Promise Fellows*

In 2002, for the first time, the State/National grants budget request includes the costs of the Education Awards program and the AmeriCorps*Promise Fellows program. These programs, previously funded under Subtitle H of the Act, are proposed to be funded under Subtitle C in order to integrate the funding of all AmeriCorps activities and to continue to increase the types of programs and organizations in which AmeriCorps members serve while minimizing the cost to the Corporation. We have proposed appropriations language to accomplish this transfer, including provisions that exempt grantee organizations from the administration cost, matching requirements, and participant benefit requirements that do not exist under subtitle H of the National and Community Service Act. These requirements have never been part of the Education Awards program or the Promise Fellows program. The new language will ensure that the Promise Fellows and the Education Awards program will maintain their current structures.

The Education Awards program has played a key role in reducing the Corporation's per member costs to below $15,000, as called for by agreement with Congress. Under this initiative, the Corporation provides education awards to national, state, and local community service organizations that can support most or all of the costs associated with AmeriCorps members from sources other than the Corporation. AmeriCorps members serving in these projects are eligible to receive education awards, but do not receive federally-supported living allowances paid by the Corporation. Up to $7 million to support 15,000 slots will be available for Education Awards program under the budget request.

The Promise Fellows is a major joint initiative with America's Promise—the Alliance for Youth, the national mobilization for youth launched by Presidents Clinton, Bush, Carter, Ford, and Mrs. Reagan representing her husband, at the Presidents' Summit for America's Future. The five promises for youth declared at the Presidents' summit are: (1) an ongoing relationship with a caring adult—parent, mentor, tutor or coach; (2) a safe place with structured activities during non-school hours; (3) a healthy start; (4) an effective education that yields marketable skills; and (5) an opportunity to give back to their communities through service. AmeriCorps Promise Fellows serve with and are selected and administered by national, state, and local nonprofit organizations that are developing and coordinating large-scale activities intended to support children and youth. They do not serve with the America's Promise organization. The budget request makes up to $7 million available for the Promise Fellows program.

National Service Trust

The budget request for fiscal year 2002 will support an additional 50,000 AmeriCorps members; of which approximately 48,000 will enroll in the Trust. In preparing this year's budget for the Trust, we have determined that no new budget authority is required for the Trust Fund costs associated with the new AmeriCorps members. The $10 million included in the Trust supports the scholarship portion of the Silver Scholarships initiative. This determination reflects several factors, including: a change in estimating procedures to recognize future interest earnings in determining current, as opposed to future, budget requirements; and a program budget that is based on a static number of AmeriCorps members in 2002 and beyond. As in previous years, the appropriations request contains language allowing the Corporation to use up to $7.5 million for the President's Student Service Scholarship Program. The addition of 50,000 new members added by this budget will bring the total Trust enrollments to more than 335,000 since the beginning of the AmeriCorps program.

*AmeriCorps*NCCC*

The administration's budget submission requests $21 million for the NCCC, the same funding level as in fiscal year 2001, to support 1,100 NCCC members. NCCC is a residential service program. Members live on five campuses nationwide and are deployed to areas of greatest need. Each year, the Corporation routinely receives approximately four applications for each available NCCC position.

In addition to addressing pressing community needs in the areas of education, public safety, and the environment, NCCC members provide assistance to the Red Cross and the Federal Emergency Management Agency in locations struck by natural disasters. Approximately 16 percent of NCCC members have been certified to provide fire-fighting support to the U.S. Forest Services and Parks Services and 50 members (the largest deployment ever) served on initial attack fire fighting teams in the western states in August and September 2000. In fiscal year 2000, NCCC responded to 34 disasters.

For fiscal year 2001, Congress increased the NCCC appropriation by $3 million to increase NCCC enrollment by 10 percent and to cover the costs of moving the San Diego Campus from its present site, a former Naval Training Center. The Department of the Navy is conveying the site to the City of San Diego, which plans to redevelop the area. Plans for the site change are moving forward. We recently completed a temporary move to the naval facility across the street from the current campus to allow the class to graduate in San Diego in July. The next phase of the move will either be a local move to another site in San Diego or to a new location. The final decision will be made in May 2001 and the move should occur in August. The move will result in certain leasing cost increases, and one-time moving and staff relocation costs

Learn and Serve America

The budget requests level funding, $43 million, for the Learn and Serve America program in fiscal year 2002. Mr. Chairman, the use of service-learning continues to grow as more and more school systems adopt this innovative strategy that combines community service with academic and civic education. In 1984, nine percent of all schools offered service-learning. By 1999, that figured had jumped to 32 percent of schools, including half of all high schools. Learn and Serve America programs engaged 1.18 million students in service-learning activities in 2000.

Service-learning offers tremendous benefits to students, schools, and communities. It gives students the opportunity to be active, positive contributors to society and contributes to greater civic engagement by students. Students become more active in school and develop greater beliefs in their ability to make a difference in their communities. Studies have found that service-learning contributes to increases in core GPA and in Math. Students in service-learning are less likely to engage in risky behaviors than their peers and contribute more than twice as many volunteer hours in the community than students who are not part of service-learning do.

Schools benefit from service-learning through greater integration with community-based organizations, energized curriculums, and by expanding connections between students and school personnel. Ninety-five percent of teachers believe students should be encouraged to participate in service. Finally, service-learning forges partnerships between schools or colleges and community organizations and institutions, providing additional resources to meet shared community and neighborhood challenges.

Learn and Serve America makes grants to state government entities, Indian tribes, U.S. territories, and national nonprofit organizations. They in turn make subgrants for local service-learning projects. In addition, Learn and Serve America provides grants directly to institutions of higher education. State education agencies receive funds from Learn and Serve through a population-based formula. Nonprofit organizations, State Commissions, Indian tribes, U.S. territories, and institutions of higher education receive funds through a national competitive process, which includes set-aside funding for Indian tribes. And Learn and Serve America encourages sustainability and growth of service-learning through its funding match requirements. All school- and community-based grantees must demonstrate an increasing level of matching funds to qualify for continued federal support, rising to dollar-for-dollar by year four. Higher education grantees must provide a dollar-for-dollar match from outset of the grant.

While most often service-learning is sponsored by schools and colleges, it also takes place in community organizations such as 4–H, YMCA, as well as through the governor-appointed State Commissions on service that administer AmeriCorps grants. Community organizations and nonprofits must develop programs with civic or academic knowledge links to the service in order to qualify for Corporation funds

Innovation, Demonstration, And Assistance Activities

The fiscal year 2002 budget request for the Innovation and Demonstration activities authorized under Subtitle H of the National and Community Service Act is $22 million, a reduction of $6.4 million below last year. Most of the reduction represents a transfer from Subtitle H to the AmeriCorps*State/National grants under Subtitle C of the costs of the Education Awards and the AmeriCorps*Promise Fellows programs. This funding level will allow the Corporation to continue its mission under Subtitle H to build the ethic of service among all Americans, provide training and technical support to the national service field, and to foster high quality programs with real community impacts. The Corporation also funds a number of special initiatives in its Innovation and Demonstration authority, including:

Recruitment.—The Corporation recently went on-line with our new web-based recruitment system at www.americorps.org to help us reach our goal of recruiting 50,000 new AmeriCorps members. The Corporation developed and implemented this new web-based recruiting system in fiscal year 2001 to assist State Commissions and local nonprofits with recruiting members. The system provides information on service opportunities, and permits a person to search for those opportunities that meet his or her interests and qualifications. You can then apply on-line directly to the nonprofit or faith-based organization. Whether a service opportunity is across state lines, or merely around the corner, putting the program in touch with the applicant is the first step that ultimately results in a member signing up to provide service in a community and help to solve critical needs. The recruitment system, found at www.americorps.org, has already generated 8,000 applications to programs.

Disability Programs.—In fiscal year 2002, organizations that were granted funds to provide outreach and recruitment activities to people with disabilities for national service programs will complete their two-year grant. Grantees will present their accomplishments and best practices at the 2002 National and Community Service Conference. Based on the information learned from these grant activities, the Corporation will hold discussions with the grantee organizations, State Commissions, programs, and the Training and Technical Assistance provider to determine the best use of new disability grants.

The President's Student Service Challenge.—In 2002, the Corporation expects to award 15,000 matched President's Student Service Scholarships and 50,000 President's Student Service Awards to reward outstanding service by young people.

Dr. Martin Luther King, Jr. Day.—This initiative is authorized under the National and Community Service Act and is intended to make this day an opportunity for all Americans to provide service to their community in honor of the legacy of Dr. King.

Evaluation

The budget request for the Corporation's evaluation activities for fiscal year 2002 is level funded at $5 million. Evaluations determine the impact of Corporation programs in achieving the goals set forth in the National and Community Service Act. They also help the Corporation identify successful service activities and best practices that can serve as models for future program development.

In fiscal year 2002, the Corporation will support a variety of studies and activities designed to track the performance of our programs, as required by the Government Performance and Results Act, and to provide customer feedback. Those activities include customer satisfaction surveys, and accomplishments tracking. Long-term studies will continue to absorb a significant proportion of the evaluation budget in fiscal year 2002. The Corporation now anticipates having to fund the first follow-up of the member longitudinal study from the fiscal year 2002 appropriation. We will also begin planning for the establishment of program outcome standards at the grantee and subgrantee level. Working in cooperation with the AmeriCorps program staff and State Commissions, Evaluation staff will design and implement a system of quantitative standards for grantee and sub-grantee performance in the areas of member enrollment, retention, and completion.

Program Administration

The budget request contains $31 million for program administration in fiscal year 2002, essentially level funding from the previous year. Consistent with the Act, the Corporation's overall program administration funding includes a 40 percent allocation of $12.4 million to State Commissions to fund their fiscal management and program support activities. The remaining $18.6 million will be used for the Corporation's direct program administration expenses, including the technology enhancements that were so critical to the Corporation's ability to obtain a clean opinion on its financial statements. Although the cost of supporting even a level program activity level will include increased program support costs due to inflation and cost of living increases, the Corporation is not requesting an increase in its 2002 Program Administration funding levels. The current request level will enable the Corporation to maintain its 2001 FTE level and to staff critical program positions.

FISCAL YEAR 2000 AUDIT

The Corporation is pleased to report that for the first time it has received an unqualified, or "clean" opinion on its fiscal year 2000 financial statements. Operational areas deemed materially weak were reduced from five in fiscal year 1999 to one for fiscal year 2000.

These achievements were the result of a concerted effort to reduce the number of material weaknesses and reportable conditions identified in the audits, beginning in fiscal year 1996 when ten operational areas were deemed materially weak. We reduced our material weaknesses by developing a comprehensive Action Plan that identified tasks that needed to be accomplished to improve management and to control material weaknesses. We continually updated the Plan to incorporate new tasks, including those identified by the Office of the Inspector General, and documented the Corporation's progress toward completing existing tasks.

In the past two years, as part of the Action Plan, the Corporation implemented a new financial management system, created a web-based reporting system for the National Service Trust that improved record keeping and accuracy of Trust data, and put in place numerous improvements to our control environment, fiscal management, and information technology. As the full impact of these systems began to be felt throughout our organization, our audit results improved as illustrated below.

CORPORATION AUDIT RESULTS—FISCAL 1996 THROUGH 2000

Type of Opinion	1996	1997	1998	1999	2000
Unqualified					X
Unqualified Balance Sheet only [1]			X	X	

CORPORATION AUDIT RESULTS—FISCAL 1996 THROUGH 2000—Continued

Type of Opinion	1996	1997	1998	1999	2000
Qualified Balance Sheet only [2]		X			
Financial Statements Not Auditable	X				

[1] The financial statements were fully auditable, the auditors issued an unqualified opinion on the Statement of Financial Position and disclaimed on the Statement of Operations and Statement of Cash Flows.
[2] Only the Statement of Financial Position was auditable.

CONTINUED MANAGEMENT IMPROVEMENTS

The Corporation continues to emphasize financial and grants management improvements. The Subcommittee's Conference Report for the current fiscal year instructed the Corporation to implement a cost accounting system, an integrated grants management system, and to establish a central archive for Corporation grant records. Funding was provided for these activities. The Subcommittee also instructed the Corporation to report on our procedures for handling "troubled" grantees. I would like to report on these areas.

Cost Accounting System

We will use our new financial management system, Momentum, to report costs in statements, so the system infrastructure for the cost accounting system is currently in place. Utilizing Momentum, we are developing a cost model to allocate expenses by program according to an appropriate cost driver in accordance with federal accounting standards. We plan to contract with an independent public accounting firm this year to assess our cost model. Our goal is to be able to generate comparative information on costs between programs and to link costs to program outcomes.

Grants Management System

The work on the integrated grants management system began in fiscal year 2000. This long-term project is going very well, and we expect to begin to implement the system next April. The design work on the system was completed in December 2000, and is now undergoing final review prior to the actual programming work. When completed, we will have an integrated grants management system that provides comprehensive financial management information for all grants and cooperative agreements. The design meets the Grants Financial System Requirements of the JFMIP and the requirements of the Government Paperwork Elimination Act and the Federal Financial Assistance Management Improvement Act. On February 2, the Corporation provided the design documentation, including functional hierarchies, entity diagrams, and initial mock-ups of all forms and reports to the Inspector General for comment.

We are very excited about the potential of this new grants system. Like our web-based reporting system for the National Service Trust, the grants system will use the Internet for many functions. Potential grantees will be able to apply for Corporation grants, using a common electronic form 424 on the Internet. The Corporation will also be able to perform peer reviews of grant proposals over the Internet. All employees of the Corporation will be able to do their assigned tasks in one system. Both financial and progress reporting will be done over the Internet. The system will be linked to the Corporation's Momentum financial management system so that all financial data will be in sync. Much of the current labor intensive tracking and notifying will be automated. And all of the Corporation's grant activity, with appropriate audit trails, will be done in one place.

Central Records Archive

The Corporation plans to consolidate its grant and program files in a central archive for grants issued from the Corporation's headquarters. Files for grants issued by our five service centers will remain at the location servicing the grant.

As part of this effort, the Corporation will close out expired grants and send the files to the Federal Records Center. We will also contract with a qualified vendor to perform grant file reviews, grant award reconciliations, and perform an analysis of financial and related reports to determine that all requirements have been met. The Corporation issued a notice of the contract for this work on February 5, 2001. We expect that a contractor will begin work on the project soon.

In the longer term, the Corporation believes that the archive will not be needed. As previously discussed, the Corporation is building a new grants management system that will handle all aspects the of the grant process from accepting applications, to peer review, to award and eventual close out. We estimate that within five years the entire grant process will be paperless eliminating the need for an archive.

Improving Grantee Performance

The Fiscal Year 2001 Conference Report also instructed the Corporation to examine the use of receivership in addressing "troubled" grantees. Our primary tool for monitoring State Commissions is our State Administrative Standards project. Under the Standards, a review team spends five days on site assessing the Commissions in five statute-based areas: (1) proper grant processes, (2) monitoring of service programs, (3) member record keeping, (4) filing of Corporation reports, and (5) financial management. In addition, the Standards evaluate the Commissions' planning and assessment processes, personnel management, systems for training and technical assistance, as well as service promotion within states. To date, Corporation staff has performed 15 State Commissions site visits using the Standards and has issued 11 final reports. An additional 14 site visits will be conducted in fiscal year 2001.

In addition to visiting State Commissions, as part of the Standards review process, Corporation staff also conducts site visits to individual program sites that are receiving funding from Commissions to ensure that the Commissions are conducting proper program oversight. State Commissions are instructed to obtain technical assistance and training to correct any deficiencies identified by the Standards and must establish policies and procedures to remedy the problems.

The Corporation has ample authority under current law to impose sanctions on troubled grantees. These sanctions include requiring reimbursement for misused funds, the suspension or termination of assistance, or the automatic recovery of disallowed Federal grant funds through administrative offset of other Federal funds. Unlike the Department of Housing and Urban Development, the Corporation does not have authority to appoint a receiver to step in and run a State Commission. Given the wide range of currently available sanctions, such authority does not appear to be necessary. So far, we have not found any Commissions with problems so significant that we would need to resort to such a remedy. The current sanctions are effective tools for insuring proper State Commission management.

Program Administration—Additional Priorities

Mr. Chairman, Senator Mikulski, as I mentioned previously, this Subcommittee has been very supportive of the Corporation as we have used our funding to improve our operational and financial systems. While we worked to improve our systems, the responsibilities and activity of the Corporation have grown substantially. The addition of 50,000 new members added by this budget will bring the total Trust enrollments to more than 335,000 since the beginning of the AmeriCorps program. There are more than 3,000 programs, sponsors, and sites that receive Corporation support and assistance.

All of this growth has placed greater demands on the National Service Trust and its staff. All member information from when they enroll in AmeriCorps or AmeriCorps*VISTA to when they exit is recorded in the Trust. If information about the member changes—change of address, change of program site—during the course of a member's service, that change is also kept by Trust data. Indeed after a member successfully completes his or her service, the Trust is responsible for receiving and processing requests for payment of education awards. As the Trust's on-going responsibilities have grown with each group of new members, there has been an increased workload of continuing inquiries from this increasing member population. The Trust is actively using technology to assist in the management of this workload, but it is important to recognize that this is a growing workload and that continuing improvements are needed to the Trust's capacity to respond to member requirements in a timely manner.

POINTS OF LIGHT FOUNDATION

The Corporation has enjoyed successful collaborations with the Points of Light Foundation and America's Promise—the Alliance for Youth. These organizations bring special expertise and resources to the national service field. Both organizations, along with the Corporation, are the co-hosts and primary organizers of the National Community Service Conference. Last year's conference brought more than 5,000 members of the national service field together to exchange ideas and best practices for delivering service.

The budget request for the Points of Light Foundation is sustained at last year's level of $10 million. The funding will be used by the Foundation to carry out its fundamental purposes:

—Encouraging every American and every American institution to help solve the nation's most critical social problems by volunteering their time, energies, and services through community service projects and initiatives.
—Identifying successful and promising community service projects and initiatives with nonprofit organizations, corporations, families, and youth, and disseminating information concerning such projects and initiatives to other communities in order to promote their adoption nationwide.
—Building the capacity of institutions to support volunteer service, and developing individuals as leaders to serve as strong examples of a commitment to serving others and to convince all Americans that a successful life includes serving others.

The Points of Light Foundation supports a network of hundreds of Volunteer Centers nationwide. An increasing number of AmeriCorps members and AmeriCorps*VISTA members are working directly with, and under the leadership of, these centers for volunteer service. In fiscal year 2002, the Foundation will develop programming and support institutions that offer volunteer opportunities and resources to low-income people. The Foundation has expanded its programming to reach and serve more communities of faith and family-based volunteer initiatives, two key strategies to strengthen communities. The Foundation will also work to build the capacity, visibility, and sustainability of a unified nationwide network of local Volunteer Centers.

AMERICA'S PROMISE

In April 1997, America's Promise was launched at an unprecedented gathering in Philadelphia called the Presidents' Summit for America's Future. In Philadelphia every living President, with Former First Lady Nancy Reagan representing President Reagan, along with 38 Governors, 100 Mayors, and delegations of Americans representing 140 communities joined together behind an overall mission of building and strengthening the character and competence of today's youth.

At that gathering, a set of five basic promises was made to every child in America. To point them in the right direction, to help them grow up strong and ready to take their place as successful adults, these five promises must be fulfilled for all children and young people:

—An ongoing relationship with a caring adult—parent, mentor, tutor or coach.
—A safe place with structured activities during non-school hours.
—A healthy start.
—A marketable skill through effective education.
—An opportunity to give back through community service.

The fiscal year 2002 budget proposes $7.5 million as a second grant to America's Promise for the purpose of fulfilling its mission. The grant will support the operational costs of the organization, as well as activities consistent with the mission described above. It is anticipated that these funds will supplement other ongoing activities and contributions toward the goals and objectives of America's Promise.

In 2002, America's Promise will continue to support programs and partnerships that develop the character and competence of the nation's youth. A key priority will be the development of collaborations across the public, private, and independent sectors around the common mission of fulfilling the Five Promises. These collaborations make the best use of scarce resources and ensure more young people are reached. Another priority will be the generation of resources, including in-kind contributions in the form of the time and talent of individuals and their employers, as well as donation of funds to support positive youth development activities in communities. Resources can be combined and delivered to children where they live, learn, and play through 'Sites of Promise' such as schools, public housing, libraries, and recreational facilities. These ultimately culminate in the full-scale mobilization of Communities of Promise.

CONCLUSION

Mr. Chairman, Americans can be proud of the work of Corporation for National Service. They see the change that individuals bring to communities with pressing needs. As we look to the future, we are not resting on our accomplishments. Over the next year the Corporation will continue to review and improve its operations and programs. We will also seek to identify innovative ways to strengthen the Corporation's contributions to the Administration's overall agenda to support faith-based service groups and the efforts of communities and families in providing vigorous and thorough support for those in need, while preserving the dignity of the individual and fostering personal responsibility. This Subcommittee has been tremendously supportive of our work and we look forward to your continued support.

AMERICORPS LITERACY ACHIEVEMENTS

Senator BOND. Thank you very much, Ms. Zenker. Let me now turn to questions.

Speaking on the literacy front, and I appreciate your comments about it, how much funding support currently goes to the Corporation's literacy initiatives? What kinds of results are we seeing? And how do you envision this Silver Scholarship and Veterans' Mission complementing the Corporation's current literacy activities?

Ms. ZENKER. We are estimating about $85 million this year will go towards our literacy efforts. One of the things we did over the past 2 years was contract for an evaluation assessment of our literacy efforts. And we have an evaluation report that was prepared by Abt Associates, which has been attached to my fuller statement, and which we can talk about, briefly.

That report is both a descriptive study of AmeriCorps literacy efforts, as well as an evaluation outcome of the results that we are getting. What we are seeing, in terms of results, is that AmeriCorps members are making a difference in the communities that they serve; that grades are going up by more than would—reading levels, excuse me, are going up by more than would be expected if the AmeriCorps members were not there tutoring.

What we do, in terms of tutoring, are several different kinds of activities. We do tutor directly, as well as have AmeriCorps members who recruit tutors to come into the schools.

Our two new initiatives, both the Silver Scholarship Program and the Veterans' Mission for Youth, both draw on this literacy expertise and seek to have more volunteers helping more young people learn to read.

Senator BOND. Well, one of the things that—that I am interested in is how we can make the—how we can expand the—the reach and the effectiveness by making sure that we emphasize the wholesale nature, rather than retail.

I know that if we have an AmeriCorps volunteer tutoring a student, that student probably is going to do better and increase his or her reading level. But if we have the—that AmeriCorps volunteer who is mobilizing a group of 10 or 15 or 20 mentors, then we—then we can hope that we get 10 or 15 or 20 more students involved, and—and raise them up.

So, I very much want to see us multiplying that effort, and using the resources of the Corporation to the extent possible to get as many non-Corporation volunteers in the field. And I hope that that will work.

How will the Silver Scholarship/Veterans' Mission work with the literacy efforts?

Ms. ZENKER. Both of those programs are directed towards mentoring/tutoring young people. The Silver Scholarships will permit seniors 55 and older, who provide 500 hours of service, to receive a $1,000 scholarship that they can pass on to a child, a grandchild, or another person in need, including the person they are tutoring or mentoring.

The Veteran's Mission for Youth is a very similar program. It seeks to take veterans, retired military personnel, and have them tutor and mentor within their communities.

GRANTS MANAGEMENT AND COST ACCOUNTING

Senator BOND. All right. The Corporation's Inspector General and KPMG have reported most of the Corporation's financial problems have been cleared up, but they continue to report deficiencies in grants management, including systems deficiency and problems in day-to-day management and oversight.

We provided the Corporation $2 million targeted for the acquisition of a cost accounting system, a grants management system, and the establishment of central archives.

What—what is being done to address these deficiencies? Who is responsible for correcting them? What progress have we seen to date? And do you expect any additional funds needed to complete the effort?

Ms. ZENKER. First, let me say thank you. We really appreciate the $2 million that we received in 2001 that was specifically focused on where we see our current top internal management priority, which is to improve our grants management system.

Where we stand with the grants management initiative—and if I may speak about that first, simply because it is taking the largest portion of that money. We have awarded a contract—we have done the systems analysis. We have done the requirements definition. We have a contractor on board. And we are actually starting, right now, to program the system. We expect that it will be initially operational in April of 2002; this time next year.

With respect to the cost accounting system, we have a new accounting system that has a cost accounting module. In our annual report this year, we did our first cost accounting allocation module method. What we want to do is bring in a public accounting firm, right now, to take a look at what we did and see if they have recommendations on how we can do it better. And we are also following your advice, in terms of getting and putting in place a central archive for our headquarters grants.

Senator BOND. I would like to ask the Inspector General, Ms. Jordan, to come forward. Do you have any comments on this or any suggestions on—on this general area?

Ms. JORDAN. The grants management?

Senator BOND. Yes.

Ms. JORDAN. The systems part——

Senator BOND. You might pull that mic over.

Ms. JORDAN. The Corporation's plans to improve the system go a long way toward working out some of the recording problems, but the problems are also in the day-to-day oversight of the grants.

We—I testified approximately 2 years ago that we were going to be doing work at the State Commissions. And Senator Mikulski, you asked us to issue reports after we did each.

In each of the reports, we have made recommendations, as far as improving the oversight and the monitoring of the grants at the sub-sites and where the members are doing the service.

There are a number of issues that remain to be resolved in those areas. A system will not address those problems. Those are management issues. And that is where emphasis has to be placed.

There was some cost accounting done for the financial statements, but the Corporation, in my mind, still cannot cost-out its programs, including what it costs to put a member down on the ground and how much a specific program, itself, costs. That will require getting some information from the grantees. And I am not aware that the Corporation has made efforts to get that specific actual information from the grantees, rather than using budget, as it has in the past.

And I am not aware, as far as the archiving, of a great deal of progress that has been made in the area. We still have issues finding documents.

Senator BOND. Do you think the Corporation needs more funds to complete the grants management system?

Ms. JORDAN. I——

Senator BOND. That is just a management challenge.

Ms. JORDAN. I am not aware that acquisition of the system will require more funds than they have now. I believe that what we need is more emphasis on management.

GRANTEE OVERSIGHT

Senator BOND. Well, this is one—and I was going to turn for my—turn back to Ms. Zenker and let her comment on that. But I wanted to follow-up on the grantee oversight, because we have seen the—the questions raised and the Inspector General has—as—it says that in its grantee surveys, very few State Commissions have good systems for tracking grants.

And what actions does the Corporation take when it finds a grantee is troubled or not performing? And what actions has the Corporation taken when the IG reports problems with a grantee?

Ms. ZENKER. We have got a couple of different mechanisms that we use. One, the Inspector General is indeed conducting pre-audit surveys, at, I believe, now, about 37 of our State Commissions. Reports are issued with recommendations. And we follow-up with the State Commission to make sure that those recommendations that they agree with are implemented. We have our program staff that are working very closely with State Commissions to make sure that they put improvements in place.

We also have what I would describe as our own internal monitoring program, which is referred to as the State Commission Administrative Standards. And this is a series of 11 standards, where we send a team out for a 5-day period, composed of both Federal and non-Federal experts, to go in, take a look at what State Commissions are doing in terms of their recordkeeping and program management, and provide a report back to us, again, with recommendations on where there are weaknesses and other areas where they need improvement.

So, we follow-up when we know that there are weaknesses. Generally, though, we think that the State Commissions are doing an adequate job. And there are many that are doing a good to excellent job. I think we need to keep that in mind, as we talk about some of the problems in some of the State Commissions that have weaknesses.

I do not want us to lose sight of the fact that, by far, almost all Commissions are running good programs. Again, almost all Commissions can probably make improvements, but for the most part, we believe that they are performing what we would consider to be a minimal and even adequate level of attention and oversight to their grant programs.

You asked whether or not—and I know that there were several questions, and I am sorry if I do not get to all of them, but one that is serious to us, of course, is always the money question; whether we would continue to need money in fiscal 2002 for these improvements. And I have to say that we do.

As we build systems, we have, minimally, the cost to maintain them, to do the next version, to make improvements, to make it better, and to expand its scope, in terms of the activities that it performs.

We are bringing up, initially, the system in 2002. We will have a continuing work in 2003.

Finally, there was a question on whether or not we know the actual cost of AmeriCorps members on the street. And that is information that we do not, right now, know the actual cost. We do talk to you, in terms of budgeted costs, and what we are aware of, in terms of what is going on out there.

We have every intention, and we will try, over the next year or two, to comply with the requirement to have actual costs for members, but that is going to be driven by putting these systems in place that will bring the data forward and permit us to report it back to you on an actual basis.

Senator BOND. Well, thank you very much, Ms. Zenker. I will submit the rest of my questions for the record.

I now turn to Senator Mikulski for her questions.

ADEQUACY OF NATIONAL SERVICE TRUST FUNDING

Senator MIKULSKI. Thank you very much, Mr. Chairman.

Well, this is one of the first, at an Appropriations hearing, Ms. Zenker, when I refer to page five of your oral testimony, in which you say, "The overall budget reductions result from the fact we don't need new resources in the National Service Trust to support the next class of AmeriCorps, and also the two new initiatives proposed by the President."

Could you tell me why that is so?

Ms. ZENKER. I think, in terms of looking at the Trust, I—I talk about three different issues. One, there is a change in what our future estimates are, in terms of growth of the AmeriCorps Program.

As you mentioned in your opening remarks, Senator, we are looking, right now, at level funding for 2002, and we, at some point, will engage with our new CEO and the President, in terms of discussions for 2003, but right now, we are looking at level funding and level growth within the AmeriCorps Program in the out years. So, that has a significant impact on what we would request for the Trust.

The second issue is, as has been discussed with this committee in years past, there is somewhat of a reserve that is in the Trust right now, and we would use that reserve. It is—it is not the number that I know has been floated around.

Senator MIKULSKI. Why do we have a reserve?

Ms. ZENKER. We have a reserve because we have estimates as to what kind of usage we are going to have of the education awards.

How many members enroll? How many members complete service? Of those members who complete service, how many use it?

Senator MIKULSKI. I want to come back to that, then——

Ms. ZENKER. Okay.

Senator MIKULSKI [continuing]. Because I want to move my questions along.

First of all, one, I am pleased to hear your analysis. And we wanted to hear both from you and the very important issues raised by the IG.

Here is where we are: One, we have—Senator Bond and I have really big challenges ahead for all of the agencies facing us. Stay the course in National Service and really use this to get our act together and get volunteers into the community. That is my goal and some new thinking.

But we have a reauthorization to do, as well as a new CEO. When we get to the reauthorization in the Jeffords-Kennedy committee, they are going to turn to us to—about whether this program means anything to—at the local level and at what cost, which goes to the IG question about the per capita. It is not the proper word, but just for linguistic purposes here.

So, one, we really do need to know—first of all, we acknowledge this for this year, but it could be very important when we show our benefits both to our colleagues in appropriations and also in the reauthorization, it could be conceivable that the Bush Administration would want to expand a program.

So, I take no position on what is the further view of the President. I presume the President, knowing him, just beginning, as I do, he is a results-oriented guy. And he is going to want to know what have been our results, at what price, for there to be an administrative—Administration policy, which then goes to this: Could you—first of all, I really want to insist that there be a sense of urgency in identifying how much does it cost to place a volunteer in the community. We are depending on the community. It might be the Conservation Corps is a different price for public safety, than ongoing tutors. So, even if we have a range, I think it is very important, so we know what does it cost to put a volunteer in the community.

USE OF AMERICORPS EDUCATION AWARDS

Second, can you tell me what is—how—what has been the use of the stipend? Now, because the whole thing was to get—when we were going through the me-generation and all of that, the whole idea of National Service was help kids reduce student debt, which is pretty considerable, with hands-on experience.

And then at the end of it, they would—it reduce their student debt or homeowners—and then come back and that we would have Alumni Associations. So, I want to know: Have we really used the stipend or—and number two, have you formed Alumni Associations, and what have those—been those results? So, that they would keep on keeping on; that this was kind of a pump primer, not for money, but a pump primer for being involved in the community?

Ms. ZENKER. In terms of those who have completed service and earned an education award, 50–56 percent of them are using it to pay for their education out on a future basis. Thirty-four percent have used it to pay off their student loans. And 9 percent use it for a combination of both of those activities.

Senator MIKULSKI. So, some use it for student debt and others use it to continue education.

Ms. ZENKER. Yes.

Senator MIKULSKI. So, that—so, it is working.

Ms. ZENKER. Yes. Absolutely.

Senator MIKULSKI. Okay.

AMERICORPS ALUMNI ORGANIZATION

Ms. ZENKER. Absolutely. And with respect to an Alumni Association, there is an independent—not a Corporation activity, but an independent Alumni Association that has been formed of AmeriCorps members. And it is headed by an individual, Mike Meneer, who is its Executive Director. And it seeks to stay in touch with and broaden the involvement of AmeriCorps members after their service, in continuing to give back to their community.

Senator MIKULSKI. Like the Peace Corps Volunteer——

Ms. ZENKER. Absolutely.

Senator MIKULSKI [continuing]. Association?

Ms. ZENKER. Just like it.

Senator MIKULSKI. It is modeled on that.

Ms. ZENKER. It is—it is modeled on that, but it is much smaller. And it is seeking and trying to reach out to AmeriCorps——

Senator MIKULSKI. Why do not—why does not—why does not National Service help be the organizers of that?

Ms. ZENKER. We have done—we have tried to do a little bit of work this year in helping to pump up that association.

Senator MIKULSKI. Well, I would like to hear more about that.

Ms. ZENKER. Okay.

Senator MIKULSKI. I am sure we will be talking more, but what—again, what we are looking for is value. Value to the taxpayer. And that the value continue long after you have left the program; that this was not a Government agency, where we are not creating a bureaucracy.

You know, having worked in social agencies, I mean, we talk to guys and gals who have been in the Marines. They say, "Once a Marine, a Marine Corps forever." Talk to a Peace Corps volunteer. Many in our own office. Jim Walsh, our counterpart, in the House, "Once a Peace Corps volunteer, a Peace Corps volunteer forever." They talk about it. They wear buttons. They want to be part of an ongoing organization. Just like our veterans.

This is what we wanted from National Service, and that there would be a continuation of this. And so, I am going to be looking for that.

DIGITAL DIVIDE

I—can you talk to me about digital—what you have done with the digital money?

Ms. ZENKER. First of all, as I said, we made a down payment. We did $12.5 million in digital divide——

Senator MIKULSKI. Tell me what you bought for it and what you hope to buy for it.

Ms. ZENKER. Oh, we have—what we are——

Senator MIKULSKI. In other words, what did the money buy for people?

Ms. ZENKER. What it is buying? One, it is buying is—is teacher training. Teaching teachers how to use technology in the classrooms. There are also some direct tutoring activities that go on in terms of teaching children or—or people of all ages how to use the computer, how to access the Internet.

We build computer labs. We help refurbish old computers, so that they can be used by new people. I think you know, many people throw computers out when they go and buy a new one. So, what we want to do is take that old computer, help refurbish it, and put it into an active environment for—for many more years.

Our activities are varied. We help set up technology centers in communities, so that low income children can be exposed to the digital divide activities.

We have also, if I may, just—our public service announcement this year was focused on the digital divide. And we have had some great play on that public service announcement. Over 18,000 stations have chosen to air it, giving us——

Senator MIKULSKI. What was—what was the point of the public service announcement?

Ms. ZENKER. The public service announcement, it is our recruitment tool. We try to get the fact that AmeriCorps is out there; that people have an opportunity to serve; and to draw them to our website, so they can learn about service opportunities around the country.

Senator MIKULSKI. Well, that is terrific, because that is what our intent was. But you need to know, it was not to provide actual—it was to train the trainers and to upgrade two constituencies; one, teachers, but the other is often the—the Executive Director of a Boys and Girls Club in a neighborhood might be great with the kids, but themselves, have never had these opportunities. And so, that was that.

The other—but here is the last question: can you specialize in E-Corps, or is it that so many of our volunteers are so computer or technology—beyond computer—technology proficient that every AmeriCorps volunteer is a potential E-Corps person?

Ms. ZENKER. They—these members who were funded in technology activities are working in technology programs. Many of our members, as you say, do become——

Senator MIKULSKI. Is there an E-Corps within AmeriCorps?

Ms. ZENKER. There—there is——

Senator MIKULSKI. Is there a subset Corps?

Ms. ZENKER. There is not something that we call an E-Corps, but there are members whose activities are completely focused on digital divide—on digital divide efforts and technology improvement efforts, but they do not call themselves an E-Corps, no.

Senator MIKULSKI. Why not?

Ms. ZENKER. One of the reasons, I—and—and it becomes a difficult issue for us, but it is in terms of letting people know what it is that is out there. It is a challenge to get people to know what AmeriCorps is and to want to volunteer to come and be AmeriCorps members and know something about the program.

We have tried to limit it the—the—the different ways that we talk about AmeriCorps, so that we can get our words——

Senator MIKULSKI. Sure.

Ms. ZENKER [continuing]. To the most numbers of people.

Senator MIKULSKI. Well, that is helpful to understand that. I would like to know—again, we will be talking more about that. I know we want to move on to Senator Johnson and to—and to our testimony on Neighborhood Reinvestment.

But first of all, I am pleased that it got started. I am just pleased that it got started and that we are making wise use of these funds. We will be looking forward to seeing what the next half will be, and then Senator Bond and I will be discussing, you know, how best to promote these digital—because we are looking for digital opportunity.

Mr. Chairman, one other comment, just to you.

Senator BOND. Yes, ma'am.

SILVER SCHOLARSHIP TAX EXEMPTION

Senator MIKULSKI. This goes to the Silver—the Silver Service——

Ms. ZENKER. Silver Scholarships.

Senator MIKULSKI. Silver Scholarships. No. The Silver Service, I think, is on display at the Metropolitan, with Jackie, so—the——

Senator BOND. Is that not the one that disappeared from Air Force One?

Senator MIKULSKI. No. Come on, now.

Senator BOND. Okay.

Senator MIKULSKI. Under what Administration?

I note that the Administration wants that to be tax exempt, and is, in a sense, trying to set up an—I am concerned that we are going to get involved with the Finance Committee. And I would like for us to perhaps have our own conversation about that.

I know what the President is doing—and I think we are all in alignment—which is to really use seniors in a way that is creative and that their sweat equity translate into value for another generation.

So, I think that is exciting. We have got an—we have got a group in Baltimore called Experience Corps, which is a subset of AmeriCorps. So, I would like to work with you.

Senator BOND. Sure.

Senator MIKULSKI. But I would like to avoid the Finance Committee on this one. Okay?

Senator BOND. Yes. Do not tell them that we are—we will see if we can just slip by them.

If you will not tell them, we will not. Okay?

Senator MIKULSKI. And then we are going to be members of the Intelligence Committee, as well. So——

Senator BOND. Right.

Senator MIKULSKI. Thank you very much. And look forward to further comments.

Senator BOND. Thank you, Senator Mikulski.

Senator Johnson.

Senator JOHNSON. Well, thank you, Mr. Chairman.

Just a couple of brief observations and one question. One is that I share Senator Bond's enthusiasm for trying to ramp up the tutorial access and activity that goes on in the country. We have the ESEA on the floor of the Senate, perhaps, this week. And one of the components is likely to be under the Department of Education is an effort to expand opportunities for tutoring. And I would hope, at some point, that there might be a linkage of some sort between our volunteer efforts and what we are trying to do through the Department of Education.

Second, on the digital divide issues that Senator Mikulski has brought up, I applaud the work that you are doing. It does come to mind that there are a number of States, no doubt, including my home State of South Dakota, where there is a teacher training program and there is a program going on.

And I do have some interest in whether there is any effort ever to coordinate these efforts, relative to computer capabilities. And that is a question that comes to mind.

The larger question—is—and Senator Mikulski alluded to it. I am new to this subcommittee, new to the committee, and I may be a little slow here, but I need a little bit of a walk-through here. Your budget was reduced by $46 million.

You have another $35 million committed to two new programs, for a total of $81 million. We are being told that is of no consequence, because of the zero growth in the out-years, and you are going to draw down on reserved trust dollars.

I need you to walk through it in a little more detail what it is that is being done with the $81 million. And particularly, enlighten me a little bit about the nature of this reserve fund. I also have a little bit of—a red flag goes up in the back of my mind when people talk about drawing down reserve funds.

In some cases, that might be a very appropriate and necessary thing to do, but in others, it is sort of a short-term stopgap funding strategy that may not be of long-term wisdom.

And so, I would like you to walk through a little bit more for me, as a new member, why it is that we can take an $81 million drain out of your Corps programs and—have no consequence.

DETAILED EXPLANATION OF TRUST FUND FINANCING

Ms. ZENKER. First, I do want to provide some additional detail, but may I also offer that we will come up and brief you and your staff, and—as well as Senator Mikulski and Bond, in terms of the details of this.

We have a lot of data that supports the proposal that we are making in this budget. And it backs up the number of members that we have and who have served—completed servers who are drawing down their award. And we now have 6 or 7 years of history that permit us to make some better estimates going forward, but that's my first offer.

We would very much appreciate the opportunity to come up and share with you, in detail, what these numbers look like. But in terms of a little bit more information, right now, the Congress has appropriated, in years past, money that specifically goes into a trust fund. And that trust fund pays for the education awards of AmeriCorps members who complete their term of service, and then have 7 years after the end of their term of service to draw down that education money.

Many—most—you know, 78 percent of them, we expect, will use that money that they have earned through their AmeriCorps service, but there are a percentage that will not use that money. At some point, we will have a full 7-year history of that first class, and then we will have the 7-year history of the second class, that will permit us to much more accurately give you a final number that says, "We expect 78 percent or 79 percent or 75 percent of members to use their education award money."

But based on that final actual number, there is somewhat of a reserve that exists in the trust that says, you know, if it is 92 percent that use it, versus 70 percent, we can have a swing that goes this way or that way. So, that reserve is one piece of the estimate.

The second piece is, indeed, this change and what our out-year projections look like. Right now, we are looking at 50,000 members for the next 10-year period. That is how the budget is built. In years past, we have come before you and we have been proposing a 62,000 corps size, leading up to and 85,000 corps size, to ultimately 100,000 members per year. That change in future growth patterns has an impact on our needs.

There is a third aspect, and that is how we credit the interest that would be earned on that principal amount that is in the trust. In years past, we credited that interest that would be earned in the year in which we were going to come to you and ask for an appropriation.

In looking closely at the trust this past year, we went to OMB, and we asked them to look at our methodology and we asked them to look at our model, and they came back and told us that there was a better way for us to do that and a more appropriate way. And that is to say that the interest on monies that you have already appropriated to us, should be credited in the current year, so that if we were to earn $10 million in interest on an appropriated amount, already appropriated, instead of popping that $10 million into each of the out-years, we are grabbing it all now and putting it into this current year, which is why we do not need a new—for those three reasons, why we do not need new appropriations this year.

When we come to you next year, and if the President is proposing an AmeriCorps program next year, in the 2003 budget, of whatever size, we will be asking for a new appropriation for the trust at that time. This is not—this is a correction that we are making now, but not one that would continue, obviously, for years into the future.

So, next year, if we come with AmeriCorps members, we will be asking for an appropriation for the trust.

I do—I know that there is a lot of information there. And I am not, by far, the best person to necessarily explain it, but we are more than happy to come up with the data that backs up these statements and share it with you.

Senator JOHNSON. I appreciate those observations and I look forward to working with you and your staff. And I am on a steep learning curve in my own part and so is my staff. We look forward to working with you on your budget numbers.

Thank you.

ADDITIONAL COMMITTEE QUESTIONS

Senator BOND. Thank you very much, Senator Johnson. And thank you, Ms. Zenker. And we will now move to the second panel.

Ms. ZENKER. Thank you, Senator Bond.

[The following questions were not asked at the hearing, but were submitted to the Corporation for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

COORDINATION WITH OTHER ORGANIZATIONS

Question. The Corporation funds a number of different organizations that serve at-risk youth. I am concerned, however, that there may be some duplication and would like to hear any thoughts you may have on how to better coordinate these activities and how we can address this issue in appropriations and the reauthorization process.

Answer. Within the Corporation programs in each state, we do not believe that there is any overlap. The National and Community Service Act of 1993 that authorized the Corporation for National Service gave it a decentralized and devolved structure for administering the AmeriCorps program. In the AmeriCorps*State program, governor-appointed state commissions select local nonprofits and small community-based organizations, including faith-based organizations, for participation in AmeriCorps. This structure allows states to target AmeriCorps resources to the areas of greatest need in the state or to select the best organizations in the state to receive funding. A state commission stands in a better position to make that determination than a Federal agency in Washington.

The commission structure ensures against the duplication of efforts in program selection. States face so many demands in a number of areas that can be addressed by AmeriCorps service that as a commission reviews applications, it is often in the state's best interest to spread Corporation resources to address as many community needs as possible. Commissions often choose one organization statewide to provide at-risk youth mentoring and another organization to focus on literacy.

Commissions also have the flexibility to target resources at one particular community need. A governor may decide to make helping at-risk youth the focus of AmeriCorps in the state. The state commission would choose a number of nonprofits in the state to provide those services as part of AmeriCorps, but it can distribute those organizations throughout the state so that no organizations overlap in the same city or geographical region of the state. We have found that the commission structure has successfully avoided the duplication of efforts across a state.

The Corporation also has the National Direct grant program that provides funding to national nonprofits to operate AmeriCorps programs in more than one state. These national nonprofits, such as Habitat for Humanity, the American Red Cross, and the United States Veterans Initiative have the expertise and the ability to administer large service projects.

National Direct grantees, like state commissions, work to avoid duplication of efforts as well. For example, the Habitat for Humanity parent organization is a National Direct grantee, sending AmeriCorps members to Habitat projects in more than one state. At the same time, local or state-based Habitat affiliates may receive AmeriCorps*State funding through a state commission. The parent organization does not operate sites in states where the state commissions have given a grant to a local Habitat affiliate. And, National Direct applicants are required to share their applications with the state commissions in which they are planning to operate. This gives the state commissions notice about what National Direct grantee affiliates will not need AmeriCorps*State funding.

Again, the Corporation's structure and internal procedures help to avoid duplication of programmatic efforts for grantees in a given state. If the question is more concerned with the programs affecting at-risk youth across the federal government, we would be happy to enter into a dialogue with the Subcommittee about any perceived overlap and duplication. In general, we are the only federal agency funding service activities, as authorized under national service legislation, that involve at-risk youth. Other federal funding is often provided to these nonprofit and public organizations for other purposes.

NATIONAL SERVICE TRUST

Question. In the past, the Corporation has argued against proposals to rescind funds from the National Service Trust. Now the Corporation is stating that no new authority is needed to fund Trust Fund costs associated with new AmeriCorps members.

What assumptions is the Corporation using to request funding on an annual basis and what is their reliability? Has there been an independent review of these assumptions? Have the auditors looked at these assumptions?

Answer. In the past, the Corporation's budget request for the National Service Trust, and the AmeriCorps program as a whole, reflected a proposal for significant growth in the number of members, both in the year of the budget request and in the succeeding fiscal years. The current budget proposal supports the same level as in the prior year. There is no anticipated growth in the out years.

In determining annual funding requirements for the Trust, the Corporation reviews and considers:

—The size of the AmeriCorps program approved by Congress in prior years and the program request in the current budget year.
—The anticipated enrollment levels in the programs in which AmeriCorps members serve.
—The anticipated completion rates of members who enroll.
—The anticipated education award amounts earned by members who complete service.
—The anticipated amounts used by members who earned awards.

In addition to these program data, the Corporation reviews the balances in the Trust and the anticipated interest earnings in the Trust over the period during which members may use earned awards.

These data, and other information, are incorporated into a model that examines the impact of these variables on Trust Fund requirements. The data used to produce the estimates for these variables are based on historical experience. For many of these variables—specifically enrollment, completion rates, and amounts earned—the historical experience has proven to be reliable for estimating future requirements. The Corporation reports on these historical data in its annual performance report as required by the Government Performance and Results Act. For example, in the latest performance report the Corporation showed historical data over a six-year period concerning enrollments, completion rates, and amounts earned by members. Further, total outlays projected in the model have been very consistent with actual experience. In general, interest earnings have also tracked well with estimates.

There is one major factor used in developing estimates for which the historical experience is incomplete. AmeriCorps members have seven years from completion of service in which to use their award. All members in the first class have yet to complete this seven-year period; in fact, the first class will not complete this period until the end of fiscal year 2002. Therefore, the Corporation's estimates of amounts used are based on behavior over a five-year period and assumptions of future behavior in years six and seven. The Corporation has estimated that an additional ten percent of awards earned will be used in years six and seven beyond the period of service, bringing the total usage of awards earned by the first class to 78 percent. The original estimates of use for years 1 through 5 have proven reliable. There is also remarkable consistency in actual usage in the initial years across several classes of AmeriCorps members. Nevertheless, the unique nature of the AmeriCorps program and the period of availability of the award means that the estimates for years six and seven may well require changing once we have the benefit of an additional two years of actual experience.

Occasionally, the Corporation performs sensitivity analyses to determine the impact on the Trust in behaviors that vary from the estimates in the model. The results of these sensitivity analyses show that the variable with the largest impact on Trust Fund requirements is the amount of the earned awards that is used by members for education purposes. Other variables, such as enrollments, completion rates, and interest rates, have less of an impact.

Concerning an independent review of the model, last year we asked staff in the Office of Management and Budget (OMB) to review the model and the basis for developing budget requirements under the National Service Trust. After conducting that review, OMB staff suggested a change to the budgeting approach. They recommended that the Corporation include future interest earnings over the period when the education award will be used by members to determine the requirements for new budget authority to cover the cost of members included in the program budget for fiscal year 2002. This is done by estimating the amount to be paid out in each of the seven years the award is available and discounting it to its net present value. In the past, the Corporation had applied those future interest earnings to program requirements in future years. The Corporation made this change, as recommended by the Office of Management and Budget, in determining requirements for the fiscal year 2002 budget. This change is another reason the estimates of need are reduced from the estimates made in prior years.

In addition, the auditors have reviewed the Trust Fund on an annual basis for purposes related to the audit of the Corporation's financial statements. Included in those statements is the liability associated with anticipated amounts earned and used by members who have either completed or entered service. This liability estimate is determined using the same variables and estimating model that are used for estimating future budget needs. The auditors have opined that the Corporation's liability estimate is fairly stated for the past three fiscal years. To the best of our knowledge the auditors have not reviewed these factors from the perspective of setting future budget requirements for the National Service Trust. The Committee has asked the Office of the Inspector General to conduct such a review and to report back to the Committee.

We will continue to update the historical information used to estimate future requirements for the Trust. We also welcome independent reviews that will help strengthen the ability to predict requirements.

We have reviewed our requirements for 2002 and have determined that no new authority is needed for the class of AmeriCorps members that is being supported in the 2002 program budget. Future Trust Fund appropriations will be needed in fiscal year 2003 and beyond, but exact amounts are dependent on Congressional and Executive Branch decisions about the size of the AmeriCorps program and further adjustments to the data in the model resulting from additional year(s) of historical experience.

NEW INITIATIVES

Question. The new Silver Scholarships and Veterans Mission for Youth programs would be administered by the Corporation as competitive grants.

Do you have the program capacity to run these two new programs on top of the Corporation's current responsibilities? What sort of outcome measures will the Corporation establish to ensure that these programs are performing?

Answer. The addition of approximately 150 new grants will be easily managed. When compared to the total grants and agreements managed by the Corporation, these 150 new grants represent an increase of less than five percent. The task will be further facilitated by the new grants management system scheduled to be launched in the spring of 2002. The new grants management system will allow the Corporation to review and award grants online, significantly enhancing the administration of all grants.

Consistent with all of its programmatic activities, the Corporation has established preliminary outcome indicators to serve as measures of success for the Silver Scholarships and the Veterans' Mission for Youth Program. The Corporation will monitor its progress toward these outcome measures, and the results will be reported to the Congress as part of the Corporation's annual Performance Plan, as required by the Government Performance and Results Act (GPRA), beginning in 2002.

The outcome measures as proposed in the Corporation's fiscal year 2002 Budget Proposal are as follows:

Silver Scholarship Program

Indicator 1: The number of senior volunteers earning scholarships. Target: 10,000 senior volunteers.

Indicator 2: Number of Silver Scholarship grants funded. Target: 60 grants.

Indicator 3: Benefits to children tutored and mentored, in improved reading skills and reductions in risk behaviors. Target: To plan a research agenda focused on measuring these benefits to children.

Veteran's Mission for Youth Program

Indicator 1: The number of veterans or retired military personnel enrolled. Target: 15,000 veterans or retired military personnel.

Indicator 2: Number of Veteran's Mission for Youth Program grants funded. Target: 100 grants.

Indicator 3: Benefits to children tutored and mentored, in improved reading skills and reductions in risk behaviors. Target: To plan a research agenda focused on measuring these benefits to children.

In addition, the Corporation may adopt short-term accomplishment measures that could include the following: (A) Number of children tutored and/or mentored; (C) Number of Silver Scholarships earned; (D) Number of schools, community-based organizations, or other service agencies able to expand resources available to help children through the Silver Scholarship and Veteran's Mission for Youth Programs.

FAITH-BASED INITIATIVE

Question. President Bush has emphasized a vision of government where this Administration will expand opportunities to faith-based organizations, charities and community groups to help people in need. National Service already looks to these types of organizations to partner with in helping people in states and localities.

Are you looking to further emphasize partnering with faith-based organizations and in what way?

Answer. Since its inception, the Corporation for National Service has partnered with faith-based organizations, charities and community groups to help people in need. In response to the President's vision, the Corporation is exploring ways to expand its outreach to faith-based and small community-based organizations informing them of the existing resources and opportunities available. The Corporation recently held a focus-group discussion with 16 diverse leaders of faith-based and small community-based organizations from across the country to identify existing barriers and to facilitate access to Corporation resources.

In the next 90 days, the Corporation plans to create a technical assistance/resource capacity designed to provide support to faith-based and community-based organizations seeking resources to meet community needs. The Corporation further anticipates that state and local entities that receive Corporation funds will continue to partner with and involve small community and faith-based organizations in helping to meet needs in local communities, and that these entities will pursue opportunities to expand such involvement. We intend to help promote these developments.

REPORTING THE FULL COST OF CNCS PROGRAMS

Question. GAO reports have indicated that the Corporation lacks reliable cost information for some of its programs which hampers analysis of the true cost of its programs.

Do the Corporation's efforts in developing cost accounting information extend to gathering the information from its grantees that would provide reliable expenditure and cost data for all of its programs and operations?

Answer. Momentum Financials, the financial management system implemented at the end of fiscal 1999 and in use by the Corporation, has the capability to capture information on the full cost of Corporation programs, including grantee information by program. During fiscal 2000, the Corporation developed a cost accounting application that is integrated with Momentum in order to utilize Momentum data to determine the full cost of its major programs.

The Corporation oversees three national service programs:

—AmeriCorps is the national service program that engages thousands of Americans of all ages and backgrounds in full-time and sustained part-time community service and provides education awards in return for such service.

—The National Senior Service Corps is a network of more than 500,000 people age 55 and older who participate in the Foster Grandparent Program, the Senior Companion Program, and the Retired and Senior Volunteer Program. These programs tap the experience, skills, talents, and creativity of America's seniors.

—Service-Learning supports and promotes service learning in schools, universities, and communities. Through structured service activities that help meet community needs, more than 750,000 students improve their academic learning, develop personal skills, and practice responsible citizenship.

In accordance with federal cost accounting standards, these programs have been designated as the Corporation's "responsibility segments." Cost information by grantee for each of the above programs is captured through the use of individual grant numbers and grantee names and codes. Every Momentum cost entry by grantee (whether based on a financial status report or an electronic drawdown through the Health and Human Services Payment Management System) includes the program or purpose of the expenditure; this information is captured through the use of three digit purpose codes. This information, coupled with a reasonable allocation of program operation costs, allows the Corporation to provide the full cost by major program. Beginning with fiscal 2000, information on cost by major program is included in the Corporation's annual report.

We believe that the new grants system, when fully developed, will facilitate the reporting of financial information from grantees for all programs.

In addition to these expenditure data, the Corporation provides information on an ongoing basis to the Congress on the budgeted costs of members in all national service programs, including AmeriCorps. The General Accounting Office has reviewed and verified these data, and reported them most recently to the Congress in a February 2000 report entitled "National Service Programs Two AmeriCorps Programs' Funding and Benefits." In that report, the General Accounting Office reported the Corporation's budgeted funds per AmeriCorps*State National Participant for Program Year 1998–99 as $14,857 (p. 9). The report also noted that "Job Corps CCC Is More Costly Than AmeriCorps*NCCC" (p. 11), and that "military enlistees receive higher benefits than AmeriCorps participants" (p. 13).

In the Corporation's response to that report, we noted that the General Accounting Office documented reductions in budgeted funds per participant. GAO further found that the budgeted cost per member in the state and national programs to be in line with, and indeed ahead of, the schedule to meet an overall AmeriCorps target of $15,000 in average budgeted cost for the program year 1999–2000. Since that report, the Corporation has met the target established for fiscal year 1999.

PERFORMANCE REPORTING

Question. The Corporation's GPRA report includes an impressive amount of data. Your report indicates that the Corporation has a strategy for monitoring coverage that includes site visits, program evaluations and audits.

I am curious to know, however, how reliable this information is at this point. Please provide additional information on your strategy and what was done in fiscal year 2000 to ensure that the information was reliable.

Answer. The monitoring strategy employed by the Corporation has four components: (1) the State Administrative Standards Project, (2) a national monitoring plan and procedures followed by the program office, (3) pre-audit surveys of State Commissions by the Office of the Inspector General, and (4) reviews of additional information sources.

State Standards Project

In fiscal 2000, the Corporation continued and expanded its initiative to set administrative standards for state commissions on service. The State Administrative Standards Project helps the Corporation assess and expand the capacity of state commissions to administer federal funds in a responsible manner. The Corporation awards funds to state commissions for developing and supporting national service within the state. The state commissions must administer statewide grant processes, monitor programs, provide training and technical assistance, and serve as liaison between the Corporation and the local programs. The State Administrative Standards seek to communicate what the Corporation expects of state commissions. The standards were developed to serve as an effective and consistent tool for the Corporation to assess state commission administrative systems.

The first four of the 11 standards cover issues related to monitoring of sub-grantees: 1. Conducts proper grant processes; 2. properly monitors programs and ensures compliance; 3. properly monitors member records; and 4. reports properly to the Corporation for National Service.

The standards review process has three stages. First, a state commission completes a self-assessment using the Standards tool. The self-assessment helps the commission gain a realistic view of its own administrative systems. Second, a six-person review team spends one week at the commission conducting the formal standards assessment. When the review is complete, there are two products. One product is a technical assistance plan created in collaboration with the state commission and supported with financial resources from the Corporation. The plan will help the state commission meet any standards it has not yet met. The second product is an assessment by Corporation staff that, along with other considerations, determines eligibility for competitive and special initiative money and similar discretionary resources.

To date Corporation staff have performed 15 State Commission site visits using the State Administrative Standards and have issued 11 final reports. The current schedule calls for 14 reviews in fiscal 2001. Over the next two years, the remaining states will participate in a State Administrative Standards assessment. The Corporation is committed to helping all state commissions reach the level of operation described in the State Administrative Standards. The Standards will help the Corporation devolve more of the implementation of national service to the state level as the administrative capacity of state commissions increases.

National Monitoring Plan and Procedures

The AmeriCorps*State and National program office developed a formal monitoring plan for program year 1999–2000 (corresponds approximately to fiscal 2000) to apply to national direct grantees and state commissions. The plan consists of a risk assessment based on previous experiences with the grantees and certain risk factors. Priorities are assigned based on the risk assessment assigned to each grantee. The formal plan is an extensively detailed document. We welcome the opportunity to brief Subcommittee staff on this material.

Pre-Audit Surveys of State Commissions by the Office of the Inspector General

To date, the Corporation's Office of the Inspector General has conducted 37 pre-audit surveys of the state commissions. These pre-audits cover the Commissions' systems for administering their AmeriCorps grants, including these factors: (a) the process followed for selecting subgrantees, (b) control processes for administering grant funds, (c) controls for monitoring and evaluating subgrantees, and (d) controls on training and technical assistance. The results of these audits are shared with the CEO, the head of AmeriCorps, and the state commission.

Review of Additional Information Sources

In addition to the Standards Assessments and monitoring visits, the program office reviews grantee progress reports and financial status reports on a regular basis, noting anomalies and conditions that might result in the assessed risk of a grantee. Also, program officers are to be alerted by the Corporation's technical assistance providers and evaluation research contractors if they identify cases of waste, fraud, or abuse during the conduct of their work assisting and researching the AmeriCorps programs.

Question. Just what does it mean (and how reliable are the numbers) when the Corporation reports

—that close to 500,000 students were taught? Taught what and for how long—hours, days, a full year? [See page 13 of the CNS fiscal year 2000 Performance Report]

—that the NCCC assisted 55,000 veterans and senior citizens? Assisted how? [page 25]

Answer.

500,000 Students

The Corporation collects information about program activities and results from a variety of sources, using many methodologies. The statistic "500,000 students were taught" comes from the 1999–2000 Annual Accomplishments Review of AmeriCorps State/National. The response rate to the survey is 80 percent.

Accomplishment review data are self-report data collected by the local AmeriCorps programs during the course of their program year and, in 1999–2000, reported to the Corporation via either paper or electronic forms. The programs are provided with lists of potential accomplishments from which they select those that best describe their effort during the program year. For each accomplishment category, the program indicates the beneficiary and the accomplishment type (for example, students taught, students tutored, adults provided job counseling, etc.) and provides a quantitative measure of their activity.

Over the four AmeriCorps issue areas there are about 125 separate categories of accomplishments, including open-ended categories that permit programs to report accomplishments not currently enumerated. Regarding direct services in education, for example, the form distinguishes between student taught, students tutored, students mentored, students counseled, students provided other enrichment activities, and several others. Consequently, programs are able to report a type of accomplishment that accurately describes their efforts.

An independent research firm, under contract to the Corporation, reviews the data. Once report forms are received they are subjected to a variety of data checks to determine that the data reported are within reasonable ranges, for example, that the number of AmeriCorps members serving could have reasonably provided the extent of services being reported. Programs that report out-of-range data are contacted and the contractor assists the program in reporting their information more accurately. Typically, mathematical and typographic errors account for out-of-range reports.

Requesting details of all the accomplishments reported would constitute an unreasonable reporting burden in the Corporation's view. In the case of the accomplishment to which the Senator referred, we have the following additional details. Two-hundred twenty-two AmeriCorps State/National programs reported teaching in kindergarten, Head Start, or grades 1–12. This category is distinct from tutoring. About 80 percent of responses indicated teaching in multiple grade levels, although two-thirds reported some teaching in kindergarten and Head Start.

About one-third of those reporting indicated the subject matter they taught. Multiple subject matter responses were permitted. Of those reporting, 45 percent reported teaching reading, almost a third indicated mathematics instruction and roughly a fifth, science. Other subjects taught included music, art, social studies, and the environment. Details regarding the intensity or duration of instruction were not requested.

Beginning in 2000–2001, accomplishment data will no longer be collected via a separate data collection, but will be incorporated into the semi-annual progress reports provided electronically by the Corporation's grantees. This revision to the data collection process should permit the agency to determine further details about specific accomplishments from particular grantees.

*AmeriCorps**NCCC assisted 55,000 veterans and senior citizens*

Every project completed by AmeriCorps*NCCC teams has a Project Completion Report, which is signed by the NCCC Campus Director and the project sponsor, who is usually a community member associated with the organization sponsoring the service activity with NCCC. The Project Completion Report details the work accomplished in the course of the project. This report is filed with headquarters in hardcopy at the same time that the campus enters the accomplishment data into the AmeriCorps*NCCC Project Database. Aggregate statistics on accomplishments are prepared in Washington. The database has a coding system that permits the quantification of every area of service in which NCCC members engage. In the case of the assistance to 55,000 veterans and senior citizens, this datum was the aggregate results of 19 service projects in fiscal 2000. The members painted and made other repairs to senior citizens' homes and other senior service facilities. They also distributed clothing and meals and provided job training, medical care, and other services to homeless veterans.

Question. What are the five most important performance measures that the Corporation reports?

Answer. Taking into consideration that we have several components in our performance measuring system, we can address your question in two ways.

First, the Corporation believes and states in its annual performance report that the most important measures of program performance are those determined through independent program evaluations and through our accomplishment reports. It is through these studies that the results of service by AmeriCorps members in terms of benefits to the American people are being documented. In 2000, we have learned that:

—Students participating in AmeriCorps tutoring programs improved their reading performance from pretest to post-test more than the gain expected for the typical child at their grade level. The executive summary of this report is attached (Abt Associates 2001).

—AmeriCorps members (1) recruited or trained 32,900 tutors, (2) placed 14,000 homeless people in transitional or permanent housing, (3) engaged 72,200 students in violence avoidance activities after school (Aguirre International 2000).

Second, looking only at the performance indicator portion of our performance measurement system, we would identify the following as the "most important" indicators for fiscal 2000:

1. *Number of members enrolled in AmeriCorps***State and National*.—This measure shows enrollment levels in the largest component of AmeriCorps, the State and National Program. In program year 1999, which corresponds generally with fiscal 2000, AmeriCorps*State and National programs enrolled 35,319 members.

2. *Percent of [AmeriCorps***State and National Members] members who complete a term of service and become eligible to receive an education award*.—This measure shows how AmeriCorps is expanding educational opportunity. It is the rate at which members successfully earn the education award. Three out of four members ending their term of service in fiscal 2000, 75.4 percent, qualified for an education award; thus the Corporation's 75 percent goal was met. In the six years of full program operation, 1995–2000, the completion rates for AmeriCorps*State and National have ranged between 74 percent and 78 percent.

3. *Number of State Commissions reviewed for compliance with the national state administrative standards*.—This measure is discussed earlier, in the response to the question concerning monitoring strategies.

4. *Number of students in projects supported by Learn and Serve America*.—In fiscal 2000, the Corporation funded 106 school-based and community-based programs and 68 higher education programs. Service-learning programs supported by the Corporation with the fiscal 1999 appropriation enrolled approximately 1,188,000 participants in fiscal 2000.

5. *Audit opinion for fiscal year financial statements*.—Fiscal 2000 was a landmark year for the Corporation—for the first time it received an unqualified opinion on its consolidated financial statements. This achievement resulted from a commitment to strong management control and accountability for financial resources.

PROCUREMENT

Question. In the past, the Inspector General has added an additional material weakness to the list when she has testified before this Subcommittee. It is my understanding that once again in fiscal year 2000, the OIG assessed the Corporation's procurement operations and concluded that they remained materially weak and vulnerable to fraud and mismanagement.

What actions has the Corporation taken to correct this situation? Who is being held accountable for the lack of progress is resolving these conditions?

Answer. In June 2000, the OIG completed work on a follow-up audit of the Corporation's Procurement Operations. The report noted that many improvements had been made in the Corporation's procurement operations, but also identified several instances where an error had been made in some aspect of the procurement process. While these types of procedural errors are not unusual in procurement offices that must deal with over 1,500 pages of guidance in the Federal Acquisition Regulation (FAR) alone, they are neither egregious nor indicative of fraud, waste, or abuse. They are, simply, mistakes. None of the errors found, taken alone or in the aggregate, could result in a material loss to the Corporation. It is also important to note that the auditors found no instances of fraud, waste, or abuse.

The Corporation agrees that the errors identified in the audit report warrant management's attention and corrective action, which it has taken action to improve the procurement operation. However, they simply do not rise to the level of significance that the procurement operation should be deemed materially weak.

QUESTIONS SUBMITTED BY SENATOR BARBARA A. MIKULSKI

KEEPING NATIONAL SERVICE STRONG UNDER THE NEW ADMINISTRATION

Question. Please explain the rationale for not maintaining the previous Administration's goal of 100,000 AmeriCorps slots per year by 2004?

Answer. Among the 15 priorities listed in the President's Budget, as described in A Blueprint for New Beginnings, is the promotion of service and volunteerism. The President has allocated additional resources in support of this goal, particularly to promote additional opportunities for service by the Nation's seniors.

With respect to AmeriCorps, the budget maintains support for 50,000 members, the same level as in the prior year. We believe this to be a significant commitment to national service, continuing a level approved by Congress on a bipartisan basis in fiscal years 2000 and 2001.

The President's overall budget for fiscal year 2002 does set limits on the growth of overall discretionary spending. Growth is moderated from the recent trend of more than six percent to four percent. It is within that context that the budget for AmeriCorps was determined. Decisions on the size of AmeriCorps in subsequent years will be determined in future budgets.

Question. How can the 2002 AmeriCorps request, which is only $7 million above last year's level, maintain the commitment to existing AmeriCorps State and National programs while also funding Education Award Grants and AmeriCorps Promise Fellowships at $14 million as proposed in the budget request?

Answer. The AmeriCorps grants budget is a $7 million increase above the prior year level. As you point out, that amount includes the transfer of two programs from the Innovation and Assistance category—Education Award grants and AmeriCorps Promise Fellowships. We are proposing these transfers because these programs are part of AmeriCorps, and the transfer will enable state commissions and national direct organizations to make decisions about which component of AmeriCorps works best for them. Under the current arrangement, where components of AmeriCorps are funded under different activities, the Corporation must restrict the ability of state commissions and national direct organizations to choose among the different components of AmeriCorps.

A critical part of the budget is the appropriations language that will permit the transfer of these programs while continuing the flexibility necessary to carry them out. Specifically, the appropriations language transfers the authority of these programs to subtitle C of the National and Community Service Act without subjecting organizations to the administration cost, matching fund, and participant benefit requirements of this subtitle. AmeriCorps Promise Fellows and Education Award programs will continue to operate exactly as they do today.

We are currently spending approximately $11 million in those programs—$6 million for Promise Fellows and $5 million for the Education Award program. Our 2002 budget proposes up to $14 million, because we thought it important to give states and communities some flexibility in which part of AmeriCorps they wish to use. For example, under this approach a state commission will be able to allocate additional funds for the Education Award program while reducing amounts requested in the other components.

You are right when you say that we are only transferring approximately $7 million to cover the costs of these two programs while we are currently spending about $11 million. However, we think that the national service field can absorb about $4 million between fiscal years. Each year some programs do not spend up to their full budget amount, and that carry-over is available in the next year. We believe that the $4 million will be available from carry-over, and therefore there will not be any negative program impact.

Question. Will this require cut-backs in existing AmeriCorps programs?

Answer. No. Cut-backs in existing AmeriCorps programs are not required.

Question. If so, does the Corporation intend for these cuts to be in State or National programs?

Answer. As noted above, we do not believe that any cut-backs in existing AmeriCorps programs are required under the President's Budget. In total, the President's Budget for fiscal year 2002 will support 50,000 AmeriCorps members, the same level as in the prior fiscal year.

DIGITAL DIVIDE/E-CORPS

Question. How will the Corporation spend the $25 million provided in fiscal year 2001 for E-Corps?

Answer. The Corporation has not yet concluded its grant cycles for fiscal year 2001 and would be pleased to provide a full report once all grant decisions have been made. To date, the competitive grants submitted by state commissions resulted in $10 million being approved for activities to address the digital divide. This amount does not include AmeriCorps*State formula submissions and AmeriCorps*National Direct grants, which are under review. We expect all three categories of grants to support activities to address the digital divide.

The following represent some of the current activities being conducted to address the digital divide:

—Train teachers on the identification, integration and use of technology in their curriculum, and provide technical assistance to teachers in the classroom.

—Train youth in computer skills and Internet usage for education, communication, and career development.

—Train adults and community residents in technology so that they may find employment.

—Assist in developing technology plans for schools and community centers.

—Provide training and technical support to nonprofit organizations in the use of technology.

In addition to these activities and those supported under Learn and Serve America, Corporation resources in support of activities to address the digital divide include:

—*AmeriCorps*VISTA*.—Involved in assessing technology needs, developing and implementing technology plans, mobilizing and securing resources, designing training programs, and providing technical assistance. Projects include Team TECH, Next Day, NetDay, LATTICE, and PowerUP. With the exception of NetDay, most of the projects are community-based.

—*AmeriCorps*NCCC*.—The NCCC is currently working in schools, YMCAs, and Boys and Girls Clubs across the country performing tasks related to bridging the digital divide. NCCC support includes assisting in the wiring and rehabilitation of sites for the use of computers, teaching students how to use computers, contributing to the technology training of teachers, tutoring students in various subjects on computers, and conducting outreach for volunteers in the community to assist the program following the departure of the team. NCCC is able to adjust its schedule to meet the needs of the community and can provide assistance before and after school, during school hours and on the weekends.

—*Senior Corps*.—Senior Corps programs are engaged in assisting other older adults with understanding and using technology; helping projects build their capacity to utilize technology, e.g., listservs; and training volunteers on computers to help children.

—*DigitalConnections*.—DigitalConnections is a cross-stream national service discussion forum for programs addressing and narrowing the digital divide. It is provided to this new and growing category of programs to enable their staff and members to share information and seek advice from their peers. The purpose of this listserv is to exchange ideas, information, and resources related to implementing technology-based service projects.

Question. Can the Corporation quantify how many volunteers we've had in digital divide programs?

Answer. Once the fiscal year 2001 grant cycles are completed, we will be able to identify the number of AmeriCorps members supporting digital divide activities. We will also be able to determine the number of uncompensated community volunteers recruited by the AmeriCorps members to assist in digital divide activities. Under Learn and Serve America, for grants made specifically for that purpose, we will quantify the number of student volunteers.

In fiscal year 2000 the Corporation conducted a specific Notice of Funds Availability (NOFA) for digital divide programs and funded 30 AmeriCorps*State and National programs at an aggregate of $9 million to support over 1,100 members. Learn and Serve America made eight grants totaling approximately $2,925,000 for K–12 School-based digital divide grants awards from fiscal year 1999 and fiscal year 2000 grant funds. At the time of award, the 8 Learn and Serve America applicants planned to make 41 subgrants that would involve 4,603 student participants. We will have the totals for fiscal year 2001 grants by September of this year.

Question. Can the Corporation quantify digital divide awards and what they usually pay for—teacher training, student training, equipment, etc? How much in each category?

Answer. Grantees have identified the primary activities they will undertake in order to address the digital divide. They are not required, however, to report financial information against each individual activity.

Once the fiscal year 2001 grant cycles are completed, we will analyze the activities and budgets and estimate amounts by category, if feasible.

Question. What criteria does the Corporation use when deciding which digital divide programs to fund?

Answer. The Corporation uses the criteria adopted by its Board of Directors that has three major categories: Program Design, Organizational Capacity, and Budget/Cost-Effectiveness. Under Program Design, the criteria include getting things done, strengthening communities, and member development. Detailed expectations are provided under each of these subcategories. The NOFA also provided explanatory language and examples of activities.

Question. Does the Corporation place a high emphasis on programs that teach teachers technology, specifically those that will "institutionalize" technology, so that we are creating a legacy of technology empowerment that lasts long after E-Corps members move on?

Answer. A major component of all national service programming is institutionalization and sustainability. This is an explicit criteria used to evaluate applications, and it is of major importance in our digital divide programming. There are many ways to accomplish sustainability; one of them is the teaching of technology to teachers, and that is part of our programming strategy.

Question. What percentage of digital divide proposals submitted to the Corporation are: actually funded? are worthy of support but are declined due to lack of funds?

Answer. In fiscal year 2000, we received 44 applications for AmeriCorps*State/National and 23 applications for Learn and Serve requesting over $27 million in funds. Thirty AmeriCorps*State/National programs and 8 Learn and Serve programs received funding, totaling $12 million. Hence, we funded 57 percent of the organizations requesting funds and 44 percent of the amounts requested.

In general, throughout our history, including the digital divide competitions, we are unable to fund all programs worthy of support. It is not possible, however, to provide a specific percentage of applicants that are worthy of funding but are declined due to lack of funds. In some cases, the Corporation does not receive an application because the state commission has responsibility to select programs competitively within available resources provided on a formula basis. Under Learn and Serve America, State education agencies receive funds in part on a formula basis and determine which applicants within the state are funded.

For fiscal year 2001, we are currently in the midst of the AmeriCorps grant cycle. Most grantees are in the second or third year of a three-year grant. With available funds, Learn and Serve America cannot make new grants in any category, including bridging the digital divide, in 2001 and 2002. Fiscal year 2000 grants and activities are expected to continue for three years.

Question. Can the Corporation quantify the "success rate" of the Corporation's digital divide programs? How many teachers have been trained? How many students have become computer-literate as a result of these programs?

Answer. It is still too early in the implementation of these programs to provide such specificity. Most of the digital divide programs approved at the end of fiscal year 2000 have just begun. We will have better accomplishment data later this fall.

As with other national service programming, it is our intent to evaluate the success of these programs in meeting their objectives. Evaluation of these programs will require determining the nature of their outputs, that is, what service was performed, as well as determining what, if any, changes in service recipients occurred as a consequence of the service provided. Typically we will begin to collect descriptive data about programs' outputs after their first year of operation, and we will have data about many of these programs at the end of the current program year. Standards for data reporting vary somewhat between programs, which increases the challenge of collecting these data across all program streams.

Insights about the effect of programs are generally best captured after they have been operating for several grant cycles. Frequently, so much is learned by both grantee and grantor during the first operational year that program changes occur. Once the programs have stabilized their service model, evaluation of outcomes can begin. Based on experience, we would anticipate beginning to conduct outcome evaluation of the digital divide programs in the 2001–2002 program year. Even at that time, we will devote considerable attention to questions of implementation. By 2002–2003 we can be confident that outcome research will reflect a relatively mature program and its effects.

We will assess outcomes using a combination of quantitative survey research and qualitative case studies to assess how the programs were implemented, how successfully they have been able to deliver services, what occurred as a consequence of their service, and what changes have occurred.

Question. The National Science Foundation is also a major player in teacher training in math and science. Is the Corporation aware of what NSF is doing in this area?

Answer. We have worked closely with the Department of Education on a number of initiatives, but to date have not had conversations with the National Science Foundation about their activities. The Corporation will begin discussions with the National Science Foundation to see what activities they support, what they have learned, and how we can coordinate our support.

Question. Have AmeriCorps and NSF cooperated on the digital divide issue?

Answer. The Corporation researched a number of sources and contacted numerous organizations prior to beginning the digital divide programming. However, we had not contacted the National Science Foundation, and will do so in the immediate future.

FAITH-BASED INITIATIVES

Question. Is the Administration relying on the experience and expertise of the Corporation as the White House Office on Faith-Based Initiatives develops its plans?

Answer. The White House Office of Faith-based and Community Initiatives has consulted with the Corporation on our experience with faith-based and other community-based organizations. Under the leadership of newly appointed Corporation Board member and Board Chair-elect Stephen Goldsmith, the Corporation will continue to explore ways to build upon its on-going work with faith-based and other community-based organizations.

Question. Is the Corporation providing guidance to the White House on how it maintains important safeguards to protect against discrimination with government funds?

Answer. Since its inception, the Corporation for National Service has provided a level playing field to all eligible applicant organizations, including faith-based organizations. We have also applied the safeguards included in the national service legislation to ensure that federal funds are not used to support religious worship, religious instruction, or religious proselytization. We have provided information about these safeguards to the White House Office of Faith-based and Community Initiatives.

Question. To what extent have the agencies that are establishing centers for faith-based programs (HUD, HHS, Education, Justice, and Labor), as directed by President Bush's executive order, reached out to the Corporation's staff for advice?

Answer. At this time, there has been no formal communication between the Corporation for National Service and the centers for faith-based programs established by five agencies (HUD, HHS, Education, Justice, Labor) under Executive Order 13198. The White House Office of Faith-based and Community Initiatives has consulted with the Corporation and we would welcome the opportunity to provide any assistance to the faith-based centers at the other Federal agencies.

Question. Is the Corporation regularly consulted by the White House and the other agencies so that you can give them the benefit of your experiences in this issue?

Answer. Through Board member Stephen Goldsmith, the Corporation continues to update the White House on its activities. We welcome the opportunity to consult with other agencies about our experience with small community-based and faith-based organizations.

Question. What guidelines are followed when the Corporation, or State Commissions, make decisions between competing proposals, particularly when there are competing proposals that seem to be equally responsive to the program's objectives—and one application is from a faith-based group and one is from a secular group?

Answer. The Corporation for National Service and the State Commissions operate under clear guidelines in making decisions on competing proposals. Upon review of proposals, decisions are made on the merits of the organization's ability to meet the programmatic guidelines regardless of the secular or faith-based nature of the organization.

Question. Does the Corporation consult with outside experts consisting of both religious and secular organizational representatives to give staff advice on the most promising proposals?

Answer. Reviewers are selected based on their expertise, work experience, education, and knowledge of national service, volunteerism, nonprofit management, grants management and specific technical subject areas. These reviewers are representative of the national service field and include both secular and faith-based organizations to review proposals.

SILVER SCHOLARSHIPS

Question. Why did the Corporation decide to award these new scholarships to individuals who are age 55 and older, as opposed to those who are eligible to receive Social Security benefits (age 62 and older)?

Answer. Eligibility at age 55 is consistent with existing or proposed law for the three existing senior service programs administered by the Corporation: the Retired and Senior Volunteer Program (RSVP), the Senior Companion Program, and the Foster Grandparent Program. These programs receive their appropriations through the Labor-HHS Subcommittee. RSVP currently enrolls persons aged 55 and older. Previous reauthorization proposals called for lowering the eligibility from 60 to 55 for the Foster Grandparent and Senior Companion Programs.

Question. Are any other scholarships or educational awards made by the Corporation tax free?

Answer. No.

Question. If not, why the special treatment for the Silver Scholarships?

Answer. We do not believe that this constitutes special treatment. There are a number of other comparable scholarships that are supported by federal and state governments that are treated for tax purposes in a similar fashion. The tax treatment of other benefits provided by the Corporation, including education awards, is an issue that can be explored along with other legislative proposals for the Corporation.

Question. Why should senior volunteers receive a benefit that younger volunteers don't?

Answer. The scholarship will give the healthiest and best-educated generation of seniors in history an incentive to volunteer as tutors and mentors. And while the scholarship is based on the service of senior volunteers, they must transfer it to a child who will in turn use it for educational purposes. The tax treatment of the education awards for the Corporation's other programs can be addressed as part of the larger reauthorization of national service legislation.

BALTIMORE EXPERIENCE CORPS

Question. Has the Corporation evaluated this demonstration program to determine its effectiveness?

Answer. No, the Corporation has not evaluated the Baltimore Experience Corps specifically. However, we have evaluated other Experience Corps and Seniors for Schools projects that are similar to the Baltimore Experience Corps. Evaluation reports reflect that all projects have been very successful, had a positive impact on students' reading abilities, and had a positive impact on schools. For example, ninety-two percent of students' pre- and post-tested in the Seniors for Schools program demonstrated improved reading skills during the project year.

Question. If the data shows that the program has had a positive impact, should it be expanded?

Answer. The data shows that the Experience Corps and Seniors for Schools programs have been very successful. However, in fiscal year 2000, the Congress, in the Consolidated Appropriations Act, directed the Corporation to end the payment of monetary incentives to individuals not meeting income guidelines as prescribed in the Domestic Volunteer Service Act. The Experience Corps projects provide monetary incentives to all volunteers serving fifteen or more hours a week regardless of income. Therefore, the Corporation is no longer able to fund Experience Corps and Senior for Schools Demonstration projects under appropriations provided for the Domestic Volunteer Service Act through the Subcommittee on Labor, Health and Human Services, Education, and Related Agencies.

NEIGHBORHOOD REINVESTMENT CORPORATION

STATEMENT OF ELLEN LAZAR, EXECUTIVE DIRECTOR

ACCOMPANIED BY:
MARGARET H. KELLY, DEPUTY EXECUTIVE DIRECTOR
CLARENCE J. SNUGS, DEPUTY EXECUTIVE DIRECTOR/TREASURER

STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Welcome, Ms. Lazar. And we will now hear from—we will now hear from the Neighborhood Reinvestment Corporation. It has been about 5 years since we last had an NRC hearing. So, I am very pleased to welcome Ms. Ellen Lazar, who, ironically, is no stranger to the subcommittee. We welcomed her here last year as head of CDFI. And I am very happy to see that Ms. Lazar has made a smooth transition from the previous Administration. Welcome.

The Administration's budget request for the NRC is for an increase of $5 million; from $90 million for fiscal year 2001 to $95 million for fiscal year 2002.

Neighborhood Reinvestment and its network of local Neighborhood Housing Services have performed a number of very valuable housing and economic development activities that I think really do not get enough recognition and credit.

In my home State of Missouri, affiliates in St. Louis and Kansas City have been working in some of the most distressed communities, and have been instrumental in revitalizing these neighborhoods. I am very proud of the work they do. And I say here, publicly, a sincere thanks to you and to all of the—the people throughout the country who are working in Neighborhood Housing Services.

We welcome you here, and now would be glad to have your testimony to hear about NRC's activities, and especially the Affordable Housing Programs.

I—this is a high priority for me to stimulate the production of more affordable housing. And I am also interested to hear how NRC has been involved in helping HUD dispose of its single-family assets and administer its new Section 8 Home Ownership Program.

So, we have lots—lots of questions. And we look forward to having your testimony.

STATEMENT OF ELLEN LAZAR

Ms. LAZAR. Thank you, Senator—Chairman Bond, Ranking Member Mikulski, Senator Johnson, and members of the subcommittee.

I am Ellen Lazar. I joined Neighborhood Reinvestment as its Executive Director in October of 2000.

It is a pleasure to be here today to testify on behalf of the Neighborhood Reinvestment Corporation and the 215 members of its NeighborWorks® network.

Our Board Vice Chair, Governor Edward Gramlich is in the audience today. I would like to acknowledge the Governor.

I am joined today by our two Deputy Directors, Margo Kelly and Clarence Snuggs.

I would like to request that my full testimony be included for the record today.

Senator BOND. Without objection, it will be so included.

Ms. LAZAR. Thank you. As the new Executive Director of Neighborhood Reinvestment, it has been gratifying to learn of the great dedication to improving distressed communities in America this subcommittee has shown through its support of our work.

I thank the subcommittee for supporting Neighborhood Reinvestment through the fiscal year 2001 budget appropriation of $90 million.

FISCAL YEAR 2002 BUDGET REQUEST

Neighborhood Reinvestment's fiscal year 2002 budget justification outlines proposed activities at a $95 million budget level. This includes a core budget level of $85 million, to continue our community revitalization efforts in urban, suburban, and rural communities, and $10 million to expand a groundbreaking pilot effort to utilize the HUD Section 8 program in support of home ownership for low income families.

I would now like to discuss a few of the proven successes of the NeighborWorks® network, and touch on a couple of new initiatives now being undertaken that keep the Corporation and the NeighborWorks® network at the cutting edge of changes and improvements in community revitalization.

CAMPAIGN FOR HOME OWNERSHIP

The Campaign for Home Ownership was launched by Neighborhood Reinvestment and members of the NeighborWorks® network to increase home ownership rates in their communities, particularly among families of modest means.

The outcomes of the first campaign greatly exceeded expectations. Over 15,000 families purchased homes and more than $1.1 billion in total investment was generated. The NeighborWorks® Campaign for Home Ownership 2002 has passed its mid-point, and is on-target to surpass all of its goals for production and leveraged investment.

Since the campaign began in January 1998, nearly 27,000 families have purchased homes in their communities for a total of $2.3 billion. Of the families assisted, more than 95 percent of them are first-time home buyers; 90 percent have low or moderate incomes; 52 percent are minorities; and 41 percent are female-headed households.

In addition, more than 161,000 families have received homebuyer education and counseling services and are on the path to home ownership.

SECTION 8 HOME OWNERSHIP

We continually seek innovative solutions to help transform communities through home ownership. In the late 1990's, changes to the HUD Section 8 program statute permitted its vouchers to be used for the first time toward the costs of home ownership. Families served by NeighborWorks® organizations under the Section 8 homeownership option have incomes as low as 30 percent of area median income, and we continue to see the Federal funds used for this effort leverage private sector investments.

In fiscal year 2000, Congress recognized the NeighborWorks® network approach to the Section 8 homeownership option and provided Neighborhood Reinvestment with a $5 million set-aside to test it further.

One of the benefits offered by Neighborhood Reinvestment is the ability to bring economies of scale, a diverse testing ground, and sound evaluation methods to efforts like the Section 8 homeownership option.

NEIGHBORWORKS® MULTIFAMILY INITIATIVE

While home ownership is a central strategy toward achieving community revitalization, nearly all NeighborWorks® neighborhoods have multifamily housing needs, as well. Currently, NeighborWorks® organizations own or manage more than 25,000 high-quality multifamily units.

In response to the growth in multifamily activity, Neighborhood Reinvestment launched the NeighborWorks® Multifamily Initiative in 1999. This initiative has provided 43 NeighborWorks® organizations with technical assistance, asset management training, and training in best practices in multifamily property development and management, thereby positioning them to be at the forefront of efforts to strength neighborhoods by providing affordable, well-managed rental housing.

The NeighborWorks® network has proven that when multifamily properties are financed, built, and managed for the long-term benefit of the community, the impact can be broad and positive. Well-maintained, these properties help improve the physical character of the community and support the values of the surrounding properties. Combine physical strength with ongoing affordability, and the result is lengthened resident tenure and a more stable and positive environment for families.

One example of a successful multifamily strategy is the successful adaptation and expansion of the Mutual Housing Association concept from its west European roots. Mutual Housing is one of the innovations that continue to produce units, as well as creative strategies for developing sustainable, affordable housing.

Initiated in the eighties at the request of Congress, Neighborhood Reinvestment engaged in a multiyear demonstration of Mutual Housing Associations. This demonstration resulted in the creation of 10 Mutual Housing Associations that have produced more than 6,400 units of quality housing. The units continue to operate in great physical and strong economic condition, even after 10 to 20 years.

With resident leadership actively promoted as part of the operating plan, Mutual Housing residents stand out as community leaders, both within their own property and within their larger neighborhoods.

Mixing of incomes, ranging from 30 percent of median to 100 percent of median family income, creates healthy, dynamic communities in which the cycle of property is broken. The stigma of low income housing is overcome in the eyes of the community. And the long-term economic viability of the property is improved.

One of our network members, Rocky Mountain Mutual Housing Association in Colorado, has been able to serve very low income families by maintaining no or little debt on its properties to keep rents affordable. Rocky Mountain Mutual acquired two FHA foreclosed properties at little cost, and rehabilitated the properties, using, among other sources, two Hope II grants.

Through resident services, such as a staffed computer lab and community center, and through active resident participation in management of the properties, residents and neighborhood members, alike, consider these properties a neighborhood asset and a cornerstone in revitalizing a community on the edge.

The network and Neighborhood Reinvestment's multifamily activities demonstrate sustainable excellence and positive impact over an extended period of time.

PREDATORY LENDING

I would like to take a moment to talk about predatory lending. Predatory lending is a very real threat to the great work NeighborWorks® organizations and their lender and Government partners have done in distressed communities.

As predatory lending practices have proliferated and affected increasing numbers of families and communities, NeighborWorks® organizations and others look to Neighborhood Reinvestment to provide a forum for discussion and a mechanism for coordinating efforts to combat these abusive lending practices at the local level.

In response, Neighborhood Reinvestment has worked to understand the impact of predatory lending through sponsorship of research symposia and public education.

In addition, Neighborhood Reinvestment has developed a significant partnership with Freddie Mac to develop a loan product for families that find themselves with a loan that has the hallmarks of a predatory loan. This program, which has an extensive counseling requirement, offers an opportunity for families to refinance and thereby retain their homes.

We also believe that financial literacy training and post-purchase education are effective strategies to combating the proliferation of predatory loans. Neighborhood Reinvestment is actively engaged in developing additional tools for this kind of training.

VISION FOR NEIGHBORHOOD REINVESTMENT

This year, we are requesting an appropriation of $95 million, which includes $10 million to further Neighborhood Reinvestment's and the NeighborWorks® network's pioneering efforts in using Section 8 vouchers to purchase a home. At this funding level, Neighborhood Reinvestment will be able to maintain its current level of services to the NeighborWorks® network with modest increases to the outputs and measures.

Your support for our efforts has allowed us to play a critical role in revitalizing America's communities. Since Congress created the

Neighborhood Reinvestment Corporation in 1978, this organization has served as an essential and unique laboratory for cutting-edge strategies in the community development field.

Your support has enabled us to make critical initial investments in a host of innovative strategies that have brought to the table public and private sector interests that would never otherwise have been assembled.

Examples include our Home Ownership Campaign, Multifamily Initiative, our Mutual Housing activities, the Apartment Improvement Program, the predatory lending pilot with Freddie Mac, and more recently, the Section 8 homeownership initiative, and a new venture to create an equity assurance program to stimulate activity in soft markets.

Seating these promising ventures with very modest, very flexible public funds, combined with intensive facilitation and staff support, has made all the difference. The benefits of those innovations have touched thousands of families and have provided extensive training opportunities and widely disseminated winning strategies to benefit the entire community development industry.

This is an exciting and challenging time, as Neighborhood Reinvestment and the NeighborWorks® network continue to build upon the strength of the past, while looking ahead to confront the problems and opportunities of the future.

PREPARED STATEMENT

I am very eager to lead this organization along its well-chosen route, while scouting ahead for new ways we can be successful in our work and add value to the field of community-based development.

Thank you for your time today. And I am happy to entertain any questions.

[The statement follows:]

PREPARED STATEMENT OF ELLEN LAZAR

Chairman Bond, Ranking Member Mikulski and Members of the Subcommittee: I am Ellen Lazar, and I joined the Neighborhood Reinvestment Corporation (Neighborhood Reinvestment) as executive director in October 2000. It is a pleasure to be here today to testify on behalf of the Neighborhood Reinvestment Corporation and the 215 members of its NeighborWorks®network.

As the new executive director of Neighborhood Reinvestment, it has been gratifying to learn of the great dedication to improving distressed communities in America you have shown through your support of our work. This level of commitment, evidenced over more than 25 years, extends beyond funding and can be seen in the involvement and interest many of you have shown through your visits to local NeighborWorks® organizations, where you have witnessed and celebrated their successes. This in turn has boosted local partners' confidence in being able to achieve our shared mission of stimulating reinvestment in communities of great need.

I thank the Subcommittee for supporting Neighborhood Reinvestment through the fiscal year 2001 budget appropriation of $90 million. Neighborhood Reinvestment's Fiscal Year 2002 Budget Justification outlines proposed activities at a $95 million budget level. This includes a core budget level of $85 million to continue our community revitalization efforts and $10 million to expand a groundbreaking pilot effort to utilize the HUD Section 8 program in support of home ownership for low-income families.

By way of background, the NeighborWorks® system comprises:

—Neighborhood Reinvestment Corporation is a Congressionally chartered, public nonprofit corporation, headquartered in Washington, D.C., and staffed in nine regional offices. Neighborhood Reinvestment:

—provides funding (that gets leveraged many times over), technical assistance, training and other resources to its network members and the community-based development industry as a whole;
—coalesces public and private support for local, regional and national community reinvestment efforts;
—contributes to policy decisions concerning housing and other means of transforming neighborhoods and improving the lives of lower-income families; and
—monitors changes in the field, assesses the need for new approaches, and initiates research or programs to address those needs.

—The NeighborWorks® network was founded by Neighborhood Reinvestment and has evolved from 34 local pilot organizations operating in about a dozen states in the 1970s to an impressive 215-member network of locally-run nonprofit organizations working to expand affordable housing opportunities and support neighborhood revitalization in nearly 1,700 communities in 48 states, the District of Columbia and the Commonwealth of Puerto Rico. Network members operate in our nation's largest cities and in some of its smallest rural communities. Regardless of their target communities, NeighborWorks® organizations function as partnerships among local residents, business leaders and local government representatives, with strategies to share, best practices that get replicated and financing mechanisms that are flexible.
—Neighborhood Housing Services of America (NHSA) is a secondary market funded by social investors and purchases loans from NeighborWorks® organizations, thus replenishing their revolving loan funds and enabling them to finance even more homeownership, rehabilitation and multifamily housing. The services NHSA provides benefit lower income borrowers; the median borrower income is $24,652.

The NeighborWorks® system is the only coordinated effort of its type in the nation. It is unique in that it
—Provides a national delivery system—built on a national network of locally-directed, community-based partnerships;
—Fosters local and regional leveraging of national resources;
—Serves as a laboratory for testing creative solutions to problems that impede affordable housing production and neighborhood revitalization;
—Provides a strenuous review process in order to be admitted to the NeighborWorks® network, as well as on-going program reviews to improve organizational efficiency while reducing programmatic risk; and
—Facilitates a learning environment for benchmarking and expanding best practices in the field.

Through the guidance of the Corporation's Board of Directors, the experience of Neighborhood Reinvestment staff, and the willingness of NeighborWorks® organizations to share the fruits of their labors, the NeighborWorks® system will, with your support, continue to enhance neighborhoods and improve lives throughout America in the year ahead.

I would now like to discuss:
—the Shared Vision of the NeighborWorks® system;
—the Proven Successes that have made the Corporation and the network the respected institutions they are today;
—the Exciting New Initiatives now being undertaken that keep the Corporation and the network at the cutting edge of changes and improvements in the community revitalization field; and
—the NeighborWorks® system's Outcomes and Achievements over the last two years and those anticipated for the next fiscal year.

INSPIRED LEADERSHIP AND THE NEIGHBORWORKS® VISION

One of the most significant changes to the NeighborWorks® system in fiscal year 2000 was the retirement of Executive Director George Knight. For 10 years Mr. Knight shared the network's and Neighborhood Reinvestment Corporation's vision of "Transforming Communities Together." By encouraging cooperative relationships both within and outside the NeighborWorks® network, he was able to foster an expanded and ever more efficient and effective network. His guidance of the Corporation led to significant growth within the NeighborWorks® network.

During the past ten years, the number of communities served by the network grew from 270 to 1,559—a 477 percent increase. Likewise, the number of families who benefited from the network's products and services increased 488 percent—from 5,788 families in 1990 to more than 34,000 families in 2000. Most importantly, the Neighborhood Reinvestment's Congressional appropriation was leveraged very successfully by the NeighborWorks® network. In 1990, each federal dollar leveraged $5.30 from other sources; by 2000, that figure had grown to $16.90.

I have been familiar with the impressive work of Neighborhood Reinvestment for many years, and I am fully committed and prepared to continue to foster an environment that stimulates innovation and creative responses to the needs of families being served by the network. The increased productivity of the NeighborWorks® Campaign for Home Ownership, and our work using Section 8 vouchers for home purchase are just two current examples of how the NeighborWorks® network is providing innovations for the community development field. Our work to grow resident leaders, through Community Leadership Institutes, continues to reap great benefits for communities. Our Training Institute is helping to grow a cadre of leaders for the community development field. I look forward to working with you, our NeighborWorks® network, residents and public and private sector partners to further enhance and transform communities.

PROVEN SUCCESSES

During fiscal year 2000, the NeighborWorks system® accomplished much through its core programs, which are the foundation of the NeighborWorks® system. Among these are:

—*Locally-Controlled Revolving Loan Funds*.—Locally directed revolving loan funds are the basis of much of the success of the network. Revolving loan funds are controlled by the local NeighborWorks® organizations and are used to provide flexible funding for community priorities, such as home ownership, rehabilitation, multifamily housing, and commercial and economic development. The liquidity of the local revolving loan fund is in many cases assisted by selling loans to NHSA. Neighborhood Reinvestment Corporation supports these revolving loan funds through technical expertise, training, and funding. Most of the funding for revolving loan funds comes from local sources—loans and grants made by banks, insurance companies, foundations, local governments and other local investors. Most of those who benefit from the revolving loan funds are hard-working families who are typically under-served. For example, 70 percent of loans made through a NeighborWorks® revolving loan fund are made to very low- or low-income households, 63 percent are made to minority-headed households, while 43 percent are made to female-headed households.

—*NeighborWorks®* Campaign for Home Ownership.—In 1993, the first NeighborWorks® Campaign for Home Ownership was launched by Neighborhood Reinvestment and members of the network to increase home-ownership rates in their communities, particularly among families of modest means. The outcomes of the first Campaign greatly exceeded expectations: 15,880 families purchased homes, and more than $1.1 billion in total investment was generated.

This success led to the Campaign for Home Ownership 2002, which has more aggressive goals: to create 40,000 new homeowners, provide housing counseling to 270,000 families, and generate $2.9 billion in investment in struggling neighborhoods, over a five-year period from 1998 to 2002.

The NeighborWorks® Campaign for Home Ownership 2002 has passed its midpoint and is on target to surpass all of its goals for production and leveraged investment. Since the Campaign began in January 1998, nearly 27,000 families have purchased homes in their communities, for a total investment of $2.3 billion. Of the families assisted:

—More than 95 percent are first-time buyers;
—90 percent have low- or moderate-incomes;
—52 percent are minorities; and
—41 percent are female-headed households.

In addition, more than 161,000 families have received homebuyer education and counseling services and are on the path to home-ownership.

In addition to achieving these impressive goals, the Campaign for Home Ownership has helped refine and create more effective mechanisms for service delivery, raised the degree of professionalism of home-ownership activities, and helped increase organizational capacity at the local level. Out of the collaborative efforts of the members of the Campaign, the NeighborWorks® network has developed major innovations in the way community residents are assisted, not only to become, but to remain, successful homeowners. These innovations include:

—Full-Cycle Lending℠—which provides education and counseling that covers needs from pre-purchase credit repair, through post-purchase home repair and foreclosure prevention;

—the creation of 55 NeighborWorks® HomeOwnership Centers—where assistance on all aspects of buying and maintaining a home are provided under one roof;

—an intensive Homebuyer Education curriculum offered at the Neighborhood Reinvestment Training Institute;
—being on the forefront of identifying predatory lending practices and providing a forum for local practitioners to discuss this emerging issue;
—foreclosure-prevention strategies and strategies to address predatory lending; and
—a financial literacy curriculum.

Neighborhood Reinvestment was recently notified that it has been selected as a semi-finalist in the 2001 Innovations in American Government Award by the Harvard University's Kennedy School of Government and The Ford Foundation for the development of 55 NeighborWorks® HomeOwnership Centers across the nation.

—*The NeighborWorks®* Multifamily Initiative.—While home ownership is a central strategy towards achieving community revitalization, nearly all NeighborWorks® neighborhoods have multifamily housing needs as well. Currently, network members own or manage more than 25,000 high-quality multifamily units. In response to the growth in multifamily activity, Neighborhood Reinvestment launched the NeighborWorks® Multifamily Initiative in 1999. This initiative has provided 43 NeighborWorks® organizations with technical assistance, asset management training, and training in best practices in multifamily property development and management, thereby positioning them to be at the forefront of efforts to strengthen neighborhoods by providing affordable, well-managed rental housing. The goal of the Multifamily Initiative is to strengthen neighborhoods by promoting multifamily housing that have the following characteristics:
—permanent affordability for low-income families;
—long-term economic viability;
—physical soundness—good maintenance, adequate capital replacements and improvements; and
—positive social fabric—a culture of opportunity and leadership where school success, homeownership preparation, employment advancement, and neighborhood leadership are the norm, while drugs, truancy and destructive social behavior are not tolerated.

The network, through its Mutual Housing model and the work of other NeighborWorks® nonprofits, has proven that when multifamily properties are financed, built and managed for the long-term benefit of the community, the impact can be broad and positive. Well maintained, these properties help improve the physical character of the community and support the values of the surrounding properties. Combine physical strength with ongoing affordability, and the result is lengthened resident tenure and a more stable and positive environment for families.

One strategy used by a number of properties owned by NeighborWorks® members is to provide on-site computer learning centers, which allow residents access to technology, as well as the staff resources to ensure that the residents are able to take full advantage of this opportunity. We recognize that the end goal of this approach to technology is not just providing computers to those with limited resources. Technology is viewed as a means to achieving broader network and community goals—such as increasing the stability of neighborhoods, increasing academic success, expanding employment and economic opportunities, and attaining homeownership.

However, the availability of such housing is dependent upon owners who recognize that the ownership of these properties involves the stewardship of both the property and the community. NeighborWorks® organizations view affordable housing in exactly this way and have captured their commitment to this approach to housing in the NeighborWorks® Multifamily Initiative.

Neighborhood Reinvestment's successful adaptation and expansion of the Mutual Housing Association (MHA) concept from its West European roots is one of the innovations that continues to produce units as well as creative strategies for developing sustainable affordable housing. In the 1980s, at the request of Congress, the Corporation engaged in a multiyear demonstration of Mutual Housing Associations. The founding principles of this model were threefold:
—Affordable housing is a critical need for many lower-income families who are not yet prepared for single family homeownership; therefore it should be produced as a perpetual asset.
—Active resident leadership will produce a positive social impact in the lives of families, as well as in the operation of the properties and the character of neighborhoods. Therefore residents should serve on boards and property councils, establishing a mutual form of ownership that supports not only the social success of the community but also the financial success of the property, by improving collections, reducing maintenance and security costs, and slowing resident turnover.

—A financial equity position in the units will enable the NeighborWorks® organization to be a strong owner, that is prepared to continue to produce additional housing to meet the need in its market area.

This Mutual Housing demonstration resulted in ten Mutual Housing Associations across the country, that have produced more than 6,400 units of quality housing. The lessons of this demonstration have been dramatic.

—The units continue to operate in great physical and strong economic condition, even after 10 to 20 years.

—With resident leadership actively promoted as part of the operating plan, Mutual Housing Association residents stand out as community leaders, both within their own property and within their larger neighborhood.

—Mixing of incomes (ranging from 30 percent median family income to 100 percent median family income) creates healthy, dynamic communities, in which the cycle of poverty is broken, the stigma of "low income housing" is overcome in the eyes of the community, and the long term economic viability of the property is improved.

—Mutual Housing Associations, given their strong capital positions and fee structures that support the depth of professional staff needed by an ongoing developer/owner, are also ongoing producers of additional housing. Mutual Housing Associations accounted for over 900 of the 1,520 multifamily units produced by the NeighborWorks® network in fiscal year 2000.

The Mutual Housing properties merit particular attention, because they demonstrate sustainable excellence and positive impact over an extended period, 10–15 years. Though the Mutual Housing model continues to grow in some markets, many of the NeighborWorks® organizations that produce affordable housing are not structured as Mutual Housing Associations. Through the NeighborWorks® Multifamily Initiative, though, the best elements of Mutual Housing along with the lessons learned are now being promoted as "best practices" throughout the NeighborWorks® network.

The Multifamily Initiative became the catalyst for creating the Neighborhood Capital Corporation (NCC), which provides affordable, short-term financing to acquire multifamily properties that are at risk of deterioration or of being lost as affordable units available in a community. Private owners of rental properties regularly approach NeighborWorks® organizations about purchasing these properties. Sometimes the owner is no longer interested in maintaining the property. In other instances, subsidies are expiring and the owner has no interest in investing additional capital or in maintaining the property as affordable. Thus, very often the best solution for residents, owners and neighborhoods is for a nonprofit organization to acquire the property and commit it to long-term affordability. Many of these properties house elderly tenants, families below 30 percent of area median income, and families who have few options for relocation.

The Multifamily Initiative explored approaches and obstacles to such purchases and found the primary obstacle is flexible pre-development and acquisition financing that allows an organization to respond quickly when a property becomes available. Neighborhood Reinvestment responded to this problem by making an initial investment of $1.8 million in NCC. NCC's board of directors is composed of executive directors of some of the most successful development corporations in the network. NCC is creating a capital fund that will meet the needs of qualified NeighborWorks® members and allow them to effectively and efficiently address the interests of multifamily owners, their tenants and our neighborhoods. In its first full year of operation, NCC projects that it will provide approximately $1 million in loans, while leveraging $6 million from other sources, thus impacting 500 units of multifamily housing.

Against the national backdrop, the NeighborWorks® Multifamily Initiative seeks to preserve affordable housing resources as community assets, while improving the physical properties of the housing and the quality of life for families with a range of incomes.

—*The NeighborWorks*® Rural Initiative.—NeighborWorks® organizations serving rural communities comprise the fastest growing segment within the network. In 1995, six NeighborWorks® organizations were serving rural communities; by 2000, this figure grew to 49 network organizations. We anticipate this trend will continue. NeighborWorks® organizations in rural areas help confront problems caused by a deteriorating housing stock, low incomes, and of rapidly increasing land prices. The rural network members are engaged in areas that historically have been difficult to serve, such as American Indian reservations, the Southwest border Colonias, and the Mississippi Delta.

Several years ago, our rural NeighborWorks® members elected to establish a formal identity and to call themselves the RNA Community Builders, as a means of eliciting support from foundations and other entities with a particular interest in rural issues. The RNA has become a highly effective institution, attracting program related investments from the philanthropic funders, and others, in order to make short-term loans to its members. More recently the RNA has also been designated as a certified Community Development Financial Institution intermediary. Neighborhood Reinvestment has provided significant support to the start-up of the RNA and to its ongoing activity. In fiscal year 2000 Neighborhood Reinvestment hired a national rural coordinator to concentrate on our rural interests and activities and to serve as a liaison with the RNA. Since its creation, RNA has made 30 loans to rural network members, creating 220 units of affordable housing and leveraging over $18 million in permanent financing.

—*Neighborhood Reinvestment Training Institute*.—The Neighborhood Reinvestment Training Institute is one of the primary venues for the Corporation's outreach to the broader community development field and increases the capacity of local neighborhood revitalization organizations. Neighborhood Reinvestment sponsors five national training events each year, serving an average of 800 participants at each Institute, which lasts a week. The Neighborhood Reinvestment Training Institute is recognized as a national leader in providing high-quality, practitioner-focused training to community development professionals. During fiscal year 2001, the Training Institute will provide more than 160,000 training hours.

The Training Institute has developed several focused efforts to build the skills of local practitioners and focus efforts of local organizations so that they build capacity. These include:

—Eight Programs of Study that guide participants through a subject-specific curriculum, culminating in a professional certificate that recognizes their accomplishments. Candidates in a Program of Study must successfully complete up to four weeks of courses and exams, and take a comprehensive exam at the end of all coursework.

—The development of an Advanced Training Platform, a new, intensive, interactive and advanced practicum for seasoned practitioners. This will initially be offered in early fiscal year 2002. This practicum will draw and expand on negotiation skills, economic analysis, leadership development, management skills, and policy application.

—Resident leadership development continues to be a core value in the NeighborWorks® network's approach to community revitalization. To respond to a need for enhanced resident leadership development, the Training Institute is intensifying its efforts by sponsoring regional Community Leadership Institutes. This will enable resident leaders to share their experiences, hone their leadership skills and bring innovative ideas back to their communities. This reflects the Corporation's conviction that while new homeowners, improved housing and increased investment are essential to revitalization, the most essential ingredient for long-term success is informed, effective and motivated resident leaders.

—In recognition of Neighborhood Reinvestment's former Executive Director George Knight, who retired at the end of fiscal year 2000, the VA, HUD and Independent Agencies Conference Committee set aside $2.5 million of Neighborhood Reinvestment's fiscal year 2001 appropriation to establish the George Knight Scholarship Fund. Established as an endowment, this Scholarship Fund will assist often-fledgling community development organizations and professionals as they seek to develop the capacity to address community needs. This fund will enable the Training Institute to more than double the number of tuition scholarships granted to staff of nonprofit organizations across the country.

The George Knight Scholarships were offered for the first time at the Neighborhood Reinvestment Training Institute in Chicago during the week of April 16. Thirty-three professionals received more than $16,000 in scholarships that enabled them to attend a week of training. Because of this Subcommittee's commitment to top-quality training, the Corporation anticipates being able to provide approximately 250 scholarships, totaling $125,000 annually.

In addition, the Subcommittee's set aside has been and will continue to be leveraged with private contributions. A large savings bank has begun this trend with a recent contribution of $550,000. The Corporation will continue to seek other private contributions to this scholarship endowment.

—*National Insurance Task Force*.—Since 1994, Neighborhood Reinvestment, members of the NeighborWorks® network and members of the insurance industry have worked together to develop strategies that improve the availability and pricing of property and casualty insurance in low- and moderate-income neighborhoods. Known as the National Insurance Task Force, this group includes representatives the insurance industry's top property and casualty insurance carriers, as well as insurance industry trade associations, insurance regulators, educational institutions, Neighborhood Reinvestment and the members of the network. The purpose of the Task Force is "To develop partnerships between the insurance industry and community-based organizations to better market the products and services of both, for the benefit of the customers and communities they serve."

The Task Force continues to develop cutting-edge products and tools that help facilitate the creation of local collaborations between the insurance industry and NeighborWorks® organizations across the country. Over the last two years the Task Force has piloted a "Loss Prevention Partnership" program. Selecting cities with insurance perils—Chicago, Charleston, SC, and Denver—the Task Force is experimenting with strategies to reduce the likelihood of damage from perils such as fire, wind and water. Education, special programs, prevention tools and a local loan fund all play a role in these local pilots. Once again, the NeighborWorks® network is serving as an appropriate and exciting laboratory to test innovative new approaches to intransigent problems.

—*NHSA*.—NHSA nearly doubled its loan purchases from local NeighborWorks® organizations in fiscal year 2000—from $46.2 million in the prior year to $83.3 million. NHSA's investors were the key to making this extraordinary increase possible. In fiscal year 2000, the investor base increased to more than 120 investors and lenders, which included two new $10 million investors. Members of the NHSA Board of Trustees have begun discussion of a $500 million social investment initiative for the period 2001 through 2006 in response to increased need for liquidity for the NeighborWorks® loans from revolving loan funds. Other philanthropic and corporate funding sources are being explored to meet these goals.

EXCITING NEW INITIATIVES

Neighborhood Reinvestment continually seeks innovative solutions to help transform communities. What follows are just some of the areas in which the Corporation has recently expanded its focus.

—*HUD's Section 8 Home Ownership Program*.—In the late-1990s, changes to the HUD Section 8 Program statute permitted its vouchers to be used for the first time toward the costs of home ownership. However, few housing authorities are prepared to accommodate this opportunity, since most lack formal homebuyer counseling or lending experience. In addition, most private lenders have no experience with the Section 8 program and, since it is re-appropriated on an annual basis, are unwilling to accept Section 8 vouchers toward a mortgage payment. In 1999 and 2000, HUD approved 15 demonstration sites for Section 8 homeownership programs. Four of these demonstration sites involved partnerships between a public housing authority and a NeighborWorks® organization. These effective and unique partnerships were formed in Syracuse, New York; Long Island, New York; Nashville, Tennessee; and Burlington, Vermont. The early success of these sites made the network a national leader in effectively using the Section 8 program to help qualified low-income Section 8 families become first-time homeowners and make progress on the road to self-sufficiency.

While the actual number of families who have purchased a home is small, the efforts of this small group of organizations have truly been pioneering, and the families who have been successful represent the largest number of families served under this option in the country. Families served by NeighborWorks® organizations under the home ownership option have incomes as low as 30 percent of area median income. Table 1 summarizes these efforts in Syracuse, Long Island, Nashville and Burlington.

TABLE 1.—CLOSINGS UNDER THE FOUR NEIGHBORWORKS® PILOT PROGRAMS IN THE SECTION 8 HOMEOWNERSHIP OPTION

	All	Syracuse	Long Island	Nashville	Burlington
Buyers to Date	23	7	2	4	10
3 Year Pipeline	266	89	60	60	57
Minority-Headed Households (percent)	53	71	50	100	100
Female-Headed Households (percent)	74	71	100	100	70
First Time Buyers (percent)	100	100	100	100	100
Median Income	$24,900	$23,798	$22,945	$22,896	$29,529
Median House Price	$85,000	$43,750	$82,500	$86,900	$115,500
Average Family Size	3.4	3.1	3.0	3.0	3.8

TABLE 1.—CLOSINGS UNDER THE FOUR NEIGHBORWORKS® PILOT PROGRAMS IN THE SECTION 8 HOMEOWNERSHIP OPTION—Continued

	All	Syracuse	Long Island	Nashville	Burlington
Average 1st Mortgage	$60,922	$42,327	$41,457	$52,187	$81,327
Average 2nd Mortgage	$7,128	$4,980	$18,737	$16,825	2,430

Source: Neighborhood Reinvestment Corporation; February 2001.

I would like to tell you about one buyer under the Section 8 home ownership option in Burlington, Vermont. This family's story is typical of many buyers that we have seen in the Section 8 home ownership program—working families, dedicated to the American dream of owning a home and getting off public assistance.

One of Burlington's first customers to close on a home using the Section 8 program had been working with the Burlington Community Land Trust's NeighborWorks® HomeOwnership Center since January 1997. As an African American, single mother raising two children on one income, it was difficult for her to save for a downpayment and impossible to qualify for a mortgage that would afford a home in Burlington, which is the 27th most expensive housing market in the country and where the median home price is $204,400.[1] Over the next several years, this woman continued to work with the NeighborWorks® HomeOwnership Center on budgeting and took a second job that allowed her to save for a downpayment at a faster rate.

In April 2000, the Burlington Community Land Trust rehabilitated a vacant and distressed four-bedroom home, which the family was able to purchase for $102,700. The Burlington Community Land Trust provided a lower interest second mortgage for $30,000. Through additional assistance, from local and state programs, the first mortgage was brought down to $52,700, which was manageable for the single-parent household.

For fiscal year 2001, Congress recognized the NeighborWorks® network's approach to the Section 8 home ownership option and provided Neighborhood Reinvestment with a $5 million set aside to test it further.

The NeighborWorks® network is uniquely suited to respond to the exceptional opportunity provided by this change to the Section 8 Program. Its Campaign for Homeownership has finely tuned the tools and activities that make home ownership possible for low- and moderate-income families, including high quality pre- and post-purchase counseling and second mortgage loans. Several network organizations responded to the Section 8 challenge by developing a strategy that includes a conventionally generated first mortgage based solely on the family's income, and a second mortgage, originated by the NeighborWorks® organization, to fill the gap between what the family can afford and the price of the house. This second mortgage is repaid by the Section 8 voucher, thereby freeing the private lender from having to interact with the voucher system at all.

The $5 million set-aside is helping Neighborhood Reinvestment create additional partnerships between NeighborWorks® organizations and housing authorities implement this home ownership strategy. The set-aside is being used to fund two activities:

—$4.25 million has been awarded as grants to local NeighborWorks® organizations, with more than two-thirds of this funding used for capital that will fund local second mortgage pools. These funds will be leveraged by private-sector investments, thus helping to stretch federal funding further. The remaining funds will be used for operating grants. These are critical since many very low-income, welfare-dependent families have significant pre-purchase counseling needs beyond those of the typical NeighborWorks® client. While families who qualify for Section 8 vouchers must be employed in order to take advantage of the home ownership option, many face real barriers (such as severe credit impairment) that can be addressed only through time-intensive, one-on-one counseling that can be provided with enhanced operating funds.

—Approximately $750,000 of the set-aside will be used to provide technical assistance, training, peer-to-peer learning opportunities, and research about the NeighborWorks® organizations' efforts utilizing this option. One of the benefits offered by Neighborhood Reinvestment is the ability to bring economies of scale, a diverse testing ground and sound evaluation methods to efforts like the Section 8 home ownership option. In addition, the expertise developed under the

[1] National Association of Realtors; fourth quarter, 2000.

NeighborWorks® Campaign for Home Ownership 2002 allows the Corporation to provide assistance that cannot be found elsewhere.

In early April 2001, the Corporation reviewed applications from interested network members and made decisions on which NeighborWorks® organizations would receive funding under the set-aside. Although the Corporation anticipated being able to use the $5 million set-aside to expand this pilot effort from four NeighborWorks® organizations to 10 to 14 organizations the Corporation will actually fund 11 applications for 21 NeighborWorks® organizations serving more than 25 communities. Funding under the set-aside is being used to assist public housing authority and NeighborWorks® organization partnerships in the following communities: Nashville, Tenn.; Toledo, Ohio; Lafayette, Ind; Oak Ridge, Tenn; Ravenna, Ohio; Hamilton, Ohio; Chattanooga, Tenn; Burlington, Vt; Newport, Vt; Springfield, Vt; West Rutland, Vt; Barre, Vt; Chicago; Centereach, N.Y.; Syracuse, N.Y.; San Bernadino, Calif.; Sacramento, Calif.; Allentown, Pa.; Pueblo, Colo.; and Hugo, Okla. We expect to help as many as 680 families purchase a home over the next three years and to recruit nearly 6,800 families to consider the home ownership option.

I will keep you informed about the progress of our work and the impact of your funding in this area. To that end, we have contracted with a well-respected research firm that will monitor the progress of the Section 8 home ownership option within the network and produce regular reports. Recognizing the great demand for practical information about this program and acknowledging the NeighborWorks® network's leadership on this effort, we will offer an on-going course at the Neighborhood Reinvestment Training Institute on the Section 8 home ownership option.

Building on the network's success, the Corporation requests $10 million for fiscal year 2002 to expand the Section 8 homeownership initiative, strengthening partnerships with housing authorities to reach 300 communities and 3,500 potential homebuyers.

—*Predatory Lending*.—Research has shown that predatory lending is a very real threat to the great work NeighborWorks® organizations and other nonprofits and their lender and government partners have done in distressed communities. As predatory lending practices have proliferated and affected increasing numbers of families and communities, NeighborWorks® organizations and others looked to Neighborhood Reinvestment to provide a forum for discussion and a mechanism for coordinating efforts to combat these abusive lending practices at the local level.

In response, Neighborhood Reinvestment has:

—sponsored symposia on predatory lending;

—shared information across the network about education efforts and other measures to stem this tide;

—sponsored a study of predatory practices with the Joint Center for Housing Studies of Harvard University;

—commissioned two studies on the growth of sub-prime lending in Boston and Atlanta that have attracted significant attention;

—worked to define the difference between sub-prime and predatory lending practices;

—developed materials to alert consumers to the dangers of high debt loans and predatory lenders; and

—convened a task force of seasoned practitioners on the topic.

In addition, Neighborhood Reinvestment has developed a significant partnership with Freddie Mac to develop a loan product for families that find themselves with a loan that has the hallmarks of a predatory loan. This program, which has an extensive counseling requirement, offers an opportunity for families to refinance—and thereby retain—their homes. We also believe that financial literacy training and post-purchase education are effective strategies to combating the proliferation of predatory loans. Neighborhood Reinvestment is actively engaged in developing additional tools for this kind of training.

—*HUD Demonstration Program—Secondary Market for Non-Conforming Loans to Low Wealth Borrowers*.—NHSA is a participant in a HUD Demonstration Program to develop and sustain a secondary market for non-conforming loans to very low-income borrowers. NHSA has made a strong start in assembling loan pools that will be studied over a seven-year period. HUD's support is allowing NHSA to purchase loans with eased credit qualifications through the extraordinary cooperation of investors and lenders, backed by NHSA's increased capacity to provide needed credit enhancements for the special loan pools. Lessons learned will help to guide NHSA's product development as well as inform the Department and the major secondary markets with regard to the nature of the changing product needs and creditworthiness of challenging groups and markets.

VISION FOR FISCAL YEAR 2002: BUILDING ON THE NEIGHBORWORKS® NETWORK'S STRENGTH

This year we are requesting an appropriation of $95 million, which includes $10 million to further Neighborhood Reinvestment's and the network's pioneering efforts in using Section 8 vouchers to purchase a home. At this funding level, Neighborhood Reinvestment will be able to maintain its current level of services to the NeighborWorks® network with modest increases to the outputs and measures.

A $95 million appropriation in fiscal year 2002 will assist the NeighborWorks® network to:

—Leverage more than $1.5 billion in direct total investment into distressed rural, suburban and urban communities;
—Assist more than 38,000 families to purchase or maintain their homes;
—Assist more than 500 families through the Section 8 home ownership initiative, resulting in their purchase of a home;
—Own or manage over 29,000 affordable rental or mutual housing units; and
—Provide pre- and post-purchase home ownership counseling to nearly 70,000 families.

To support and expand these significant accomplishments, the Neighborhood Reinvestment Corporation and NHSA expect to:

—Add 10 new organizations to the network, increasing the NeighborWorks® network to 240 organizations serving over 1,700 communities;
—Conduct 210 reviews of member organizations and review 240 audits;
—Provide over 160,000 training contact hours to community development leaders and practitioners, not only through the Neighborhood Reinvestment Training Institute but also through local and district training opportunities; and
—Purchase $60 million in loans from NeighborWorks® organizations, bringing the total number of loans owned by NHSA to 7,350 totaling $312 million.

To be certain that we are making best use of our Congressional appropriation this coming year and beyond, especially as the network continues to expand, we are undertaking a corporate-wide strategic planning process. This will ensure the continued relevancy and vibrancy of our services to the NeighborWorks® network and its constituents. The strategic planning process:

—will help us understand the significant changes in our work environment and context;
—ensure that the Corporation responds to our constituents' changing interests and needs;
—formulate budget submissions for the coming fiscal year and beyond based on priority needs; and
—articulate a clear direction for Neighborhood Reinvestment services and activities over the next three to five years.

As a result of the strategic planning process, Neighborhood Reinvestment will articulate its vision for executing our statutory mission and define and communicate the guiding principles of our work in a contemporary context, enabling the Corporation and its partners to provide even more effective service to communities across the United States.

OUTCOMES AND ACHIEVEMENTS

The last two fiscal years have shown increased growth in nearly all areas of the NeighborWorks® system. I have full confidence that with an approval of the Corporation's fiscal year 2002 budget request, Neighborhood Reinvestment and the network will meet or exceed all of the anticipated outcomes and achievements. The following table summarizes the outcomes from fiscal year 2000, projected results for fiscal year 2001 and the expected results based on a $95 million appropriation for fiscal year 2002.

TABLE 2.—OUTCOMES AND ACHIEVEMENTS

	Fiscal Year—		
	2000	2001 (Projected)	2002 (Budget Request)
Congressional Appropriation (millions)	$75	$90	$95
Resultant Total Direct Investment (billions)	$1.3	$1.4	$1.5
Organizations Added to NeighborWorks® Network [1]	16 (215 total)	12 (230 total)	10 (240 total)
Families Assisted in Purchase or Rehabilitation of their Homes	34,000	36,100	[2] 38,100
Families Counseled Pre- and Post-Purchase	60,280	63,900	[3] 66,000
Rental Units Owned or Managed by NeighborWorks® Organizations	24,935	27,450	29,450

TABLE 2.—OUTCOMES AND ACHIEVEMENTS—Continued

	Fiscal Year—		
	2000	2001 (Projected)	2002 (Budget Request)
Communities Served	1,559	1,723	1,780
NHSA Purchases [4] (millions)	$83.3	$50	$60
Number of Loans	12,375	6,600	7,350
Value of Loans (millions)	$408	$276	$312
Program Reviews	159	200	210
Audits Reviewed	199	220	240

[1] For fiscal year 2002 we have projected very modest increases in the increase of member organizations for two reasons. First, while the demand for affiliation continues to grow, we want to insure that important efforts like the Section 8 home ownership pilot succeeds and NeighborWorks® network members continue to have access to the basic levels of training, financial and technical resources that are critical to their long term health and productivity. Second, existing NeighborWorks® members are rapidly expanding their efforts to serve much broader geographies. The number of communities served has increased from 825 communities to 1,659 communities since fiscal year 1998, while the number of organizations has increased by 29 organizations. The ability and willingness of NeighborWorks® organizations to reach out to other organizations, to new communities and to additional neighborhoods has been exceptionally well-received in sites like Montana, New Mexico, Baltimore and many others. We anticipate that this is a trend that will continue into the future.

[2] Plus 500 Section 8 Buyers.

[3] Plus 3,500 Section 8 clients.

[4] The objective of NHSA and Neighborhood Reinvestment Corporation is not to use federal funding to supplant private funding, but rather to attract it. The lower volume of loans purchased by NHSA indicates the willingness of the private sector—specifically private lenders—to engage in lending activities in distressed neighborhoods.

CONCLUSION

This is an exciting and challenging time, as Neighborhood Reinvestment and the NeighborWorks® network continue to build upon the strengths of the past while looking ahead—to confront the problems and opportunities of the future. I am very eager to lead this organization along its well-chosen route while scouting ahead for new ways we can be successful in our work and add value to the field of community-based development.

AFFORDABLE MULTIFAMILY DEVELOPMENTS

Senator BOND. Well, that was a well-timed presentation. You landed right on the money.

Throughout the country, and in my own State of Missouri, there is a real shortage of affordable rental housing for low income families. I am very concerned that not enough affordable housing is being produced, especially for those that we would consider extremely low income.

We are going to be working on developing an affordable housing production bill in the next few weeks, and any input you can give us would be most appreciated.

My first question to you would be: What lessons have NRC and NeighborWorks® organizations learned about providing rental housing for extremely low income families, while maintaining the properties' long-term viability? That has been a real problem in some—in some areas in the past. What have you learned? What is your experience?

Ms. LAZAR. We have learned a number of things. One is that you want to make sure that the operating costs for the properties are really adequate to fund all the necessary reserves, particularly, if you are dealing with older properties; that all of the necessary physical work that needs to get done, gets done well through the rehabilitation; and that reserves are set aside to maintain those properties.

To that end, you want to be able to make sure that the operating costs are sustainable by the rents and that you manage the properties with as little debt as possible.

We talked earlier about the FHA Disposition Program. I think it is very, very important that we spend some time studying what we can do with the housing stock that now exists and how those properties could be acquired for as little money as possible, so that they can be maintained as affordable housing stock and be maintained for the future in an economically viable way.

We have found, in low cost communities, that we are able to push the envelope a bit and are able to acquire properties and then bring in folks at a variety of incomes and help cross-subsidize the project, so that we have some tenants paying higher rent, and other tenants paying lower rent. This allows us to bring in more lower income tenants through the cross-subsidy of the higher rent.

Higher cost areas are more of a challenge. What we have seen is that the Section 8 subsidy has worked well there. There are other ways of looking at other types of operating subsidies that may be able to keep rents affordable by reducing the debt considerably, by being able to acquire properties at low or no cost, and by subsidizing the development costs up-front.

EXAMPLES OF SERVING EXTREMELY LOW-INCOME RENTERS

Senator BOND. Well, we are going to be looking at a number of those things. And I have heard stories about charitable, not-for-profit organizations having to get Federal grants to buy distressed properties for FHA—from FHA. And I am saying, what are we—where does that make—where does that make any sense? I mean, there ought to be—we ought not to be—we ought not to be doing that.

Can you give us some examples of properties owned by NeighborWorks® organizations that serve families with incomes below 30 percent of poverty and—and how they approach serving this population?

Ms. LAZAR. Sure. I am happy to.

We have properties in Cambridge, Massachusetts, that are serving families with incomes below 30 percent of area median. They are able to do it by relying upon Section 8 to reach these extremely low-income residents. In Cambridge, Massachusetts, you have very high development costs and operating expenses. It really makes any other approach infeasible. You have old housing stock, as well, which costs that much more to maintain and retrofit.

In Sacramento, we use a combination of Section 8 and very low debt levels to reach extremely low income residents. We blended a couple of techniques.

In North Dallas, we have been able to acquire properties with very low debt levels at zero percent interest, and a higher income mix, which allows for the internal cross-subsidization, and allows us to reach extremely low income people.

Senator BOND. How much money is NRC dedicating to its multifamily activities, and what other resources do you use, I guess, in addition to Section 8?

Ms. LAZAR. That is a good question. Our organizations get a limited amount of funding from us, directly, for multifamily activities. We provide expendable grants to them and capital grants to them. They average somewhere in the neighborhood of $70,000 for the expendable grants; $100,000 for the capital grants.

We do not have a lot of money right now to put into developing multifamily properties. It would be nice to be able to look to other grant sources to fund these potential projects.

We have a tremendous need for flexible dollars that could be used to acquire properties as they become available. We tend to lose properties because the deal is not fully funded and nobody has any money to acquire properties that are on the market.

Often, it takes 10 to 12 months to acquire a project for multifamily housing and to put all the financing pieces together. A buyer might be very anxious to sell, and the groups that we work with do not necessarily have the equity or a source of flexible grant funds that can be repaid later to do the acquisition. This type of money would be very useful.

SECTION 8 HOME OWNERSHIP

Senator BOND. With respect to Section 8, you have received a $5 million set-aside to expand the partnerships between NeighborWorks® and PHAs in implementing the Section 8. And you have asked for $10 million.

Could you give us an update on how the—how it is working, and if you have any suggestions on improving the program?

Ms. LAZAR. Sure. I will be glad to.

This, as you might guess, is a very labor-intensive effort. The lenders who are often providing the first mortgages do not really understand Section 8 as a potential tool for repayment. They have not necessarily worked with this population before, so we have to do education on that end.

On the other end, we have PHAs, who really do not have very much experience with lending, mortgage origination, and servicing. So, we have a lot of pieces that we have to put together, in terms of the education of the organizations we are working with.

This year, with the $5 million, we have awarded 11 grants to about 21 NeighborWorks® organizations working in 25 communities around the country. We anticipate that this is going to create home ownership opportunities for about 680 families and we will have an opportunity to counsel about 6,800 families through this process.

We have been working all around the country. We have been doing very intensive training with the prospective buyers, many of whom have already been through some family self-sufficiency programs and other pre- and post-purchase counseling programs. We are finding that the time it takes to really groom these folks for home ownership takes about three times the amount of time that it takes other people.

It is very labor-intensive, but ultimately, I see the pay-off as really wonderful, in terms of putting families in homes and giving them the opportunity to grow their assets and come up into the mainstream of American economic life.

Senator BOND. Thank you very much, Ms. Lazar. And as I—I will submit further questions for the record.

Now, I turn to Senator Mikulski for her questions.

Senator MIKULSKI. Thank you very much.

And, Mr. Chairman, I just want to put my opening statement into the record, please. Thank you.

[The statement follows:]

OPENING STATEMENT OF SENATOR BARBARA A. MIKULSKI

I want to welcome Neighborhood Reinvestment Corporation Executive Director Ellen Lazar.

The Neighborhood Reinvestment Corporation and its NeighborWorks organizations have extremely impressive records.

It has a mission of providing an opportunity structure that helps those who practice self-help.

The Neighborhood Reinvestment Corporation really maximizes the taxpayer's "bang-for-the-buck"—it leverages 14 private dollars for $1 of public investment.

On a local level, in my hometown of Baltimore, the NeighborWorks organization is extremely effective in assisting neighborhoods facing shortages of decent, affordable housing.

Unfortunately, we live in a world with distressed communities that are underserved by the mainline private financial institutions.

People living in these communities want to move up the ladder of opportunity—but they can't access the help they need to reach to own a safe, decent, affordable home.

I believe there are 3 types of neighborhoods—stable, stressed, and siege.

NeighborWorks organizations help keep stable neighborhoods stay that way and ensure that stressed neighborhoods don't become sieged by empowering residents to rehabilitate and purchase homes.

I think that our other Federal agencies with the mission of promoting the American Dream of homeownership can learn from the Corporation's experience preventing predatory lending—a despicable practice where scam artists gouge the poor.

Senator BOND. Without objection. I apologize for not calling on you at the time.

Senator MIKULSKI. No. No. No. No. No. No.

Senator BOND. It is my fault.

Senator MIKULSKI. I had to step outside for a moment.

Ms. Lazar, we just think it is great that you are the Executive Director of Neighborhood Reinvestment. Neighborhood Reinvestment has been one of these quiet, often overlooked agencies. And it has had good stewardship in the past.

When I first came to this subcommittee and worked, then, with my colleague, Senator Garn, it was like—something like a $19 million appropriation. And this has always had strong Congressional support, even though it is not always in the public eye.

You bringing your background from CDFI, I think, is just going to be terrific, because you understand, essentially, housing financing, and at the same time, strong grassroots support. So, we think you are the right Director for this new century.

PREDATORY LENDING

I want to go to predatory lending. And you might or might not know that—with the cooperation of the chairman, we have really tried to do something about predatory lending—flipping, as it is called in Baltimore. We were a—we were one of the worst places in America, particularly for FHA—the use of FHA to gouge the poor and defraud the taxpayer. We are working on that. And I want to thank Secretary Martinez for really staying the course of this.

Could you tell me, though, what you are doing in predatory lending? And I know that there are two issues; one, FHA, which we have concentrated on, here; then there is the sub-prime issues, which were really beyond the scope of an Appropriations Committee. But I know Housing and Banking is looking at it.

And could you tell us, though, how you are involved, and what tools or other things that you might need to help with it? And I would like to, if we could, concentrate on the FHA. And I will then tell you why.

In Baltimore, after the poor were gouged and they went into default or bankruptcy because of these gimmicks—17 percent interest—I mean, I will not even—I will not take you through the melancholy anecdotes.

But then there was FHA—and in deteriorating neighborhoods, it contributed to decay. So, they went from deterioration to decay. Then we had teeter-totter neighborhoods, meaning that they—they had been through blockbusting; they had been through trauma, aging in place, kids moving out, speculators coming, and the gougers. Very stressed neighborhoods.

And then there is an FHA house standing abandoned, which then contributes more to the totter, when we are trying to move stressed neighborhoods to stable.

What—what—what have you been doing? What more would you like to do, that we could help you do, both in terms of helping the poor not be gouged, sticking it to the predatory lenders through proper law enforcement, and third, the FHA disposition?

Ms. LAZAR. Okay.

Senator MIKULSKI. Even suggestions you might have for us to take to Mr. Martinez.

Ms. LAZAR. Okay. I am happy to do that.

There are a number of areas that we have been working in on the predatory lending front; primarily in education. We have been the convener of a lot of symposia.

Senator MIKULSKI. For who?

Ms. LAZAR. For people in the community development field and government in order that they may educate residents. Our research is widely disseminated for the field. I could share some of that with you. I think it would be interesting for you to have.

We worked, most recently, down in Georgia. We had, at one of our training institutes in Atlanta, a day-long discussion on predatory lending in Georgia.

We have done things all over the country to bring together folks to talk about predatory lending, but there is more than talking about it that needs to get done.

In our pre- and post-purchase counseling modules, we are making people very aware of the issues around predatory lending.

In addition, when we have loans that come in to us to refinance, where we are holding the second note and the loans have been subordinated to us, we have an opportunity to really look and evaluate those prospective loans and may be able to stop predatory loans from going forward.

Where families have already gotten stuck with what looks like an egregious loan, we have worked with Freddie Mac to put together a loan program called the Home Equity Loss Prevention Program—HELP. The HELP Program basically provides an opportunity for a family to refinance a loan with this Freddie Mac product, which would allow them to take some cash out for home improvements or other financial needs, but still maintain their equity in their home.

We are also working closely with Freddie Mac on their "Don't Borrow Trouble" campaign around the country.

Personally, I have been a great advocate at finding more dollars for public education and advertising in this arena. I think that public service announcements are key to reaching the folks that are the targets and the victims of predatory lending practices. I think more resources in that area would be very, very useful.

I also think more funding for the Federal Trade Commission and the Justice Department's enforcement activities here would be very helpful. There is so much activity out there and if they do not have the ability to go after it and make it stick, it makes it that much harder to enforce.

I would be very enthusiastic about looking at more enforcement tools, as well as more broader public education tools through the media.

Senator MIKULSKI. Well, I think some of this can be done. And really, we can recruit the private sector, particularly Freddie Mac, Fannie Mae. I believe the mortgage bankers really want to participate in this.

And we will be talking about predatory lending with Secretary Martinez and continuing our Baltimore effort, but one of the things I would like you to think about, and if it is an appropriate role for Neighborhood Reinvestment—you are the home for a lot of the nonprofits in this country that are involved in housing.

And one of the important things—and this goes to faith-based—okay—et cetera, which is pre-counseling for home ownership, whether it is to avoid flipping, whether it is—even if you are getting into Section 8, it is not buying a home. We all know this. It is keeping a home. And really, for Neighborhood Reinvestment to be training the trainers.

The other is—and we are just brainstorming here for a moment, but we would need to know more about this. As we look at faith-based initiatives—I am sure my colleague has experienced what I have—every little church, some even with storefronts, want to come in to get in on it. They think there is this big pot of money that we are going to give out there in the community.

What we find is they do not know what a community development corporation is. They—and even if there is a large church, like in the AME tradition, which has always been excellent, in terms of community involvement. Capacity building, you know.

And I would like—which also, for many people in the Latino community, the African-American community, the faith-based organizations are where they are going to learn the most; not through some government person coming to an improvement association meeting that has got seven people coming to it, when Reverend Reid has got 10,000 people in the AME Church on Sunday.

Ms. LAZAR. Yes.

Senator MIKULSKI. So, my point is that capacity building, as well as public information on home ownership, of which avoiding predatory lending would be one component, and then perhaps a linkage to the faith-based, as we are gearing up on faith-based, but even to make highest and best use of faith-based, one of which is their incredible ability to communicate with their congregations.

Ms. LAZAR. Yes. I understand what you are saying, Senator.

Senator MIKULSKI. And the trust involved there. And many of them have credit unions.

Ms. LAZAR. Yes. We do a huge amount of training.

Senator MIKULSKI. Is that beyond your scope or——

Ms. LAZAR. We do a lot of training for trainers, and a lot of training through our Home Ownership Campaign.

We have begun some dialogs with a number of faith-based organizations, the National Council of Black Churches and other organizations to see how we can work together to serve communities.

We will continue fostering those relationships and get back to you about how we are doing and where we are able to make some inroads.

A lot of our organizations already have strong relationships with their faith-based congregations. We can see how and document for you how they are working together on this issue.

Senator MIKULSKI. Mr. Chairman, I know my time is up. One of the things I would like Ms. Lazar—if she could suggest to both you and I, the recommendations of Neighborhood Reinvestment for HUD, if you think—on what to do with this FHA disposition area.

Senator BOND. I think that is a——

Senator MIKULSKI. Really. Really.

Senator BOND. That is a—that is something that I keep hearing things that——

Senator MIKULSKI. Me, too.

Senator BOND [continuing]. Make me scratch my head and wonder what is—what is happening.

Senator MIKULSKI. Yes. And where HUD, FHA—homes languishing, as I just said, in our communities—not only predatory, are then—really help destroy the neighborhood—and somewhat—so——

Senator BOND. That—we would—as I have—we have asked for—we have asked for advice and guidance in a number of areas. And we look forward to hearing your suggestions. And obviously, we will continue to be in touch with you and——

Ms. LAZAR. Well, we are happy to do it.

Senator BOND [continuing]. Thank you very much for—for your good work and—and for your wise counsel, which I assume we will be receiving shortly.

Thank you very much.

Senator MIKULSKI. Yes. Thank you for all the great things in Baltimore and Salisbury.

Ms. LAZAR. Great. Glad you are happy.

Senator MIKULSKI. Thank you.

SUBCOMMITTEE RECESS

Senator BOND. And with that, the hearing is recessed. Thank you very much.

Ms. LAZAR. Thank you very much.

[Whereupon, at 11:30 a.m., Thursday, April 25, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, MAY 2, 2001

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Christopher S. Bond (chairman) presiding.

Present: Senators Bond, Craig, Mikulski, Leahy, and Johnson.

DEPARTMENT OF VETERANS AFFAIRS

STATEMENT OF HON. ANTHONY PRINCIPI, SECRETARY OF VETERANS AFFAIRS

ACCOMPANIED BY:

NORA E. EGAN, CHIEF OF STAFF, OFFICE OF THE SECRETARY
THOMAS L. GARTHWAITE, M.D., UNDER SECRETARY FOR HEALTH, VETERANS HEALTH ADMINISTRATION
FRANCES M. MURPHY, M.D. MPH, DEPUTY UNDER SECRETARY FOR HEALTH, VETERANS HEALTH ADMINISTRATION
JOHN R. FEUSSNER, M.D., CHIEF RESEARCH AND DEVELOPMENT OFFICER, VETERANS HEALTH ADMINISTRATION
CHARLES V. YARBROUGH, CHIEF FACILITIES MANAGEMENT OFFICER
JIMMY NORRIS, CHIEF FINANCIAL OFFICER
ART KLEIN, DIRECTOR OF BUDGET OFFICE, VETERANS BENEFITS ADMINISTRATION
JOSEPH THOMPSON, UNDER SECRETARY FOR BENEFITS, VETERANS BENEFITS ADMINISTRATION
PATRICK NAPPI, DEPUTY UNDER SECRETARY FOR BENEFITS, VETERANS BENEFITS ADMINISTRATION
ROBERT J. EPLEY, ASSOCIATE DEPUTY UNDER SECRETARY FOR POLICY AND PROGRAM MANAGEMENT, VETERANS BENEFITS ADMINISTRATION
JAMES W. BOHMBACH, CHIEF FINANCIAL OFFICER, VETERANS BENEFITS ADMINISTRATION
ROGER RAPP, ACTING UNDER SECRETARY FOR MEMORIAL AFFAIRS, NATIONAL CEMETERY ADMINISTRATION
VINCENT L. BARILE, DEPUTY UNDER SECRETARY FOR MANAGEMENT, NATIONAL CEMETERY ADMINISTRATION
DANIEL TUCKER, DIRECTOR, BUDGET AND PLANNING SERVICE, DEPARTMENTAL ADMINISTRATION

TIM S. McCLAIN, GENERAL COUNSEL, OFFICE OF THE SECRETARY
JOHN H. THOMPSON, DEPUTY GENERAL COUNSEL
RICHARD J. GRIFFIN, INSPECTOR GENERAL, OFFICE OF THE SECRETARY
ELIGAH D. CLARK, CHAIRMAN, BOARD OF VETERANS' APPEALS, OFFICE OF THE SECRETARY
GUY H. McMICHAEL III, ACTING PRINCIPAL DEPUTY ASSISTANT SECRETARY, ASSISTANT SECRETARY FOR INFORMATION AND TECHNOLOGY
D. MARK CATLETT, ACTING PRINCIPAL DEPUTY ASSISTANT SECRETARY FOR MANAGEMENT
DENNIS M. DUFFY, PRINCIPAL DEPUTY ASSISTANT SECRETARY, ASSISTANT SECRETARY FOR POLICY AND PLANNING
ROBERT W. SCHULTZ, DEPUTY ASSISTANT SECRETARY FOR ADMINISTRATION, ASSISTANT SECRETARY FOR HUMAN RESOURCES AND ADMINISTRATION
E. PHILLIP RIGGIN, DEPUTY ASSISTANT SECRETARY, ASSISTANT SECRETARY FOR CONGRESSIONAL AFFAIRS
CLAUDE M. KICKLIGHTER, DIRECTOR FOR SPECIAL EVENTS, ASSISTANT SECRETARY FOR PUBLIC AND INTERGOVERNMENTAL AFFAIRS

OPENING STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Good morning. The Subcommittee on Veterans Affairs, HUD and Independent Agencies will come to order.

This morning we will be hearing testimony from the Department of Veterans Affairs on its fiscal year 2002 budget request. We are delighted to be able to welcome this morning Secretary Tony Principi for his first appearance under the new administration before the subcommittee.

Tony is an old hand at VA, having served under the last Bush administration as Deputy Administrator, and then as Acting Secretary. Tony, your wealth of knowledge and expertise about the issues confronting the Department are a mixed blessing. On the one hand, it has not taken you long to get up to speed. On the other hand, I do not think you expect much of a honeymoon. We are expecting that you will be able to address quickly and effectively the myriad of significant challenges before you and, as we all know, there are more than just a few.

VA's budget proposal totals $51 billion, including $23.4 billion in discretionary spending, an increase of $1 billion over the current fiscal year. In addition, VA's medical collections are expected to increase significantly to a total of $896 million next year. Coupled with collections, medical care for veterans would total a record amount of nearly $22 billion. This increase demonstrates the President's commitment to veterans' health care. It is one of the largest increases we have seen requested for medical care.

Now, some have questioned whether this budget is enough to provide high quality, accessible care to all veterans who seek it. I think the President's budget is a very good start. We look forward to discussing it with you and working with you when there are other areas of the budget that need fine-tuning.

Frankly, this year's budget is a more honest budget than we have seen from VA in quite sometime. The reason is, VA has acknowledged its spending patterns have not matched up with its budget as requested in three key areas and has adjusted its budget accordingly. Improving the VA budget process is critical to ensure there is accountability for the funds provided.

VA'S MEDICAL CARE PROGRAM

For example, I am very troubled that spending has not matched VA's plans, particularly in the area of hepatitis C. We need to understand better why this has happened. There are many different explanations I have heard. The reasons may be, there was not adequate attention paid to hepatitis C, but in any event, the amount of money spent on hepatitis C was totally different from what was requested for it.

Mr. Secretary, as you found upon your return to VA the Veterans Health Administration has made some tremendous changes over the past 6 years. A number of initiatives begun under former Secretary for Health Dr. Kenneth Kizer have resulted in moving VA from primarily a hospice system to a comprehensive care outpatient system.

I think that is a real success story, that the VA has been able to increase significantly the total number of veterans served by VA medical care. One million people, or 36 percent more veterans today are getting VA care compared to 1995. That is a huge number, and at the same time I think VA has been able dramatically to be able to improve the quality of patient care, and the accessibility of its services.

Today, VA has tripled the number of community-based outpatient clinics it had in 1995, making care available closer to home for thousands of veterans nationwide. I can tell you, in Missouri it has been very warmly received, and it has been a badly needed improvement in the care, but there is a lot more to be done, and some of the really tough issues have not yet been tackled, especially the need to restructure VA's capital assets to make better use of health care resources and eliminate wasteful expenditures on outmoded and unneeded buildings, and there were about 4,700 in VA's inventory last time we checked, total buildings. Not all of them are needed, but I am sure some of them are.

According to the GAO, VA is wasting $1 million a day to maintain unneeded buildings, and that could be a conservative estimate. We look forward to getting an update on the capital asset realignment for enhanced services, or CARES initiative. As I understand it, VA should be concluded phase 1 of CARES, which is basically a review of VISN 12 in Chicago.

Tony, you probably know we have been studying since at least 1995 whether we really need four VA hospitals in Chicago. We need to be sure that CARES, which, if it works properly, should result in a comprehensive long-term strategic plan for the Veteran Health Administration, is on track and working the way it should.

I am pleased that you have included significant resources, $115 million, in your budget for CARES-related infrastructure projects which emerge from this planning process. This should reassure everyone we have every intention of moving forward with the infrastructure improvements that will be recommended out of the CARES process.

Also, VHA must adapt further to address the declining and aging veteran population, including the implementation of new programs which will help aging veterans get long-term care in noninstitutional settings wherever possible, such as the Millennium Act, which was enacted in 1999 to better meet aging veterans' needs, and we hope that we can see progress, but it has been slow in implementing the requirements of the act, and we need to understand why.

So the issue of access, while great advances have been made improving the accessibility of services, is a work in progress. About 13 percent of veterans who currently use VA must travel more than 30 miles to reach VA medical care. GAO has done some work for us which will be included in testimony for the record today which identifies significant disparities across the system.

VHA also must consider the increasing number of so-called Priority 7's. These are folks who formerly were not able to get to VA medical care. In the past several years, VA has increased the number of higher-income, nonservice-connected veterans to about 20 percent of all its users from less than 4 percent in 1996. We should be proud that this deserving population is able to get care today. However, we need to consider whether they should bear a greater level of the cost, as the current level of collections from their insurance and copayments covers only about 10 percent of the cost of their care, and that care provided to them is not coming at the expense of low-income service-connected veterans who often rely exclusively on VA for their care.

These are but a few of the issues before the Veterans Health Administration.

VETERANS BENEFITS ADMINISTRATION

With respect to the Veterans Benefits Administration, the budget includes almost $1.1 billion for VBA, $133 million, or 13 percent increase over the current year. This increase again signifies the administration's strong commitment to veterans' programs.

Mr. Secretary, you have indicated that addressing the backlog is your highest priority, and have announced a goal of processing regional disability claims within 100 days by the summer of 2003. We are getting the backlog down to 250,000. This is an admirable goal, cutting both those in half. The question is, is it achievable? Good luck.

VBA is currently taking more than 200 days to process a claim, and the backlog is about 500,000. While VBA is making some progress in timeliness and claims processing, progress has been hindered by the duty to assist legislation enacted last year, and then the former Secretary's decision to grant disability compensation for Vietnam veterans with Type II diabetes.

It seems VBA's problems never end. Last year, VBA claimed its failure to reach its 1999 goals were the result of organizational and cultural shifts in VBA, along with the increased difficulty and complexity of the workload. This year, it is the duty to assist and diabetes.

While I understand the latest crisis resulted from legislation which greatly expands VBA's requirements, and which was not fully supported by VBA, duty to assist was not unanticipated. Also, many improvements which have been suggested over the years, such as moving case management, centralizing certain functions, and holding managers accountable for their performance, still have not been fully implemented.

Mr. Secretary, your efforts to take a fresh look at this through the task force you have created are greatly appreciated and absolutely necessary. We want to work with you to provide the resources you need to implement these needed reforms. It is my view that you must have a long-term strategy, not just more Band-Aids to address the immediate crises, that will take VBA well beyond the current problems.

We look forward to seeing your detailed plan, including resources requirements, later this summer. We hope when you return next year to testify on the fiscal year 2003 budget, there will be some good news.

NATIONAL CEMETERY ADMINISTRATION

Finally, for the National Cemetery Administration, VA is requesting a 11-percent increase, for a total of $121 million. This includes $10 million for the National Shrine commitment, which ensures that the backlog of deferred maintenance needs be addressed and the resting places of our fallen heroes may be maintained in an appropriately dignified manner.

Also, construction funding totalling $87 million is requested for seven cemetery projects.

In conclusion, as I stated at the outset, I believe this is a robust budget for VA which targets some critical needs. I look forward to discussing with you and my colleagues whether additional funds might be needed to ensure the important goals you have set forth for the coming year can be met.

Before closing, let me raise an additional issue. During last year's hearing, I raised some concerns about the quality of care our Nation's veterans received in nursing homes. In the aftermath of that hearing, we focused whether policies and procedures were in place to coordinate the oversight efforts of all Federal and State regulatory agencies when monitoring problem nursing homes.

Since then, we have worked with the General Accounting Office in examining the VA's policy for overseeing the quality of care provided to veterans. We look forward to the final results of the GAO study and sharing the findings with the VA. We have a series of questions about the VA's current and proposed policies which will address the goal of enhancing and encouraging the VA's rigorous oversight of nursing homes that care for our veterans across the United States.

[The Information follows:]

VA HEALTH CARE—COMMUNITY-BASED CLINICS IMPROVE PRIMARY CARE ACCESS (GAO–01–678T)

(By Cynthia Bascetta)

Chairman Bond, Ranking Member Mikulski, and Members of the Subcommittee: We are pleased to contribute this statement for the record of the Subcommittee's deliberations on the President's fiscal year 2002 budget request for the Department of Veterans Affairs (VA). This budget proposes $22.3 billion for health care system expenditures by the Veterans Health Administration (VHA) to serve an estimated

4.1 million veterans and other beneficiaries.[1] This system comprises 22 health care networks, which operate over 700 medical facilities, most of which are community-based outpatient clinics (CBOC).

As you know, VHA launched a major initiative in February 1995 to expand its network of CBOCs. Before 1995, VHA operated about 175 community-based clinics, as well as 172 hospitals, which also offered outpatient services. Since VHA launched its initiative, about 400 CBOCs have opened and another 145 CBOCs are currently planned. These newly opened and planned clinics, hereafter referred to as Initiative CBOCs, were to operate essentially as physicians' offices focusing on primary care and were to be located in close proximity to VHA's patients.

VHA's stated goals for its Initiative CBOCs emphasized making access to care more convenient for its existing users, especially those with compensable service-connected disabilities or incomes below established thresholds.[2] For these high priority veterans—VHA's traditional population—Initiative CBOCs were expected to improve access, for example, by reducing the need to travel long distances or to travel in congested urban traffic.

My comments focus on (1) the accessibility of VHA primary care for patients who used VHA health care in the past, including the potential improvements that would result from opening planned Initiative CBOCs, and (2) the characteristics of Initiative CBOC users. To conduct our work, we surveyed VHA's 22 networks concerning their existing and planned CBOCs, analyzed VHA's outpatient care database for use patterns and demographic information, and analyzed information in a VHA database that identifies the geographic location of VHA's patients to determine the effect of recently opened and planned CBOCs on their proximity to VHA's health care facilities.

In summary, Initiative CBOCs have contributed to improved accessibility of VHA primary care for patients who used VHA facilities in the past; however, access remains unevenly distributed across the networks. Planned CBOCs should help to further improve access, although network variation is not likely to be diminished much. While 87 percent of VHA's patients systemwide live in reasonable proximity to primary care clinics,[3] 13 percent—about 432,000 patients concentrated in 6 networks—still live more than 30 miles from a VHA primary care clinic. VHA's currently planned CBOCs could provide reasonable proximity to primary care for an additional 68,000 patients, but the majority of those who live more than 30 miles from a primary care clinic would still reside in 6 of the 22 networks. The difficulties in providing cost-effective VHA-staffed CBOCs or contract care in areas with few patients make it hard to improve accessibility, according to network managers.

Although Initiative CBOCs largely serve patients who have received VHA health care in the past, they have also facilitated access for new patients.[4] In fiscal year 2000, for example, about 135,000 Initiative CBOC users were new patients, including 56,000 higher-income veterans. During the same year, 158,000 new higher-income patients used other VHA outpatient facilities, but not Initiative CBOCs. Although their numbers are growing, new higher-income patients remain a relatively small segment of both patients using Initiative CBOCs and patients using any VHA outpatient health care.

BACKGROUND

Regional directors of VHA's 22 health care networks (known as Veterans Integrated Service Networks, or VISNs)[5] were given responsibility for CBOC planning. VHA guidance stated that attracting new patients should not be the sole or primary goal of a new CBOC. This guidance instead noted that planners should exercise caution because any new patients attracted to CBOCs must be accommodated within existing resource constraints.

Since VHA's CBOC initiative was launched in February 1995, the number of CBOCs has more than tripled. As of February 28, 2001, VHA had 573 operating

[1] About 9 percent of VHA's patients nationwide are nonveterans, for example, dependents of veterans who died of service-connected disabilities, patients provided humanitarian care, employees given preventive immunizations, and beneficiaries seen through sharing agreements with the Department of Defense.

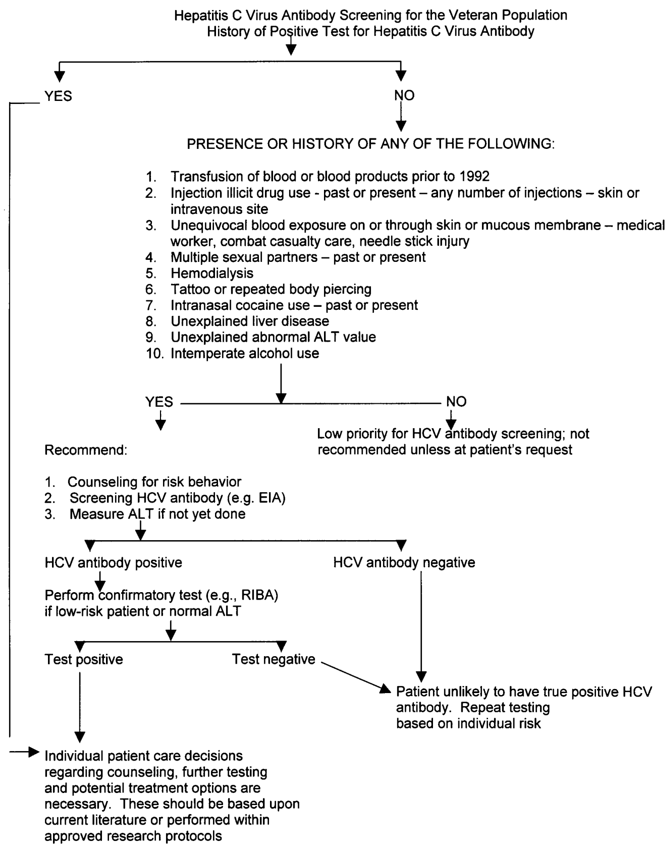
[2] VHA uses a sliding scale of income thresholds, depending on number of dependents.

[3] VHA's primary care clinics include Initiative CBOCs, hospital-based clinics, and pre-existing community outpatient clinics.

[4] New patients are defined as those who did not obtain health care through VA for 3 fiscal years before a visit. Past patients, in contrast, are those who did receive VA health care at any time during the 3 preceding fiscal years.

[5] In 1995, VHA created 22 VISNs, a new management structure to coordinate the activities of and allocate funds to VHA medical facilities in each region. See appendix I for a list of these networks.

CBOCs, including nearly 400 Initiative CBOCs. According to network officials, firm plans for another 100 CBOCs have already been authorized by the Congress or have been submitted to VHA headquarters or the Congress for consideration.[6] Tentative plans for 45 CBOCs are in the development phase.[7] Network managers expect most of these plans to be implemented within the next 3 years. Networks vary in their numbers of existing and planned CBOCs, as figure 1 shows.



Although new CBOCs continue to open, the peak of expansion seems to have passed. From March 1998 through February 1999, 124 Initiative CBOCs opened. Fewer have opened each year since. If networks implement all planned CBOCs within the next 3 years, then new openings will average about 50 CBOCs annually.

Existing CBOCs (including both Initiative and pre-existing CBOCs) differ somewhat in the services they provide. The vast majority—more than 90 percent—offer

[6] Of these planned CBOCs, 12 have already opened. Because they opened after our reference date of February 28, 2001, we counted them among the firmly planned CBOCs.

[7] Network managers also indicated that an additional 70 locations are being considered. Because the plan development phase has not begun, we excluded them from our analyses.

primary care, and about half offer mental health services.[8] In addition, one-third offer other services as well.[9]

Systemwide, VHA staff operate about 75 percent of VHA's current CBOCs using VA-owned or leased space. Contract arrangements are, however, becoming increasingly common. Contractors operated only about 1 in 25 CBOCs opened before February 1995. In contrast, one in three Initiative CBOCs are contract-run, and one in two of VHA's planned CBOCs are expected to involve contracted staff and space.

VHA's initiative to expand CBOCs was one component of a broader set of changes intended to improve veterans' access to health care. Notably, the Veterans Health Care Eligibility Reform Act of 1996 authorized a uniform package of health care benefits for all veterans. As a result, VHA's traditional veteran patients became eligible for a broader array of services (including preventive care) than was previously available. In addition, veterans with incomes higher than established thresholds could also receive the same uniform benefit package if VHA determines that it has more resources than it needs to serve traditional patients.

Over the last 6 years, VHA's patient base has increased dramatically. For example, VHA served 2.8 million patients in fiscal year 1995 compared to 3.8 million in fiscal year 2000, a 36 percent increase. VHA's fiscal year 2002 budget projects that about 4.1 million patients will be served, representing an increase of almost 50 percent since 1995.

CBOCs are Improving Primary Care Access, but Results Vary Among Networks

As the number of Initiative CBOCs has increased, the percentage of VHA's patients who live in reasonable proximity to a VHA primary care facility has increased to 87 percent. In 1995, we found that about two-thirds of VHA patients had reasonable proximity to VHA health care facilities, which we then measured as living within 25 miles of an outpatient clinic.[10] After we recommended that VHA establish a time or distance standard for CBOCs,[11] VHA began to report the number of patients who lived within 30 miles of its facilities.

VHA's most recent report[12] showed that about 86 percent of its total fiscal year 1999 patient population, 3.4 million patients, lived within 30 miles of a VHA outpatient facility. Since that time, VHA has opened about 100 additional Initiative CBOCs, and we estimate that the percentage of those patients living within 30 miles of a VHA primary care clinic has increased to 87 percent.[13]

However, the percentage of the patients who live 30 miles or less from a primary care clinic is not evenly distributed among VHA's networks. As figure 2 shows, the percentage of patients who are within 30 miles of VHA primary care ranges from less than 70 percent in some largely rural networks, such as the VHA Upper Midwest Health Care Network (VISN 13), to nearly 100 percent in largely urban networks, such as the Veterans Integrated Service Network—Bronx (VISN 3).

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[8] The Veterans Health Care Eligibility Reform Act (Public Law 104–262) authorized VHA to provide preventive care. Consistent with this, more than 97 percent of Initiative and planned CBOCs offer primary care, compared to 82 percent of pre-existing CBOCs. In contrast, more than 80 percent of pre-existing CBOCs offer mental health services, compared to 45 percent of Initiative CBOCs.

[9] These other services typically include ancillary or preventive services (such as laboratory testing or nutritional counseling), although some CBOCs offer limited specialty care as well.

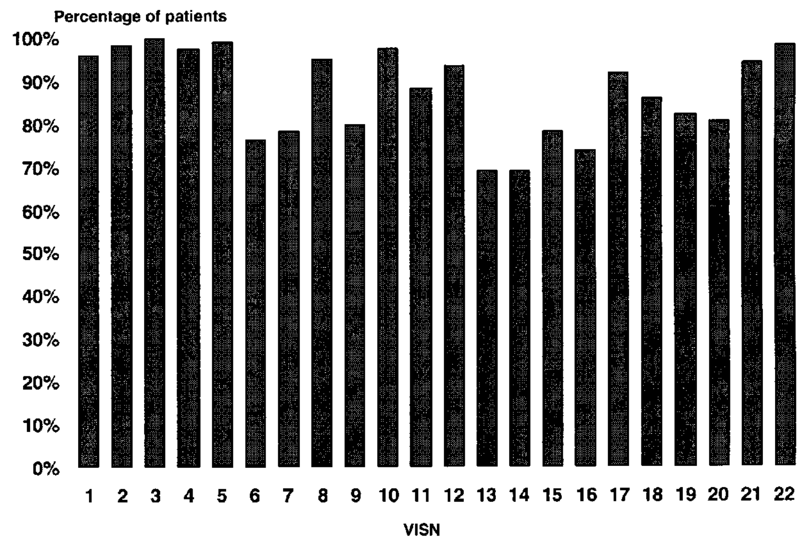
[10] VA Health Care: How Distance From VA Facilities Affects Veterans' Use of VA Services (GAO/HEHS–96–31, Dec. 20, 1995).

[11] VA Health Care: Improving Veterans' Access Poses Financial and Mission-Related Challenges (GAO/HEHS–97–7, Oct. 25, 1996).

[12] Geographic Access to Veterans Health Administration (VHA) Services in fiscal year 1999: A National and Network Perspective, report by the planning systems support group, a field unit of the VHA Office of Policy & Planning (April 2000).

[13] Overall, 88 percent of VHA's patients live within 30 miles of a VHA outpatient facility, but not all of these facilities offer primary care.

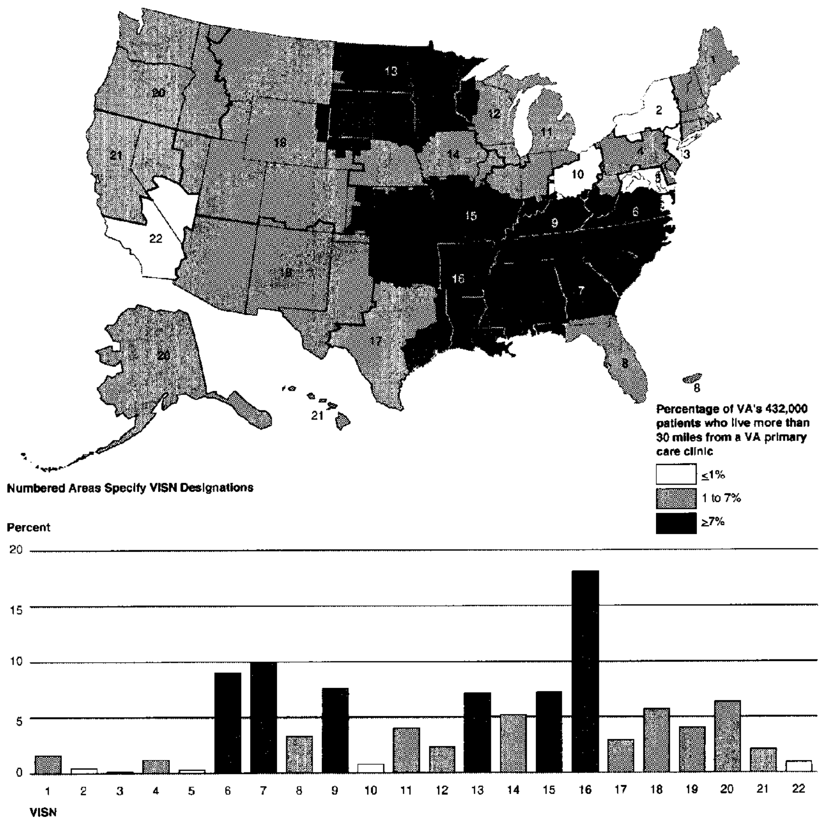
Figure 2: Percentage of Each Network's Patients Who Live Within 30 Miles of a VHA Primary Care Clinic Given CBOCs Operating on February 28, 2001



Source: GAO analysis of information provided by VHA and network managers.

Moreover, approximately 432,000 patients—or about 13 percent of VHA's patient population—live more than 30 miles from a VHA primary care clinic. As figure 3 shows, almost 60 percent of these 432,000 patients live in six networks.

Figure 3: Percentage of the 432,000 Patients Who Live More Than 30 Miles From a VHA Primary Care Clinic Given CBOCs Operating on February 28, 2001



Source: GAO analysis of information provided by VHA and network managers.

If networks implement all firm plans for 100 new CBOCs, then more than 50,000 additional patients will be within reasonable proximity to VHA primary care. In addition, another 18,000 patients will have reasonable proximity to primary care if the tentative plans for 45 more CBOCs are also implemented.[14]

However, opening all planned CBOCs would not eliminate uneven access across the networks. Specifically, we estimate that 364,000 patients would remain more than 30 miles from VHA primary care, and the same six networks would still account for the majority (60 percent) of these patients. Moreover, more than 68,000 patients (19 percent) live in one network—the Veterans Integrated Service Network—Jackson (VISN 16)—and more than 148,000 patients (41 percent) live in the other five networks.

Managers in these networks noted challenges to improving the proximity of VHA primary care to their patients. In some areas, there are not enough VHA patients to support a cost-effective VHA-run CBOC. Even where there are enough patients, network managers reported that there can be difficulties recruiting VHA medical personnel to staff CBOCs or obtaining appropriate, affordable space. They also noted

[14] If all plans for CBOCs were implemented, about 89 percent of VA's patients would live within 30 miles of a VA primary care clinic, an increase of about 2 percentage points over current levels.

obstacles to arranging contract care. For example, some network managers mentioned difficulties in finding local providers who were willing to enter into contracts to provide primary care to veterans at reasonable costs.

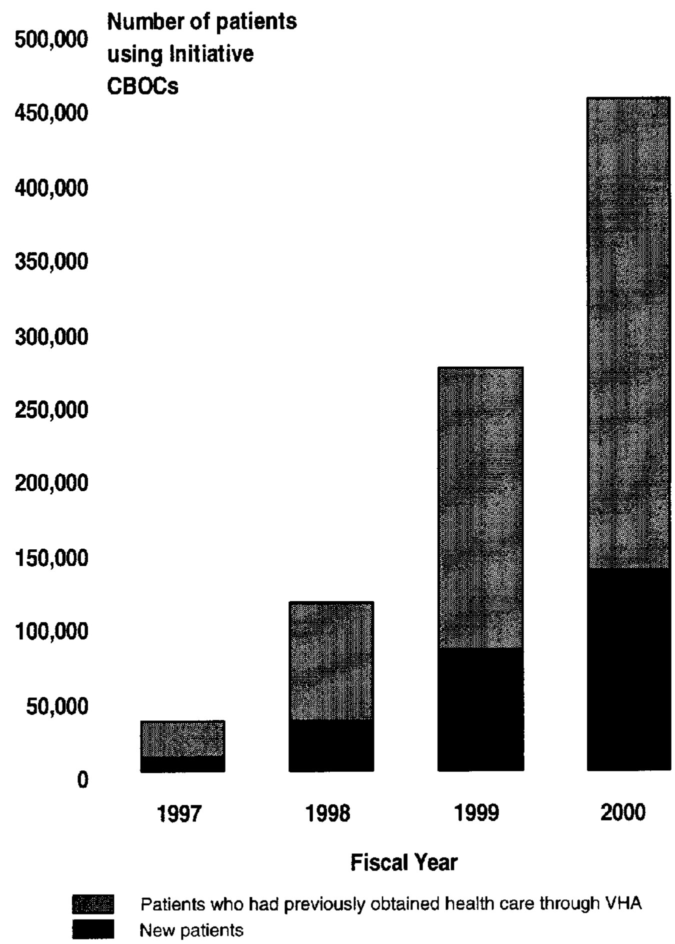
Network managers nationwide noted that reducing the number of patients who live more than 30 miles from a VHA health care facility is not their only goal when planning CBOCs. Many, for example, mentioned reducing veterans' travel time to 30 minutes or less—whether because of distance, congested urban traffic, or other factors. VHA is in the process of estimating the time its patients must spend traveling to VHA health care facilities, an endeavor made possible by recent advances in computer mapping software. Because many patients who are within a 30-mile radius of a health care facility may need to travel more than 30 minutes to reach it, switching to a time-based measure of access will likely reduce the number of patients considered to have reasonable access. As a result, the uneven accessibility across networks portrayed in figure 2 is likely to change once VHA begins measuring access in terms of travel time rather than distance.

CBOCs and Other Outpatient Facilities Serving a Relatively Small, but Growing Number of New, Higher-Income Veterans

New VHA patients have represented about 30 percent of Initiative CBOC users in each of the last 4 years, although their numbers are growing. In fiscal year 2000, for example, 454,000 patients used Initiative CBOCs,[15] including 135,000 who were new patients to the VHA system. In contrast, less than 10,000 new VHA patients were Initiative CBOCs users in fiscal year 1997. As figure 4 shows, each year since 1998 VHA has experienced significant increases in the use of Initiative CBOCs by both new patients and patients who had previously used other VHA outpatient facilities.

[15] Most patients who used Initiative CBOCs also used VHA's other facilities to obtain health care services.

Figure 4: Number of New and Past Patients Who Used Initiative CBOCs in Fiscal Years 1997–2000



Note: The number of patients who used Initiative CBOCs in fiscal years 1995 and 1996 cannot be counted accurately because outpatient visits to CBOCs during those years were often counted as visits to the medical centers that had administrative responsibility for their operations. Almost all CBOCs now report their workloads separately from those of medical centers.

Source: GAO analysis of information provided by VHA.

The percentage of Initiative CBOC patients who were new to VHA varied across networks. In fiscal year 2000, for example, new VHA patients who used CBOCs ranged from 16 to 42 percent, as table 1 shows.[16]

[16] These analyses are based on the network in which patients reside, rather than the location of the Initiative CBOC used. That is, our numbers describe patients who live within a network, rather than patients who use the facilities within that network. For example, patients who live in VISN 6 may have used Initiative CBOCs in a neighboring network, such as VISN 5. Such patients would be included only in the data reported for VISN 6.

TABLE 1.—*Percentage of Initiative CBOC Patients Who Were New VHA Patients in Fiscal Year 2000*

Percent	*Number of networks*
16–20	3
21–25	4
26–30	8
31–35	3
36–40	2
40–42	2

Note: These analyses are based on the network in which patients reside, rather than the location of the Initiative CBOC used.

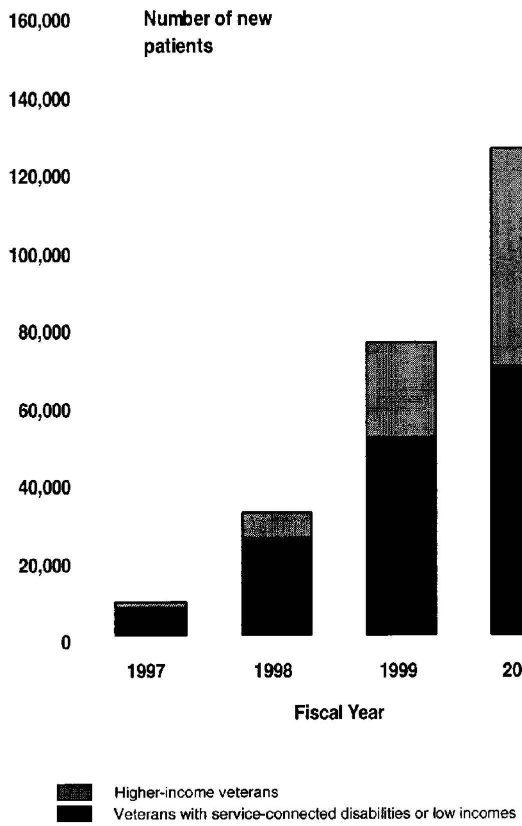
Source: GAO analysis of information provided by VHA.

Of the 135,000 new VHA patients using Initiative CBOCs in fiscal year 2000, about 56,000 were higher-income veterans, up from 1,300 in fiscal year 1997.[17] Moreover, higher-income veterans as a share of new patients who use Initiative CBOCs have risen from 14 to 41 percent from fiscal year 1997 through fiscal year 2000 (see figure 5).[18]

[17] In fiscal year 2000, a total of about 100,000 higher-income veterans used Initiative CBOCs; however, 44,000 had previously obtained outpatient health care from VHA.

[18] A small percentage of Initiative CBOC patients do not fall into either the traditional veteran population (those with compensable service-connected disabilities or low income) or the higher-income veteran population. These patients include nonveterans, veterans whose eligibility for benefits was being assessed, and veterans whose disability and income status were not identified in the outpatient database. They accounted for about 5 percent of Initiative CBOC patients in fiscal year 1997, but less than 4 percent of Initiative CBOC patients in fiscal years 1998 through 2000.

Figure 5: Number of New Patients Who Used Initiative CBOCs in Fiscal Years 1997–2000



Source: GAO analysis of information provided by VHA.

Like the percentage of new patients, the percentage of new higher-income patients using Initiative CBOCs varied across networks. In fiscal year 2000, for example, new higher-income veterans who used Initiative CBOCs ranged from 15 to 62 percent, as table 2 shows.

TABLE 2.—*Percentage of New Initiative CBOC Patients Who Were Higher-Income Veterans in fiscal year 2000*

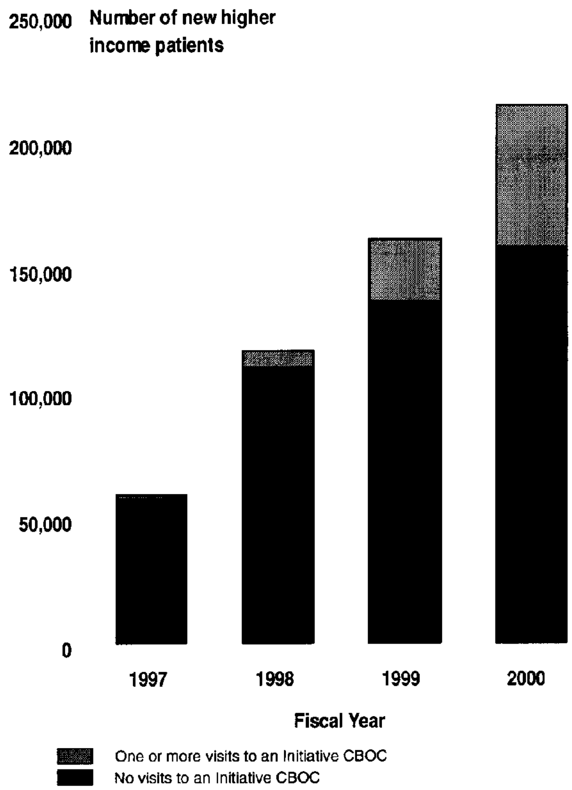
Percent	*Number of networks*
15–24	2
25–34	7
35–44	5
45–54	6
55–62	2

Note: These analyses are based on the network in which patients reside, rather than the location of the Initiative CBOC used.

Source: GAO analysis of information provided by VHA.

Systemwide, most new higher-income veterans do not use Initiative CBOCs, but instead use only other VHA outpatient facilities. Nevertheless, the number and share of new higher-income patients using Initiative CBOCs have increased dramatically. The proportion of new higher-income veterans who use Initiative CBOCs has grown from 2 percent in fiscal year 1997 to 26 percent in fiscal year 2000.[19] As previously discussed, the number of these new higher-income patients has increased from 1,300 in fiscal year 1997 to 56,000 in fiscal year 2000. To put this in perspective, during the same period, the number of new higher-income veterans using other VHA outpatient facilities exclusively grew from 57,000 to 158,000, as shown in figure 6.

Figure 6: Number of New Higher-Income Patients Using Initiative CBOCs and Other VHA Outpatient Facilities in Fiscal Years 1997–2000



Source: GAO analysis of information provided by VHA.

Nonetheless, new higher-income veterans remained a small segment—about 6 percent—of all patients using VHA's outpatient facilities in fiscal year 2000, up from 2 percent in fiscal year 1997.

CONCLUDING OBSERVATIONS

Overall, through its Initiative CBOCs, VHA is steadily making primary care more available within reasonable proximity of patients who have used VHA's system in the past. However, the uneven distribution of patients living more than 30 miles

[19] This is consistent with CBOCs growing share of total higher-income veterans (new and past users) using Initiative CBOCs; from fiscal year 1997 through fiscal year 2000, the percentage of higher-income veterans using CBOCs grew from 2 percent to 21 percent.

from a VHA primary care facility suggests that access inequities across networks may exist. Also, the improvements likely to result from VHA's planned CBOCs indicate that achieving equity of access may be difficult. Nonetheless, we believe VHA's effort to assess the time it takes patients to reach a VHA outpatient clinic could provide a better measure and, therefore, a clearer understanding of access differences among networks.

In addition, our assessment suggests that new CBOCs may have contributed to, but are not primarily responsible for, the marked increase in the number of higher-income patients who have sought health care through VHA over the past few years. While Initiative CBOCs have undoubtedly attracted some new patients to VHA, our analysis suggests that new patients would have sought care at other VHA facilities in the absence of Initiative CBOCs. In that regard, enhanced benefits and access improvements afforded by eligibility reform may have attracted more new patients, including those with higher incomes, than VHA's Initiative CBOCs.

GAO Contacts and Staff Acknowledgements

For more information about this statement, please call Cynthia A. Bascetta, Director, Health Care—Veterans' Health and Benefits Issues, at (202) 512–7101, or Paul Reynolds, Assistant Director, at (202) 512–7109. Key contributors to this statement include Kristen Joan Anderson, Deborah Edwards, Michael O'Dell, Peter Schmidt, Thomas Walke, and Connie Wilson.

STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator BOND. Now, it is my pleasure to turn to my ranking member, Senator Mikulski.

Senator MIKULSKI. Thank you very much, Mr. Chairman, and I am very pleased to welcome our new VA Secretary, Mr. Anthony Principi.

I had the real pleasure of working with Mr. Principi during the previous Bush administration when he was Deputy Secretary. I got to know him and got to appreciate his commitment to the core mission of the Department of Veterans Affairs, as well as, I think, bringing to the table significant management skills, and I believe those skills have only been even more finely honed and developed during this stint in the private sector.

So we really welcome you back to this, and we know that as you return to the Department of Veterans Affairs there are many challenges, budget management, the crises that all health care in America is facing, as well as the changing demography of the United States of America, which impacts benefits and health care in the larger community, but also is particularly focused also in the Department of Veterans Affairs.

So we look forward to working with you not only on the appropriations for actual health care, but to deal with issues like the nursing shortage that I want to hear more about in our questions and answers, to how we are going to deal with an aging population, from our World War II moving to frail elderly, the Korean War veterans, the anticipated aging of the Vietnam population, which is so significant in number and yet hard to evaluate where the permanent wounds of war will manifest themselves once these vets hit 50. Many battle-related conditions will only manifest themselves as one gets older.

So we look forward to having these discussions with you. As you know, in the last 2 years, this committee has worked on a bipartisan basis to provide large increases for veterans' medical care, and to encourage more veterans to enroll in the VA system. At the time when high private health insurance and prescription drugs are really straining the elderly, we can only expect that this subcommittee will be urged to continue these increases.

Many veterans will be shifting to VA medical care because they do not have anywhere else to go. Particularly I am looking at a population who are in their fifties. They might now be working in businesses where they do not have health insurance. Anyway, they are more to be talked about.

So it is also about increasing our funding.

The issue also will be about long-term care, and our ability to really look at how we will implement the Millennium Act, and we go forward to your advice. We cannot do it all in 1 year, but I believe that if we look ahead to the changing and the anticipated boom that the boomers are going to put on the system, specifically the Vietnam vets, if we look now under your stewardship that each year we really focus on getting systems and finances in place, that we do not try to do everything immediately but really develop this continuing care, I think that we are going to have something to be proud of over the next 2 or 3 years.

So we look forward to what you want to do, and how you would recommend that it be paced from both a managerial and fiscal standpoint, because I think we all have the same goal. If we have the right pacing, I believe we can help you get the right money, so let us think about those.

Also, as you know, the issue of quality has come up. The Cleveland Plain Dealer has written some scathing articles. I take no position on the accuracy, nor am I here to finger-point. I am here to pinpoint, to see really how we can ensure the highest quality of services, but also know that quality is directly impacted by staff shortages, a bidding war I would presume you are in for good nurses and lab technicians and so on, and then also the improvement of the use of technology, information systems, fiscal management systems, going after dead-beat insurance companies to reimburse you so that you have the tools of the trade, if you will, to really be able to put the management systems in to improve the quality.

The other thing I want to emphasize is, I am deeply troubled about hepatitis C. I am deeply troubled about it. The medical and public health community in Maryland—and as you know, we have two great academic centers, the University of Maryland, which has its excellent relationship with our VA hospital as well as Hopkins in infectious disease, tells me this hepatitis C is as dangerous, if not more so, to spreading in the larger community than probably any of the other infectious disease we could face, and there is no cure for it, so we have really got to get a handle on hepatitis C.

We also, as I said, come back to the system of collecting what our veterans and taxpayers are owed from private insurance companies.

PREPARED STATEMENT

Last, but not at all least, of course, Mr. Thompson, I am going to ask about the reduction of the processing time for benefits, and I know it is a high priority of the President. I know it is a high priority with you, and it is a high priority with me, so having said that, I would ask unanimous consent that my full statement go in the record, and look forward to not only hearing your testimony, but really working hands-on with you.

Senator BOND. Thank you very much, Senator Mikulski. Your statement will be included in the record, and we appreciate your perceptive comments.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BARBARA A. MIKULSKI

Mr. Chairman, I am very pleased to welcome our new VA Secretary, Mr. Principi, to the Subcommittee this morning. Secretary Principi has a great deal of experience, having served as the Deputy Secretary from 1989 to 1992, and as the Acting Secretary from 1992 to 1993. I look forward to working with him and his team on the issues facing our veterans.

My goals for this hearing are two-fold. First, we must ensure that the new Administration's budget keeps the promises we made to our veterans. And second, we must make sure the VA is a good steward of taxpayer dollars—so that our veterans and the American people get the most for their hard earned money.

The budget requests $51.7 billion for veterans' benefits and services: $28.3 billion for entitlements, and $23.4 billion for discretionary programs that are under this Subcommittee's jurisdiction—a $1 billion increase.

Promises made must be promises kept. Our veterans must have access to the quality medical care and benefits they deserve—in a timely manner.

This year's request for medical care is $22.3 billion. This is a $1 billion increase over 2001, and includes $896 million that will be collected from third-party health insurance and co-payments from veterans.

In the last 2 years, we have provided large increases for medical care—$1.7 billion in 2000 and $1.3 billion in 2001—to encourage more veterans to enroll in the VA system, and to provide them with the medical care they deserve. At a time when high private health insurance and prescription drug costs are really straining our elderly on fixed incomes, we can only expect that the Subcommittee will be urged to continue these increases.

As medical care funding increases to meet demand, we must not loose sight of quality. The VA has made great progress on quality control issues. In fact, a recent New England Journal of Medicine report shows that heart attack patients treated in VA hospitals receive the same quality of care as Medicare patients receive in private hospitals.

But I am concerned about a series of recent negative articles in the Cleveland Plain Dealer that really question the VA's ability to deliver safe, quality, medical care. I would like to hear from Secretary Principi about these articles. Are these stories largely anecdotal, and what has VA done to address these problems?

And while many groups say we need more for medical care, we must also make sure that the VA can spend what it gets in an efficient way. We must make highest and best use of tax dollars.

I am troubled that the VA now tells us it can't spend much of the funding we provided for Hepatitis C. I understand that the treatment for this disease is very complicated, but this contagious threat should be a priority. I want to hear from the VA about the proposed adjustments that result in a $168 million cut to this program.

It is good news that the VA is making progress in collecting what our veterans and taxpayers are owed from private insurance companies. The VA will collect almost $100 million more in 2002. But we need to do more, and I want to know what the VA is doing to ensure that our veterans and taxpayers get what they are owed.

Collections from veterans will also increase—largely because the prescription drug co-payment will rise from $2 to $7. I would like to know how the VA decided on $7, and if there are plans to make further changes the co-payment.

More money can't solve every problem. Veterans still have to wait too long to see a doctor. This problem is not just about funding. It is also about management. The VA must have adequate systems in place to evaluate this problem, its causes, and develop strategies to reduce waiting times.

And on the benefits side, while the VA has made progress in reducing its claims processing time, 173 days is still unacceptable. I know Secretary Principi wants to reduce processing time to 100 days by 2003, and I am interested in learning how he plans to do this.

Research is an area of the budget that gives taxpayers a great return on their investment. This budget would fund VA medical research at $360 million. VA research doesn't just help veterans. It contributes to the public health by sending new innovations to the marketplace.

So many important medical technologies have their roots in VA research—including the pacemaker and the CT scan. The budget request is only about one-third of the funding that will go toward VA research—the rest will come from the private sector, NIH, and other areas of the VA. But the budget request proposes to cut 79 employees from the VA's medical research program, and I'd like to know why.

Finally, I am very proud of the VA facilities in Maryland—Fort Howard, Perry Point, and the hospital, extended rehabilitation, and long term care facilities in Baltimore, as well as 7 outpatient clinics around the state. These clinics make the best use of our resources to deliver quality care to veterans where they live.

Fort Howard is slated to become a "continuum of care" campus for veterans. It will serve as a national model for how we can provide quality medical services to veterans at all levels of need, while allowing them to maintain their quality of life. This is particularly important as our veterans population ages.

The Fort Howard project is not just important to our veterans. It is also critical because our taxpayers want to see the VA make highest and best use of this grand facility that is on prime real estate. I hope to hear from Secretary Principi about the new Administration's views on Fort Howard and how he will work to keep this project moving in the right direction.

Again, I welcome Secretary Principi to the Subcommittee, and I look forward to hearing his testimony.

Senator BOND. Now we turn to a newer member of our subcommittee, Senator Johnson.

STATEMENT OF SENATOR TIM JOHNSON

Senator JOHNSON. Well, thank you, Mr. Chairman. I, too, would ask consent for my full statement be received into the record.

Senator BOND. Without objection, and with great pleasure.

Senator JOHNSON. I want to thank Chairman Bond and Ranking Member Mikulski for scheduling this important hearing and welcome, of course, VA Secretary Tony Principi to our committee.

I was very pleased that he went out of his way to meet with me prior to his confirmation, and that it is my understanding that tomorrow he is going to be traveling to South Dakota, to Sioux Falls to meet with veterans' leaders there in our community, and not least of all dedicate the new Rough Rider Cafe at the VA hospital there, and we look forward to——

Senator MIKULSKI. The VA has a new flair, as well as a new Secretary.

Senator JOHNSON. That is right. This is not your father's VA.

But we welcome him to South Dakota for that purpose, and to meet with our veteran's leaders in the State. I know that Gene Murphy is looking forward to meeting you there as well.

I will be very brief about this because we need to move on to the testimony, obviously, but there are a number of areas that are of great concern to me. I am pleased in a way that we are looking at an $800 or $900 million increase in veterans' health benefits on the heels of what had been some flat line budgets in the past for VA health care.

On the other hand, it has been called to my attention that the Secretary's request to the OMB was more in the $1.9 billion range, and we all know that the independent budget put together by a coalition of veterans organizations in this country called for $2.6 billion in veterans health care over last year's levels, and so I am concerned whether even the best management can do what it needs to do with resources that may fall short.

I look forward to the testimony today about veterans health care funding. Having just come from the opening of a VA outpatient clinic in Aberdeen, South Dakota, I am impressed with what these outpatient clinics are doing to make high-quality health care available and accessible to veterans in rural areas in particular. I hope that we can follow on with the development of more of these.

I am very concerned about the future of the Montgomery GI bill. Senator Collins and I have joined forces in sponsorship of legislation which would create a benchmark level of education benefits. Currently roughly half of our vets, even though they have contributed their $1,200 pay into the program simply do not use the benefits that have fallen far short of what the contemporary cost for higher education area, and our proposal, I think, is congruent with what Secretary Principi looked at as chairman of the Congressional Commission on Service Members and Veterans Transition Assistance Commission, and I am concerned about the current receipt issues as well as claims processing.

PREPARED STATEMENT

I am pleased that you have promised a top-to-bottom review of the VA benefits claims processing efforts, and I look forward again to where you feel you can make progress in all of these areas, given the financial resources that currently are being made available. I was pleased that we were able to wrap up VA benefits within the context of the budget resolution, but also recognize that the budget resolution is not cash in hand.

So I look forward to the Secretary's testimony on all of these issues.

Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF SENATOR TIM JOHNSON

I would like to thank Chairman Bond and Ranking Member Mikulski for scheduling this important hearing on veterans budget issues. Their leadership on veterans issues over the past few years has been instrumental in restoring critical benefits and programs for our nation's heroes. As a new member to the Senate VA–HUD Appropriations Committee, I look forward to working with the Committee and learning from their collective experience on these issues.

I would also like to thank VA Secretary Tony Principi for appearing before the Committee this morning. Secretary Principi was kind enough to meet with me the day before his confirmation in the Senate Veterans Affairs Committee, and we had a good discussion on several issues of importance to South Dakota veterans, including veterans health care funding and veterans education benefits. I took that opportunity to invite him to my state of South Dakota to meet with veterans and tour our first-rate veterans health care facilities. I am pleased that Secretary Principi took me up on my offer and will be traveling to Sioux Falls, South Dakota, tomorrow to help dedicate the Rough Rider Cafe at the VA Hospital there. Unfortunately, I will be unable to join Secretary Principi in Sioux Falls, so I wish him a safe trip and hope that we can see each other in the state at some other time. Secretary Principi has already earned the trust and respect of those in Congress, and I look forward to working with him on veterans issues.

Mr. Chairman, as I travel my state of South Dakota and meet with veterans, I am reminded of the very core of what the Founding Fathers meant when they talked about America's citizen soldiers who serve as the bulwark of defending our democracy and freedom. The sacrifices of the men and women who served this nation in time of war are a dramatic story that we need to tell to future generations.

We all know the history: for decades, men and women who joined the military were promised educational benefits and lifetime health care coverage for themselves and their families. Many of the veterans were told, in effect, "If you disrupt your family, if you work for low pay, if you endanger your life and limb, our nation will in turn guarantee an opportunity for an education and lifetime health benefits.''

Those promises have too often not been kept and that is threatening our national security. Veterans are our nation's most effective recruiters. However, inadequate education benefits and poor health care options make it difficult for these men and women to encourage the younger generation to serve in today's voluntary service. We are blessed to have unprecedented federal budget surpluses, and the only question is whether veterans health care and educational benefits should be a priority instead of an afterthought.

As a member of the Senate VA–HUD Appropriations Subcommittee, I plan to do all I can to work with my colleagues to honor our country's commitments made to veterans. Specifically, I would like to highlight the following areas:

Veterans Health Care Funding.—Recently, I attended the grand opening of a new VA outpatient clinic in Aberdeen, South Dakota, and had the chance to see firsthand how the VA is reaching out into rural areas to provide veterans with the health care they need. VA outpatient clinics in my state are a huge success and compliment the work done at our three VA hospitals. However, I would like to see additional outpatient clinics to provide services for those veterans who still must travel long distances, often in difficult weather conditions. That requires increased funding for veterans health care. Veterans from around the nation have been calling on Congress to provide the VA with adequate funding to meet the health care needs for all veterans. Without additional funding, VA facilities will be unable to deliver the necessary health care services to our veterans population.

For a number of years, I have worked with veterans and members of this committee to increase flat-line appropriations for veterans' health care. We were successful two years ago in getting a historic $1.7 billion increase for VA medical care. We fought last year for another $1.4 billion increase. While these increases will help relieve some of the VA's budgetary constraints, I believe that more needs to be done to make up for those years of budgetary neglect, as well as to keep pace with rising costs of health care.

While I am pleased that the Administration has proposed an increase in veterans health care funding for fiscal year 2002, additional funding is needed to address rising health care costs, treatment of Hepatitis C, emergency medical services, and long-term care initiatives. During consideration of the Senate Budget Resolution, I was pleased to see bipartisan support for my effort to increase veterans health care funding by an additional $1.718 billion and unanimous support for Chairman Bond's amendment to add $967 million for veterans health care.

The Senate has once again sent a message that additional funds are needed to address veterans health care needs, and I look forward to working with this Committee to turn that message into a reality.

Montgomery GI Bill.—Another priority for me this year will be to continue to improve educational benefits for veterans. The Montgomery GI Bill has been one of the most effective tools in recruiting and retaining the best and the brightest in the military. It has also been a critical component in the transition of veterans to civilian life.

Unfortunately, the current GI Bill fails to keep pace with the rising costs of higher education. On the first day of this legislative year, I joined Senator Susan Collins in introducing legislation to bring the GI Bill in the 21st Century by creating a benchmark level of education benefits that automatically covers inflation to meet the increasing costs of higher education. Our concept is a very simple one: at the very least, GI Bill benefits should be equal to the average cost of a commuter student attending a four-year university. Currently, less than one-half of the men and women who contribute $1,200 of their pay to qualify for the GI Bill actually use these benefits.

During consideration of the Senate Budget Resolution, Senator Collins and I offered an amendment to create a Reserve Fund specifically for GI Bill improvements. With the support of members of this Committee, our amendment passed unanimously, and now gives the Senate Veterans Affairs Committee budget authority to act this year on legislation to bring the GI Bill benefits more in-line with the costs of higher education.

In 1999, Secretary Principi served as chairman of the Congressional Commission on Servicemembers and Veterans Transition Assistance. The commission, established by law in 1996, reviewed programs that provide benefits and services to veterans and to servicemembers making the transition to civilian life. The commission's review of benefits and services was the most comprehensive since 1956, and the commission offered more than 100 recommendations addressing issues including veterans education. I look forward to hearing Secretary Principi's insight on this issue and how our bipartisan effort in the Senate fits in the Administration's plan for improving Montgomery GI Bill benefits.

Concurrent Receipt.—An issue that needs to be addressed this year is concurrent receipt. I find it indefensible that our government forces men and women who fought for our country and are disabled as a result of it to choose between retirement pay and disability compensation. This nickel-and-diming of our country's heroes must stop, and I am part of the bipartisan group of Senators supporting the Retired Pay Restoration Act of 2001, S. 170, and the Reserve Fund in the Senate Budget Resolution creating budget authority for this act. I am hopeful that we will be able to continue on the progress made last year on Concurrent Receipt and finally make this long-overdue correction for 437,000 disabled veterans nationwide.

Claims Processing.—Finally, I am pleased that the Administration has promised a top-to-bottom review of the VA's benefits claims processing. Redtape and staggering delays have plagued the claims process and given many veterans reason to doubt the effectiveness of the VA. I fully support efforts to decrease the current claims processing backlog and prepare for projected workload increases due to several legislative initiatives, including "duty to assist." I know that addressing the claims processing issue will not be an easy task for Secretary Principi, but I pledge to work with him and other members of Congress to help restore veterans' faith in this system.

Veterans are our country's heroes, and their selfless actions will inspire generations of Americans yet to come. Our country must honor its commitments to veterans, not only because it's the right thing to do, but also because it's the smart thing to do.

I am honored to be a member of the Senate VA–HUD Appropriations Subcommittee and look forward to working with Chairman Bond, Ranking Member Mikulski, other Committee members, and Secretary Principi in realizing many of these goals.

Thank you for the opportunity to share some of my thoughts with you today, and I submit a list of questions for Secretary Principi.

STATEMENT OF ANTHONY PRINCIPI

Senator BOND. Thank you very much, Senator Johnson. Now, Secretary Principi.

Secretary PRINCIPI. Thank you, Mr. Chairman, Senator Mikulski, Senator Johnson. It is such a pleasure to be here. I am honored to have the opportunity to be back as head of the VA, this time not in an acting capacity and, very importantly, as you pointed out, to work closely with this committee in the interest of our Nation's veterans, and clearly you all have been such strong advocates and been so very helpful to our Department over the years.

I have submitted my statement for the record and, at risk of not reading some summary words here, I would like to offer some thoughts and comments based upon what I heard you say this morning.

Senator BOND. Mr. Secretary, we will make your full statement a part of the record.

Secretary PRINCIPI. Thank you very much. I am pleased to be accompanied by Roger Rapp, our Acting Under Secretary for Memorial Affairs, to my immediate right, Dr. Garthwaite, our Under Secretary of Health, Mark Catlett, who is our Acting Principal Deputy Assistant Secretary for Management and really handles our finance, our CFO functions, and to my far left, Joseph Thompson, our Under Secretary for Benefits.

I am honored to head the VA, because the VA has such a noble and extraordinary mission to really care for people who are deserving of our Nation's gratitude. I am very honored to head a Department that has such committed people, who have devoted their lives to caring for these people. Although we have significant challenges before us, I want to point out that where we have failed, or not done as well as we should to address these challenges, these people at the VA do not fail. It is the systems that fail, and systems put in place by leaders.

So as we address these challenges I want my remarks and my answers to your questions to reflect the fact that I do believe that we have some of the most dedicated people in Government. I have been around Government a long time, both on the Hill and in the executive branch, and I think we are one of the fortunate departments to have those people, but, indeed, we do have challenges.

Let me start with the Veterans Benefits Administration. You have all heard me speak about my concerns about the claims backlog and some of the steps we have taken and need to take, I believe, to bring this backlog down. It is my objective to have an inventory that is workable and allows us to achieve very, very ambitious goals of an inventory of around 250,000 claims, a timeliness of about 3, 3½ months. Those are, indeed, ambitious goals.

Clearly, some of the problems are outside the VA's control. I think we need to start with that, a new mandated service connection for things like diabetes, myelitis. We will add 100,000 claims, and that is a good change. We should be providing a presumptive service connection where the science clearly shows the disease is associated with military service.

The duty to assist legislation, the Veterans Claims Assistance Act, are good legislation. We should never have stopped duty to assist in the first place. But it happened, and now we have this new requirement that will add an additional 340,000 claims to our backlog. That creates more work.

So clearly, some of it is outside of our control and perhaps some of the funding that was requested last year to assist with that workload was not there, but that is water under the bridge. We live with that. We live with the law the way the Congress has written it.

But there are things that we need to do, too, internally. We have had a very worthwhile quest to have unassailable accuracy. It is absolutely important that when we adjudicate claims, that our decisions are accurate. But that accuracy, and that quest for accuracy have come at the cost of timeliness, which I believe is almost as important as accuracy, because both comprise quality.

Accuracy is one component; timeliness is another component, and unless you have both, you do not have quality. Today we do not have quality, because it is taking too darned long to adjudicate claims. I think some of the systems we put in place, while strategic in thinking, and visionary, may have caused some of the productivity standards to drop to a level that is unacceptable. Steps are being taken to change that, to suspend some of those changes, and at the same time trying to sustain a high level of accuracy. We need to do better.

I have always said that the claims issue is not a VBA issue. It is a medical VHA issue, it is an IT issue, it is a General Counsel issue. All of the components of the VA are brought to bear to assure that we have the right systems to adjudicate claims. Although we are making progress in these areas, we do not have those systems in place to properly and accurately adjudicate claims. That is something we need to do, and do it quickly.

Education processing has been slow. We need to improve upon that. As Senator Johnson said, the transition commission, which I was fortunate enough to chair, made some worthwhile recommendations to the Congress.

I believe the opportunity for young men and women in uniform today to get the best education possible, to conform educational programs and VA programs to the needs and to the ways current education is delivered in the private sector, are things we need to address. I think it is a very, very important program, so that people can build successes in their life. We want veterans to come to us not out of necessity, because they need a pension, because they are poor—this is very important, but rather we want them to be successful in life and come to us out of choice and not necessity for the programs that they need.

On the health care side of the house, we have made enormous improvements on the one hand in quality and patient safety. I agree with you, Senator Mikulski, about the anecdotes in the Cleveland Plain Dealer. I do not think they are representative of our VA health care system.

However, I take anecdotes seriously. I expect the Veterans Health Administration to take them seriously. I expect them to be investigated seriously, and reports made to ensure that that is not a system problem, or a problem around the country, or even if it is just isolated at one location, that we take corrective action on each and every anecdote that the Cleveland Plain Dealer or any other periodical or GAO report or IG report provide to us. That is our responsibility to do so.

But clearly, we have seen enormous improvements in quality and customer satisfaction recently. I believe the $1 billion increase in discretionary spending this year, much of which goes to VHA, coupled with, hopefully, increased medical care collections funds, will give us an overall 5.4 percent increase in our health care budget.

I believe that is a good foundation, and yes, Senator Johnson, I did request more, but I am grateful that we have received the $1 billion increase in discretionary spending to allow us to do some of the things that we believe are very, very important to provide high quality health care.

I am concerned, as you have indicated, as all of the members of this committee have indicated, the lack of uniformity, and the lack of clear standards in some of our systems and programs. Financial systems standards, information technology standards, billing and collection standards, uniform access to health care—not based upon where you live, but based upon need—and status, or what category do you fall into. Those are all important policy issues, policy decisions that must emanate from Washington and be carried out uniformly, and people held accountable for compliance with those standards. I think that is terribly important.

On the other hand, I also believe equally strongly that the people in the field, the people in the trenches closest to the patients, closest to the beneficiaries, should have the flexibility to manage within those directions and within those standards, to make the day-to-day decisions that they need to make to deliver care, to provide benefits.

CARES is an important initiative. I support CARES. I support the goal of CARES to rationalize our infrastructure to the veterans of today and the veterans of tomorrow, and taking into account the demand for care. However, I absolutely insist that as we go forward with the CARES process, that the data is unassailable, that the voices of the stakeholders are heard throughout the process, and that the models for the veteran population and the demand for care are the correct ones.

I think those are very, very important, because we are undertaking a mission of realigning assets that may change the mission, may result in the closure of a hospital. Before we do that, we need to ensure that the data is absolutely the right data for this process.

PREPARED STATEMENT

I think that about covers some of my highest concerns, and now I will take your questions. I thank you very much for the opportunity to express some of these issues, and I look forward to working with the committee.

[The statement follows:]

PREPARED STATEMENT OF HON. ANTHONY J. PRINCIPI

Mr. Chairman, and members of the Committee, good morning. Thank you for inviting me here today to discuss the President's fiscal year 2002 budget proposal for the Department of Veterans Affairs.

We are requesting more than $51 billion for veterans' benefits and services: $28.1 billion for entitlement programs and $23.4 billion for discretionary programs, such as medical care, burial services, and the administration of veterans' benefits. Our budget increases VA's discretionary funding by $1 billion or 4.5 percent over the fiscal year 2001 level. With an increase in medical care collections of approximately $200 million, this brings the total increase to $1.2 billion or 5.3 percent.

The budget ensures veterans will receive high-quality health care, that we will keep our commitment to maintain veterans' cemeteries as national shrines, and that we will have the resources to tackle the challenge of providing veterans more timely and accurate benefits claims determinations.

The President promised a top-to-bottom review of our benefits claims processing. He has designated this area as a key budget initiative and I have made it one of my top priorities. I know you share this Administration's commitment to restore the confidence of many veterans who have lost faith in VA's ability to fairly and promptly decide their benefits claims.

For the administration of veterans' benefits, we are requesting $1.1 billion, an increase of $132 million over last year's level. Mr. Chairman, as we all know, VA is not completing work on benefits claims in as timely a manner as our veterans deserve. I am proud to say this budget will rejuvenate VA's efforts to process compensation claims promptly and accurately.

An additional 890 employees will allow VA to handle the projected workload triggered by several key pieces of legislation enacted last year. This request fully implements new legislation that strengthens VA's "duty to assist" role in helping veterans prepare their claims. The new law will require VA to review 98,000 cases that were denied previously, plus another 244,000 cases that were pending when the legislation passed. In addition, our request enables us to carry out the new policy of adding diabetes to a list of presumptive conditions associated with exposure to herbicides. About 105,000 applications for disability compensation are expected in fiscal year 2002 under the new rule on diabetes.

Because of additional workload, VA predicts an increase in the time needed to process these applications. In fiscal year 2002, the average claim is projected to take 273 days to complete, compared to 202 days this year. However, I have begun immediate efforts to address the claims processing backlog.

Additional resources will be coupled with a proactive approach to solving problems. On April 16, 2001, we held a preliminary meeting of the special Claims Processing Task Force that will address claims processing and develop hands-on, practical solutions to the challenges we face. The 10-person task force, headed by retired Vice Admiral Daniel L. Cooper, will examine a wide range of issues affecting the processing of claims, from medical examinations and information technology, to efforts to shrink the backlog and increase the accuracy of decisions. The panel's final report is due to me in approximately 120 days.

For veterans' health care, we are requesting $21.9 billion, including nearly $900 million collected from third-party health insurance and co-payments from veterans. This reflects an increase of $1 billion over last year's level.

The budget request reaffirms our primary commitment to provide high-quality medical care to veterans with service-connected disabilities or low incomes. VA provides comprehensive specialty care that other health care providers do not offer, such as services related to spinal cord injury, Post Traumatic Stress Disorder, prosthetics and addiction programs. I am proud of our unique accomplishments and our request provides full funding to continue our leadership role in these areas.

Our budget proposal for medical care includes an additional $196 million for long-term care and an additional $164 million to improve patient access. VA's goal is for patients to receive appointments for primary care and non-urgent care in 30 days or less, while being seen within 20 minutes of a scheduled appointment. The budget also supports the President's new health care task force, which will make recommendations for improvements. The task force will be comprised of representatives from VA and the Department of Defense (DOD), service organizations, and the health care industry.

The budget includes $121 million for the operation of our National Cemeteries—an increase of $12 million over last year's level. Our request ensures that VA's cemeteries will be maintained as National shrines, dedicated to preserving our Nation's history, nurturing patriotism, and honoring the service and sacrifice of our veterans. It provides $10 million—twice the amount included in fiscal year 2001—to renovate gravesites and to clean, raise and realign headstones and markers.

The request also includes funding for land acquisitions for new cemeteries in the Detroit, Pittsburgh and Sacramento areas; development of a new cemetery in Atlanta; and design of a new cemetery in Miami. In addition, funds are provided for columbaria expansion and improvements at the Massachusetts National Cemetery in Bourne, and the Tahoma National Cemetery in Kent, Washington.

Mr. Chairman, our 2002 budget is not simply a petition for additional funding. It also reflects opportunities for cost savings and reform. VA will do its part to ensure the most efficient use of limited resources, while maintaining the highest standards of care and service delivery.

The National Defense Authorization Act for Fiscal Year 2001 established a new DOD benefit for military retirees over age 64 who have Medicare coverage. These retirees will be able to use their own private doctors for free care and receive a generous drug benefit. Currently, 240 thousand of these retirees are enrolled in VA's health care system. Our budget assumes that 27 percent of them will switch to the DOD benefit in 2002, which shifts $235 million in VA medical liabilities to DOD.

This recent legislative change underscores a critical need for better coordination between VA and DOD. The Administration is seeking legislation to ensure DOD beneficiaries who are eligible for VA medical care enroll with only one of these agencies as their health care provider. We will work with DOD to avoid duplication of services and enhance the quality and continuity of care.

Restructuring efforts in our health care system will continue in 2002. VA has begun an infrastructure reform initiative that will enhance our ability to provide health care to eligible veterans living in underserved geographic areas. Savings from this effort will allow us to redirect funds from the maintenance of underused facilities to patient care. As we await the results of this assessment—referred to as "CARES"—we will continue to expand sharing agreements and contracting authorities with other health care providers. The budget includes $115 million to begin implementing CARES recommendations.

The budget request also includes legislation for several proposals that will yield mandatory savings totaling $2.6 billion over the next ten years. One proposal would eliminate the vendee loan program and the other proposals would extend previously enacted mandatory savings authorities that would otherwise expire over the next several years.

Finally, we will continue to reform our information technology. New technology offers VA opportunities for innovation. It also offers a means to break down the bureaucratic barriers that impede service delivery to veterans, divide VA from other Federal government departments, and create inefficiencies within VA itself.

I wish to restate my pledge that we will not initiate any new technology-related activities until we have defined an Enterprise Architecture that ends "stove pipe" systems design, incompatible systems development, and the collection of data that do not yield useful information. I have instructed my staff to convene a panel of world experts in the area of systems architecture to team with our Administrations and staff offices to develop a comprehensive Integrated Enterprise Architecture Plan. I expect to be able to deliver this plan to Congress in a matter of months. We will implement a technology plan that serves veterans first.

Mr. Chairman, that concludes my formal remarks. I thank you and the members of this Committee for your dedication to our Nation's veterans. I look forward to working with you. My staff and I would be pleased to answer any questions.

CLAIMS PROCESSING TASK FORCE

Senator BOND. Mr. Secretary, you have already answered some of the really good questions I was going to ask, but I very much appreciate that, and you said that improving claims processing for disability compensation is one of your highest priorities. Sometime ago, I asked to have explained to me how you process these claims, and I could not understand it, so GAO put out a little chart to show how the process works, and now I understand why I did not understand the process. If this were not such a serious business, this could be a laugh line on a late-night TV show.

You talk about the system being difficult for the people in VA, and for the people who hope to receive the benefits. There has got to be some way that you can make it simpler for the people to administer it and for the people who apply, so there have been lots of studies in the past. You set up a task force. How is this task force going to be different?

Secretary PRINCIPI. Well, this task force is going to be different because they are going to address things like that chart. Other task forces and commissions, although they looked at process, they looked at management, they looked at organization, they also looked at changes in laws, abstract the roles of veterans benefits.

What I have asked for is precisely that, some practical, hands-on solutions that I as Secretary can implement to streamline the process, to see what changes need to take place. Do we need to consolidate in some areas? How can we do it differently? How can we have cycle time reduction? What expert systems are available in the private sector?

I know there are expert systems available in the private sector that can be brought to bear to make the job of the ratings specialist easier. It is precisely that chart, and trying to improve the processing where possible; that is what my goal is.

I do not know what will come out of the commission, but I have tried to appoint a chairman who I have confidence in. He is a retired Navy Admiral. You might say, why? I appointed him because he is head of our Navy's nuclear power submarine force. He is on the board of one of our Nation's most prestigious insurance companies. He brings a real discipline and engineering mind and focus to the process. If he could run and manage nuclear-powered submarines and a fleet of them, I believe he is the type of individual that will devote his time to this effort because he feels it is important. I am hopeful that under his leadership we are going to have some concrete suggestions for us to take a serious look at.

Senator BOND. He may want to go back to running nuclear submarines after this, but I would be happy to lend you this so you have the before.

You already mentioned consolidating operations. One of the controversial things that has been offered up with the task force study, the possibility of seeking legislation to offer lump sum payments to certain veterans. I know that some veterans applied 12 or more times, and there is possibly some radical solutions. Will they be looking at all of those aspects?

Secretary PRINCIPI. I did not ask the task force to look at finality or lump sum payments. I know those issues, those ideas have been highlighted, illustrated in several reports to the Congress. I know they are very controversial. I felt that this was not the right time. I wanted the task force to look at the law as we currently have it, and to see what recommendations I could implement right away so we did not go there, sir.

BENEFITS BACKLOG

Senator BOND. All right. Recently, VBA headquarters told its 57 regional offices that certain changes which have been underway such as transitioning to the new software program called RBA 2000 and fully implementing case management could be put on hold for now in order to concentrate fully on working cases.

I am a little concerned that while you are striving to make this drastic reduction, cutting in half the processing claims time and the backlog, that we may be sending a mixed message to the field that immediate gains are more important than long-term improvements. Do you not think we need to stay on the path to the long-term solution to the VBA backlog, rather than chucking it for a scramble to cut in half?

Secretary PRINCIPI. No, I do not think so, not at all. I visited several regional offices over the past couple of months. Not as many as I would like, but I am absolutely convinced that the actions to suspend RBA 2000 was a correct one. It was not ready to be implemented in my mind. Other people take a different view, and I welcome that view.

I am not forsaking long-term goals to have the right software in place so that you do not have to always rebuild cases from the beginning. But any time you have productivity drops as we have experienced with RBA 2000, then I do not believe that this is the right time to launch it or to continue it. That is not a statement or act of discarding the software. This software holds great promise, but we will have to wait until we get out from under this situation.

Senator BOND. All right, sir. You have already answered my question on management and the need for uniform standards throughout the field, so now I will turn to my ranking member for her first round of questions.

DISABILITY COMPENSATION FOR TYPE II DIABETES

Senator MIKULSKI. Thank you very much, Mr. Chairman. Well, I will not duplicate the questions that Senator Bond did on processing, but Secretary Principi, and to your team, even going back to when I initially chaired this committee and you were Under Secretary and then Acting Secretary, as we know, the processing times has been a problem, and I think we have now gone from a problem to a crisis, also because of the expanded workload, so we look forward to the solutions.

I want to just raise one issue, though, that I would like your task force to consider. As you face the challenges, particularly with the addition of Type II diabetes, that you think about this, and I just want you to think about it—we can hear later what you think—is that if, in fact, in the processing of a claim where there is a chronic but manageable condition like diabetes, high blood pressure, but particularly now in diabetes Type II, that as part of the claim adjudication, that there be a health management plan that asks how this Type II diabetic—and Dr. Garthwaite, I think you would support this concept—would go into some type of diabetic management plan.

I worked very closely with Senator Sue Collins on the issue of diabetes, and it is a chronic condition across the United States of America that offers really significant ways that we can intervene, because Type II diabetes, if not dealt with, leads to a very severe set of circumstances, from increased heart disease, kidney problems, et cetera, so think about that.

If you are going to get a benefit, not that we mandate that you have got to have a health plan, but we really do strong intervention at the time of adjudication that says, let us get you the help you need so what you have got is a managed plan, and think about that as part of the adjudication process, that we really look at that and really maybe even stay in touch with them. It would be a great opportunity. we could really do prevention intervention here, so think about that.

Secretary PRINCIPI. I think that is an excellent suggestion. I think it points out the need for the two administrations to work closely in these cases where we are, in fact, providing service-connected disability compensation to someone with this diabetes, to ensure that we get the medical side of the house to provide the outreach, or the plan, if you will, the health plan to keep that disability in check.

NURSING SHORTAGES

Senator MIKULSKI. Exactly, so as we look at also where VA is going, it is not unlike where Medicare is going, which is—once, Medicare's original purpose was to help pay the bills for acute care. Now, its purpose is to manage chronic conditions, and that is not unlike what you are facing, but let us go, though, to really what you are doing in your primary care, in these excellent primary care facilities as well as in the hospitals. Are you facing a nursing shortage and, if so, what is the magnitude of the shortage that you are facing, and have you done any recommendations on how we can help you?

Secretary PRINCIPI. It is serious. Again, I am new at this, but at the hospitals I visited, it is a national problem. We are large, so we feel it, but we have significant nursing shortages on our wards and in our clinics. Every nurse I have spoken to, every nurse-manager I have spoken to have looked at me a little bit afraid at times, but yes, we are short nurses.

We have nurses who are double shifting in some cases because we do not have enough, and patient safety, patient quality, if this—and we are taking decisive steps, and Dr. Garthwaite I hope can answer those questions, but this is a major issue that our society faces, as well as the VA in particular in this case.

Dr. GARTHWAITE. We have made a small dent in the number of nurses, in the first 6 months of this fiscal year we have brought in over 600 nurses net.

Our approach is fairly comprehensive. We have recently increased salary rates. We have some loan forgiveness programs. We have student fellowships during the summer that brings nurses in to get them involved in our care. We continue to look at educational opportunities, as we find students who are trained in the VA, like to stay in the VA. We have other educational opportunities to allow them to advance in their careers into nurse-practitioner roles or nurse-anesthetists and other kinds of roles.

So it is a fairly comprehensive look, but it is really dependent on how well society is at getting people to choose nursing as a profession.

Senator MIKULSKI. But that is my question to you, what are you doing about it, and how many vacancies do you have, and then is the VA also working, also to help make this an attractive profession?

I mean, Senator Tim Hutchinson and I worked on a bill in terms of the larger community. It is an education bill, so it is a down payment on the shortage. It does not deal with the respect or the pay issues.

Dr. GARTHWAITE. One thing we have done is an attempt to bring the nurses into the system and to provide them an opportunity to move on to baccalaureate and beyond where they have potentially, a higher salary down the road and can make more contributions. We put $50 million into a training program over 5 years to advance their education. We think that helps us, and it helps them, and we hope that it provides an attractant. We have signed an MOA with a community colleges organization, an associate degree nursing organization.

Senator MIKULSKI. Well, I am so glad to hear that, Dr. Garthwaite. I know my time has expired and it is time to move on to Senator Johnson, but I believe nursing comes at different skill levels. The nurse practitioner is a whole different skill level than really bedside care and acute care.

The use of community college nursing I think is a great way, and for many men and women who would like to enter nursing the community college is an affordable gateway, and also offers for many of them flex time to move up.

I would also like you to think about looking within your own ranks, where there are people working now in VA who love working in VA, and perhaps in other areas, but would love the opportunity to go to a community college, and therefore they would do lattice work, kind of instead of a ladder of opportunity, a lattice of opportunity where they can move up the system.

We look forward to working with you, and I now will wait for my next round of questions.

Senator BOND. Thank you, Senator Mikulski. I certainly agree with you on the community colleges. I am going to turn to Senator Craig, who has joined us, for any opening statement and/or questions he wishes to ask at this point.

STATEMENT OF SENATOR LARRY E. CRAIG

Senator CRAIG. Thank you, Mr. Chairman. I welcome you before the committee. I guess this is the first time you have been before the committee. I welcomed you before the full Veterans Committee, but we appreciate you being here now where the rubber hits the road, and the budgets that we will work with you on are really going to provide and/or not provide the kinds of services that our veterans expect, and I think all of us in this committee believe they deserve.

I will not go into it today, but I wish we could schedule a time with you and the appropriate folks on your staff to deal with the benefits and claims processes. We spend a lot of time with that out in my offices, primarily in Idaho and in Boise, and we have got some questions and some concerns, and just kind of want to walk through them with you, that are kind of repetitive. We see them quite often, and we think there are some ways to deal with them, and that is important, because that is really the underpinnings of what our veterans deal with.

I guess my greatest frustration comes in a rural environment, and I know we are struggling to do some outreach in some small clinics, but the question of equal access for rural veterans versus urban veterans, the distances involved, and clearly in States like mine several hundred miles is not unusual to have to travel one-way.

Senator MIKULSKI. How many miles, Senator?

Senator CRAIG. Several hundred.

Senator MIKULSKI. I thought you said 700.

Senator CRAIG. In one instance they traveled 351 miles one way, veterans from one area to the Salt Lake Hospital, and for elderly, or older people—it is a daunting challenge for the young. It is an even greater problem for the old. We are doing some clinics. We will be working with you to see how we can make that a more functional kind of thing, I think, to deal with.

REGULATIONS TO IMPLEMENT THE MILLENNIUM ACT

But the question I guess I would have of you, and the Senator from Maryland broached it, with diabetes in the Millennium Health Care and Benefits Act, I think we are now just beginning to realize what it is all about. However, I do not think the VA has yet developed the policies necessary to deal with such issues as emergency care and hepatitis C and diabetes. Can you tell me where we are, or where you are, where the administration is at this point with that?

Secretary PRINCIPI. Yes. We have been terribly slow in having our regulations finalized and submitted to OMB and then published in the Federal Register. This has been a major issue at VA for many, many years. We are beginning to take steps to address it.

Some of the regulations you just cited, Senator Craig, with regard to the emergency care, and other millennium care provisions are now in the final stages. Some of them are at OMB for clearance, and future publication. Of course with the start of a new administration, a number of the regulations were pulled back for review and need to be resubmitted, but with regard to those mentioned, we are very close. However we do have some lingering issues about how we process regulations in the Department.

Senator CRAIG. Well, we anxiously await—when do you think we will actually see those out and operable, or to a point of being implemented?

Secretary PRINCIPI. I expect them all to be implemented by this fall, all of the ones that you mentioned, certainly by the end of the year, but I believe we can expedite some of them. I think we have a provision that could shorten the publication time in the Federal Register to 60 days. I believe that this is the case, and so there are steps we could take to get some relief to the veterans who have been waiting for reimbursement for the emergency care regulations.

TRICARE FOR LIFE

Senator CRAIG. We have another interesting problem in Idaho, and I think it is largely because of—well, I do not know whether it is hostility, or just nonacceptance of HMO's largely in the medical profession, but I am talking TRICARE. Veterans who are military retirees are really medically underserved in Idaho, and partly rural, but also as it relates to the acceptance of TRICARE.

I think you are going to have to work with the Department of Defense. We are making some advances there, there is no question about it, and we have got the Department of Defense and the Secretary of the Air Force's focus, because I am talking air base type retirees predominantly.

At the same time, they fall under two categories, one is retired and can be eligible in both instances, but I guess what I am going to want to do is sit down with you to look at that, because we are beginning to get those reactions now, the combination of military retiree/veteran and TRICARE.

Secretary PRINCIPI. High priority issue. I have a letter going over to Secretary Rumsfeld today. We have spoken on several occasions. The President has directed that we both get together.

Senator CRAIG. Well then, it is an issue nationwide.

Secretary PRINCIPI. There are too many issues between DOD and VA which do not help beneficiaries of either system, and certainly in our delivery of benefits, especially we have to wait months upon months to get a letter from DOD to adjudicate so that VA can pay claims and it is unnecessary. I hope we are going to announce an interagency commission, or a blue ribbon commission to look at both health care systems.

PREPARED STATEMENT

Senator CRAIG. Well, we will watch that very closely.

Thank you, Mr. Chairman.

Senator BOND. Thank you very much, Senator Craig, for raising some very important questions.

[The statement follows:]

PREPARED STATEMENT OF SENATOR LARRY E. CRAIG

Mr. Chairman, it is indeed a pleasure to welcome our new Veterans Administration (VA) Secretary, Tony Principi and members of his staff. Secretary Principi's prior experience working in the VA will be invaluable and ensure our government honors our commitments to veterans while implementing the most beneficial and cost effective programs. To do this, we must look for opportunities to reform the VA health care system, while maintaining as our number one priority, our combat veterans with disabilities or veterans with low incomes who often rely exclusively on the VA for their care.

The VA's budget proposal totals $51.7 billion for veterans' benefits and services, including $23.4 billion in discretionary spending, for medical care, burial services, and the administration of veterans' benefits. This is an increase of $1 billion over last years budget. In addition, with an increase in medical care collections, medical care for veterans would total a record amount of nearly $22 billion. This is a total increase of 5.3 percent, and demonstrates the President's commitment to veterans health care.

The President has promised a top-to-bottom review of how the VA processes benefits claims. I don't want to take up time during this hearing, but would like to invite Secretary Principi to meet with me at a later time to talk about the veterans benefit claim process and the dire need of reform. We must work together to restore the confidence of many veterans who have lost faith in the VA's ability to fairly and promptly process their benefit claims .

I strongly support a VA which is committed to providing accessible high quality medical care and other veterans benefits and services in a timely and effective manner. However, we must expand and improve the delivery of services and benefits so that all veterans have equal access to, and quality of, medical care, particularly in under served rural areas such as Idaho. In southern Idaho, the initial steps were taken and clinics were provided in Pocatello and Twin Falls. But we must not forget the large population of veterans in the north who must drive over 350 miles to a clinic. A third clinic in Lewiston would provide desperately needed access to essential services.

Another concern is the long list of veterans waiting to receive various services, especially medical care. In recent years there were tremendous staff reductions that resulted in reduced services. The necessary steps must be taken to reverse this trend.

The benefits of the Millennium Health Care Act have just begun to be realized; however, the VA has not yet developed the policies necessary to deal with issues such as emergency care, hepatitis "C", and diabetes. I look forward to working with Secretary Principi to deal with these issues of major concern.

I also realize there are several additional issues that are a concern to America's heroes. The National Defense Authorization Act for Fiscal Year 2001 established a new Department of Defense (DOD) benefit for military retirees over age 64 who have medicare coverage. Veterans who are also military retirees are medically under served in Idaho and other rural areas. Secretary Principi must work with the DOD to provide medical services to TRICARE dependent military retirees in VA facilities to ensure our veterans are properly served.

In closing, Mr. Chairman, there is no way to over emphasize the honor and respect this nation owes the military men and women who sacrificed so much to accomplish a strong national defense. I believe that this proposed budget is a good beginning for ensuring our veterans will receive high-quality health care, that we keep our commitment to maintain veterans' cemeteries as national shrines, and we have the resources to process veteran benefit claims in a more timely and accurate manner. I look forward to working with Secretary Principi to meet the many challenges that the VA will face in the coming years.

LONG TERM CARE

Senator BOND. Now it is my pleasure to turn to Senator Johnson.

Senator JOHNSON. Well, thank you, Mr. Chairman. I am heartened by Senator Craig's concerns and your response on greater coordination and reaching out between our VA and our DOD facilities. I think this is something that has been needed for a long time, and I appreciate your work on that. While there is greater emphasis on outpatient care at the VA as well as health care providers overall in the Nation, VA also faces a demographic reality of large numbers of World War II and Korean War era veterans with increasing needs for long term care.

Under 1999's Millennium Act, we attempted to address long-term health care issues, but could you update me on where do you see the VA going relative to the long-term care needs of increasingly large numbers of veterans?

Secretary PRINCIPI. Yes, sir. The good news first. We are making tremendous strides in addressing the extended care needs of veterans. Particularly either on an outpatient basis or in the community were trying to keep the veteran home as long as possible with the right support base, whether it be hospital-based home care, or the opportunity for respite care, which gives the caregiver a break. I talked to a couple of veterans in the hospital in Denver who were quite invalid. They were there for a couple of weeks while their caregiver got some rest.

On adult day care programs, I visited great programs in our health care system in New York, and so I think we are doing a great deal on that score.

The State veterans home program is an excellent program. We have made great strides in working with the States in sharing the cost of construction, providing a per diem payment. We have had a good success there.

The only area where we have failed is in VA nursing home beds. We are about 1,200 beds short of our mandate, of the law, for nursing home care beds, and that is unacceptable. A direction has to go out indicating that we will, in fact, open and staff VA nursing home beds, to be at least in compliance with the law, and to make a policy decision as to whether or not we need more beds because of the aging veteran population. World War II veterans are now very frail and dying. As Senator Mikulski indicated, we have my generation—well, the Korean generation and my generation from Vietnam are now approaching 60, and these programs become more important.

So I think we are doing some wonderful things, great success. We have now established a uniform policy that says thou shalt have so many nursing home beds that are open and staffed to be in compliance with the Millennium Care Act.

Senator JOHNSON. Well, I appreciate your trying to address the whole spectrum of long-term care needs rather than focusing exclusively on nursing home beds. You are right that home health care and assisted living and the whole array that the private sector has taken on makes sense within the context of the VA, but I am concerned about the shortage of the nursing home beds, and also aware that the condition of some of our older VA hospitals are not conducive to an easy conversion to nursing home facilities, that oftentimes that is not seen as an appropriate step, but I look forward to working with you on that particular issue.

MEDICAL RESEARCH

One last thing I just want to touch base very quickly with. All the concern about physical plant, trying to catch up with the backlog on case filings and all the things you are doing, an area that I have some concern about is whether we are maintaining the resources and the attention of VA research that needs to be there, and I wonder, as we get in an increasingly difficult crunch financially on the resources available to the VA, do you feel that this is an area that is being squeezed out of the VA agenda?

Secretary PRINCIPI. I will allow the experts to perhaps give a more detailed response, but from my perspective, research is very, very important to VA's core mission of caring for veterans. I think that some of the recent changes that have taken place in our research program, technology transfer and intellectual property, where the VA really receives the credit for this research, a research that is focused on our veteran population, are all things we can be very proud of.

The budget goes up $10 million, it keeps pace with inflation, and I think it gives us a good base to continue to seek grants from NIH, which we have been very successful at. We take a significant amount of money out of the medical care appropriation and combine it with the $1.2 billion research program.

I think we have a lot to be proud of, and I hope we will see more discoveries for which the VA will be the beneficiary both in terms of our patients who may have lost limbs, have a spinal cord injury, or a traumatic brain injury. And that VA will get the credit and some of the money to improve the research at the facility as well as rewarding the research. Those are the goals, and I think we are doing very well.

Senator JOHNSON. I would yield back. My time has about expired.

Senator BOND. Thank you very much, Senator.

MEDICAL CARE FUNDING LEVEL

Mr. Secretary, the VA budget for medical care represents an increase of $971 million over the current fiscal year, including collections, for a total of $21.9 billion. Are you confident that is sufficient to meet the needs of all veterans who seek VA health care with the best quality and in a timely fashion?

Secretary PRINCIPI. I feel like I am on Regis. How do I answer that question?

Again, I am pleased, very pleased with the budget that we have received from the President. I think it reflects a real commitment. What concerns me is, that we do have a lot of needs and a lot of different areas. We have allowed ourselves, and not maliciously, to back ourselves into policies that I am concerned about.

We talk about category 7's, for example. We have got the CBOC's out there. A lot of people are coming to us. HMO's, as you said, Senator, are closing down, and I am not sure we have really addressed this issue as all the stars in the universe, you touch one, they all get hit. What does this mean for our overall system? Where are we going? Who do we provide care to? What care do we provide? It impacts on the CARES process, on how many category 7's come in, and what kind of copayments do we collect from 7's. We are not collecting very much now, as you said, 10 percent, and these are people who are nonservice-connected, and have higher income. They are deserving because they served their country. They may have scaled the walls of Normandy and never filed a claim for benefits.

So they are nonservice connected, and they have higher income, but I am not saying they are low priority because of what they did during World War II and Korea. These are the issues that we have to grapple with, and certainly with the committee, we need to determine where we are going, because there are 25 million men and women out there. We see about 4 million. We get $22 billion. If you extrapolate that, that leaves probably about $180 billion to care for everybody.

So we have to determine what does this mean to the system as we increase access points. Do we allow everybody to be enrolled, and can we provide high-quality care and what will it take? Those are the issues that need to be discussed up front rather than saying the way I think we have done it.

MEDICAL CARE COLLECTIONS

Senator BOND. Well, I have got a whole bunch of questions that I am going to give you lots of opportunities for answers. Let me try to run through them. The VA collections you say are going to increase by about $200 million. In the past, the collections have always fallen short of projections. They have remained relatively stable to just around $570 million. Why do you think collections can be projected to increase so significantly this year and next?

Secretary PRINCIPI. I think a couple of reasons, first, reasonable charges. We have seen the results of imposing reasonable charges now on third party, and we have already collected $355 million in total medical care collections in the first half of the year. That is a record, so I am pleased with the trend.

Second, I think we will see some adjustment in copayments in pharmaceutical benefits. All of those dollars, of course, stay with the system, so we will see an increase in first party reimbursements in 2002, and I am hopeful that we will continue to improve our processing. I am not convinced that we do it as well as we can.

Our accounts receivable are high, the amounts we recover are low, and the cost of collecting is too high. We need to find out what are the best practices out there, export those best practices uniformly around the system, and have a uniform standard. Rather than allowing everybody to do their own thing their own way. We need to have more uniformity.

Senator BOND. I understand a large percentage of the cost of the VA bills could never be recovered. They cannot recover from an HMO or receive full cost from a medigap policy, but clearly there is an opportunity to do better. What do you think is the maximum amount of additional reimbursements that you believe VA could be recovering, and what do you see as your plans down the road to improve the collections program to recover fully all of those costs so we can increase the resources that we devote to veterans health care?

Secretary PRINCIPI. I do not know. You know, we cannot collect from Medicare. You know, the big insurers of the private sector collect from Medicare. That is unavailable to us, so we have to go after the HMO's, unless they have a provision that allows reimbursement—most do not. That puts us at a disadvantage, because we have to go after the small insurance companies, but I do believe it is higher than we are now. I think we may be able to break $1 billion in collections. Certainly, as we look at the issue of category 7's, that is something that we have to address.

Dr. GARTHWAITE. Just one comment. One of our challenges is identifying insurance, and we are working with Medicare to see if they have a data file that would allow us to know that the veterans had insurance.

Secretary PRINCIPI. And also being a TRICARE provider will be very important.

Senator BOND. That is a possibility. Budget accountability is something I mentioned earlier. More than $700 million this year was identified in spending that will not meet original budget plans for fiscal year 2001. I hope you will work with us to develop a system that links the budget development with the budget execution. If you tell us what you are going to spend it on, we can appropriate that rather than having a mismatch between what is requested and how you account for it, and that is frustrating for us, and it is not effective.

Quickly, what else can be done to identify insurance for veterans who have private insurance?

Secretary PRINCIPI. Well, certainly I have directed—I do not know if it has gone out yet, but I have directed that when we register or preregister an individual, that the individual signs a form. The individual then has to sign that the information provided is true and correct, that it is a violation of Federal law if they do not write down their insurance company. I mean, DOD does it in every case. We need to do more to identify insurance at preregistration before any veteran comes to the medical center for care.

Perhaps Dr. Garthwaite has some other ideas, but clearly we are not getting the information we should be getting, and as a result we cannot bill an insurance company for the cost of care.

NEED FOR MEDICARE REFORM

Senator BOND. I will return to that after Senator Mikulski's next round of questions. Thanks.

Senator MIKULSKI. Thank you very much, Mr. Chairman. I just want to amplify the point that had been made related to priority 7.

I believe that you are seeing a growth in the priority 7 cases because of the failure to do real Medicare reform, and I would really encourage you at the highest level within the Bush administration to really press that Medicare reform, which I know the President does want to do, be really accelerated.

It is actually even more of an impending crisis, I think, than social security. Social security is a demographic money problem. This is a whole other issue. I have such confidence in Governor Tommy Thompson that I believe that we could really make progress on this, but the Medicare HMO is a disaster.

I have had the closures downs just first in my rural areas and then $75 premiums because you lived in Salisbury instead of Baltimore. What does that mean if you are 65 years old, the VBA givebacks that I know we have worked with on a bipartisan basis for training and for home health care.

So really the need for Medicare reform—and I truly believe a prescription drug benefit would really help alleviate the pressure on you. They are coming to you not because of part A, because they want to come into your great hospitals, but they are coming to you because of part B. They want to see the doctor, specialist, and have access to prescription drugs, and they feel, they could pay for medigap and maybe get additional help there, so I think this is where it is intertwined. So enough said.

GERIATRIC EVALUATIONS

Long-term care is, again, facing the entire population and if we could get the implementation of the Millennium Act, I think the Millennium Act is an outstanding act, but the question is how to do this, and here is my question. First of all you say, Dr. Garthwaite, you need 1,200 beds. One of the issues is appropriate evaluation so that people go in the right place at the right time.

My dear father died of Alzheimer's, but because we had geriatric evaluation at Hopkins, we could use adult day care and that kept him at home with us, and I believe stretched out his cognitive ability. But we needed to have the right evaluation and where he was in this situation before we looked at this.

So my question is threefold. Number one, are you building geriatric evaluation into it? Number two, by geriatricians, okay, because the other people that my father saw before I got him to the Hopkins geriatric evaluation just said, oh, it is old age, and wanted to give him tranquilizers, because he was starting to live the 36-hour day that I know you are familiar with.

So the question is, number one, appropriate evaluation, number two, how are you going to pace this? This is really significant. And number three, the issue of assisted living in all of this, because often it is a family collapse rather than a health collapse that requires long-term care, and a different type of facility might be more suitable.

Dr. GARTHWAITE. I could not agree more. My father also died of Alzheimer's, so I know personally the challenge of caring for someone with that disease. I am sure you are aware of our geriatric research education and clinical centers. We actually have 21 across the United States, and these are dedicated to research and understanding of the challenges and diseases and difficulties with aging, and the education of other geriatric providers throughout the system.

I think geriatrics owes its birth, really, to those facilities and other programs such as geriatric evaluation units that the VA has put forward. In the Millennium Act we see several related things. One is that there is a proposal for a new covered benefit which would include alternatives to nursing care so that we can provide services that really are not provided by most health care systems.

We have efforts underway at providing uniform screening and comprehensive evaluation of patients for those services. We have authority to conduct one pilot in assisted living, and that has been awarded. It has been awarded in VISN 20, and it is starting up shortly. I think we totally agree with you with the significant emphasis on alternatives to nursing care, because frankly that is better for the patients and more cost effective.

Senator MIKULSKI. I know my time is up, but do you have a sense of how you will pace this implementation of the Millennium Act? You do not have these facilities. You have a few scattered through the entire United States of America.

Secretary PRINCIPI. Well, I know we are talking about the one at Fort Howard as a possible assisted living facility, but we do not have a clear policy, Senator, and we need to get the policy in place, and then from that point make the determination of how we are going to proceed.

FORT HOWARD

Senator MIKULSKI. Yes, and also new ways of being able to do this, not only the assisted living but the adult day care, and are there going to be public-private partnerships, and creativity, I mean really creative and resourceful.

Yes, Fort Howard, as you know, is closing. We are looking at a way of providing some continuing care for this also, not to be the assisted living demonstration project, but I think what we have at Fort Howard is an opportunity, and could I have you take a look at Fort Howard? I want to be sure you are satisfied with what we are doing at Fort Howard, talk with me, so that the veterans of Maryland are satisfied and that we can move forward on it.

Secretary PRINCIPI. I would be happy to. I was out there many, many years ago, and need to do a return visit to assess that, but I have talked to my people about it. Dr. Garthwaite has a good site for that, but we will take a look at it, and I will get back to you, Senator.

Senator MIKULSKI. Thank you. Thank you, Mr. Chairman.

Senator BOND. Thank you, Senator Mikulski.

Senator Leahy, are you prepared to offer a statement and/or ask questions?

Senator LEAHY. Thank you, Mr. Chairman. I will submit questions for the record, but as I was upstairs in another matter on Judiciary, I am glad to see the Secretary here. He and I have known each other for almost 25 years, and I am very pleased to see him, and I look forward sometime to having him come up to Vermont to see how the VA operates there. There are a number of success stories there.

Secretary PRINCIPI. It is great to be back, Senator, and I look forward to working with you on the various programs. We are making progress. We have some more to do.

Senator LEAHY. I would, with full disclosure, Mr. Chairman—because my mother and all her family are from Italy, I will only be half as tough on the Secretary as I would be otherwise.

Secretary PRINCIPI. You have reminded me of that over the 25 years.

Senator LEAHY. I find I do not have to remind you any more.

Senator BOND. Do not bet on it, Tony, but it is nice to have out there just in case.

Secretary PRINCIPI. That is the better half, his mother.

Senator LEAHY. When my mom was alive somebody before one of our committees, obviously an Italian name, man about 50, and was somewhat nervous coming before the committee—it was a controversial thing—and my mother called and said, don't you give that nice boy a rough time, or that nice young man a rough time.

TAMPA STUDY—AUTOMATIC CLINICAL GUIDANCE

I have pushed the VA in the past few years to test new software that might automate clinical guidance for veterans. There is so much data out there that can be picked up.

The VA, as you know, has been a great spot to detect trends on a lot of things, heart condition, diabetes and so on, and if you have the right software, as I see it, you would end up increasing the quality of care, but you could also save a lot of money, too.

Now, I understand that a test of these tools at the Tampa VA Hospital did show, as Senator Mikulski brought out, the dramatic improvement in the care of diabetes patients, but I have not read an actual copy of the report. I do not know if you have heard of the Tampa study yourself. Do you have any thoughts about how this kind of software could improve health care across the veterans' health care system, and do you have a copy of the study?

Secretary PRINCIPI. I have not seen the study. I know of the study, and I know the work there has been successful, and I need to read the study, but you are absolutely right, I do believe that we need to look at the expert systems that are available, the solutions that are available to allow us to do our work better and with higher quality and quicker, and I know in the benefits claims area as well, there are systems out there that perhaps can be imported to assist us.

We have an aggressive look now. I know the Under Secretary for Benefits, Mr. Thompson, to my far left, is doing that and we hope to be working with the private sector in looking at a procurement for a system or systems very soon that will help us get this enormous backlog down.

Senator LEAHY. I think you would find a lot of support on this committee on both sides of the aisle for ways to help you, and to help the veterans through the kinds of software, through information that if you got—and the obvious thing, when you see a sudden spike in a particular age category of an illness or a result, and that is happening nationwide, the sooner you know it the better, because it may well change treatment, and the effect for the civilian population just to know this.

Again, so many advances in the medical science have come from the VA system partly because you can look nationwide, so let us continue to work together on that, and Mr. Chairman, you do not have an easy job on this part of the budget because there is always more demands that we never have the resources for. I commend you for over the years your deft hand at trying to balance how best to do that, and I have enjoyed working with you on it. Thank you very much.

PRIORITY 7'S

Senator BOND. Thank you very much, Senator Leahy. That is what makes the job so much fun and rewarding, but that is why they call it a budget, because there are always more priorities than there are resources to meet them, and we appreciate your work on those.

Speaking of priorities, over the last 5 to 6 years, priority 7 veterans have risen to about 27 percent. Your budget projects a slight drop, and I would like to know the philosophy on the sevens. We want to make sure that they are not being provided expansive care for the service-connected low-income veterans. Are there other ways that you are considering of increasing the cost share for the sevens on the kind of care that they receive?

Secretary PRINCIPI. A critical issue, Mr. Chairman. Thus far, there has been no change in policy with regard to sevens. Again, I would certainly like to continue to be able to enroll sevens, but at the same time, the impact they are having on the system—whether it is going to have an adverse impact on the service connected to the poor—I am not sure we know quite yet, because they are still coming in, in relatively large numbers.

I do believe that if we continue to have unrestricted enrollment, that we need to look at the copayment issue and getting reimbursement from insurance companies. Because collecting 10 cents on the dollar, spending $1.5 billion on sevens and only collecting about $150 million, of which 22 to 23 percent is for overhead to collect the $150 million, the system is finitely budgeted. We only have so much money to go around, and we heard about all the needs for long-term care, and hepatitis C and other programs. We have to make some decisions.

But I am hopeful through an increased copayment and increased reimbursement from insurance companies, we can continue to enroll sevens and continue to have a full spectrum health care system.

Senator BOND. I notice that there is a projected slight drop in 2002. What do you see for the long term? Are we going to see a drop, or is this just 2002, just a 1-year time? Is it going to continue to go up? There are lots of other—TRICARE and things like that—is it likely to impact the number of sevens?

Secretary PRINCIPI. I think it is hard to predict. I think with an increasing copayment you will see a drop-off, certainly, in veterans. I think with TRICARE for Life, where military retirees age 65 can now enroll, and enroll their spouses in the TRICARE program, will drive some away from our system. I do not know what percentage of the military retirees will choose to go to TRICARE. We have projected 25 percent, or 27 percent in 2002, so $235 million of our budget has been transferred to DOD to pick up that liability.

That may be high, that may be low. I think we have to wait a year.

As Senator Mikulski said, if Medicare has a more attractive prescription benefit, and Medicare reform, that could have an impact on our system.

There are a lot of variables, a lot of unknowns.

COMMUNITY-BASED OUTPATIENT CLINICS

Senator BOND. Let us turn to community-based outpatient clinics. That has been something that I think all the members of the committee, and I have been certainly most appreciate of the new service that is being provided. We have tripled the number of CBOC's since February 1995, but GAO tells us 13 percent of the VA users, 432,000 veterans, are not within 30 miles of VA medical facility.

They found the majority of patients who lack reasonable access are concentrated in six networks, including VISN 15, which encompasses most of Missouri. Is there something inherent in the networks that makes improving access for veterans more difficult?

Secretary PRINCIPI. I believe we need national policy guidelines with regards to the CBOC's. I believe that is in the works, and due to me any day now so that we can take a look at the shortfall before we send a new list up to you to activate new CBOC's. Therefore, no new list will be sent up until we have a uniform policy. Dr. Garthwaite and I will discuss the policy, and hopefully continue to make sure that our coverage is where it should be.

Senator BOND. Well, I know that Senator Craig is going to be very interested in that, and we are looking forward to seeing it. I realize in some areas veterans are just too widely dispersed to be within the 30-mile range, but we do look for your best recommendations on how to handle those situations.

HEPATITIS C

Let me turn to hepatitis C. A couple of years ago we were estimating $500 million in actual spending. It was only $50 million last year on screening in the antiviral drug therapy. Last year, the agency stated VA believes the surge of patient workload is likely to occur in fiscal year 2001 due to increasing veterans awareness, education, and training of staff, and to VA's promotional efforts. Why haven't these projections been realized?

Secretary PRINCIPI. Dr. Garthwaite can answer some of the details of this, but from my perspective, I want to point out that I believe the Department is committed to screening, testing, and providing treatment to as many veterans who have inflicted this hepatitis C virus. I think we are plowing new ground here. Our estimates were not accurate, because this is relatively new to us, and perhaps we did not have the data systems in place by which we could truly monitor what was going on in the field, and then again, only 20 percent of those with hepatitis C actually go into the treatment.

We found of that percentage, 50 percent complete the treatment because of the toxicity of the drugs, and so veterans do not complete the treatment, and of those that do complete the treatment, 50 percent, I guess, go into remission. I do believe however, we have made an effort to outreach and screen and provide treatment to a great many veterans.

Dr. GARTHWAITE. All I would add is that we started this making estimates where everything was an assumption. We have no empirical data to use, and so we are rapidly enhancing our understanding.

We believe we have tested—we have certainly done over 600,000 tests, significantly more than that in 1999 and 2000, and identified 75,000 unique individuals who are positive for hepatitis C and are actively managing their cases and providing them a lot of health care.

The key is, we do not quite know how many people we have screened, because it is in each individual chart, but we did recently implement a reminder system that electronically captures the screening, so we believe over the next couple of years we will be able to document that we have screened every veteran at least with the questions that decide whether they should have the tests done.

Senator BOND. So this may be a question of just inadequate information, but still it is a management system that you need to put into place to make sure that everybody understands the need for a screening, so that you will communicate to the hospitals that this is a priority to screen for this, and you will assure that there is information technology in place to assure that follow-up?

Dr. GARTHWAITE. We have communicated the importance, but you need to remind providers at every visit, at each time there is a visit. People are busy. There are a lot of things going on, and we need to document it so that we know it actually has happened.

In addition, we are sending out 3½ million fliers, with the help of the American Liver Foundation, to encourage people to come be tested.

Senator BOND. The number for fiscal year 2002 is $172 million. Is that a reasonable estimate?

Dr. GARTHWAITE. We think it is, based upon currently updated information, and I think I would beg your indulgence. We are trying to get smarter and better as we go, and we will share all the information we get with the committee.

Senator BOND. Well, we will look forward to seeing the performance measures when you get those in place so we know that it is working.

CARES SYSTEM

Let us turn now to CARES. I have been very supportive of this process. It took too long to get off the ground. We want to make sure it does not fall behind. We have heard that, quote, if the integrity of the model and data is proven, we will continue this process throughout the system.

What does that mean, and what is your assessment of the CARES system, and are you committed to it?

Secretary PRINCIPI. Yes, I am committed to it, because I do think we need to rationalize this infrastructure and bring it in line with the demographics, and changes in the health care delivery. But, I do think the data needs to be unassailable. I think it needs to have a great deal of integrity that the books have not been cooked, and we are taking into consideration suppressed demand and all of the other factors, so that people have credibility in what we have done when we have to make the hard decisions.

So I am committed to it. I am not backing away from it. But, I know that it is going to involve some tough decisions in every State, and I want to get on with it as quickly as possible, and make the changes. We are not in the real estate business, we are in the health care business, and if we can demonstrate that we can enhance health care by changing the mission of a facility, then I think that is important.

Senator BOND. Do you support a moratorium on major medical projects, pending the completion of the CARES study?

Secretary PRINCIPI. I am sorry, sir.

Senator BOND. Do you support a moratorium on major medical projects, pending the completion of the CARES process?

Secretary PRINCIPI. Sir, no, I do not. We have a large health care system in America, and it is deteriorating in some areas, and I think we need to make investments in those areas where we know there will be no change in mission.

I can assure this committee, the chairman, that I would not invest dollars in a facility that had even the most remote probability or possibility of a mission change. But, we cannot afford to allow our system to deteriorate and impact on the quality and patient safety, and there are some things that we need to get on with. So, I urge the committee that certain additions, certain renovations, carefully prescribed in consult with this committee, should go on and keeping in mind that this process is taking place, but look what happens.

Look what has happened to the DOD health care system. It has deteriorated, equipment past its useful life, and I think we need to be very, very careful that that does not happen to the VA.

But again, I know about CARES. I know about putting money into the facilities. At the same time, we need to watch our capital asset management as well, because we are making decisions with regard to licenses, leases, contracts that are binding our hands for many years, and that is an issue of concern to me as well.

Senator BOND. Well, we certainly agree with you on the safety aspects and other things, but I think it is important there be some standard that you have, because I have heard in Government there are such things as politically popular investments. The proponent always calls them a strategic investment. There are those who call them pork-barreling, and one of the objectives of CARES was to establish a clear line to determine what is a sound investment.

To the extent that there must be some standards—for example, one of the things that I think the seismic risk—VA has 69 facilities, most of them on the West Coast. We do earthquakes along the New Madrid Fault as well, but how much of an emergency is this, and will CARES process impact this? Are there other areas where there are critical needs, for which you have standards that you would want to move forward?

Secretary PRINCIPI. Well, clearly, seismic is an important area. You never know whether or when the next one is going to hit. Clearly, some are in more active seismic areas than others. We need to take a look at that.

Electrical, water type of infrastructure repairs that need to go on, and facilities that we know will remain with a highly unlikely mission change or expansion, I think it is those areas, but we need standards. You are right, you need to know what we are basing the request on, and we will provide that to you, but I do think we need to get on with some minor and major construction to keep the system at a high state of quality.

Senator BOND. Give me a quick update on the pilot project in VISN 12, and have you learned any lessons, and will we get all phases completed by 2003?

Secretary PRINCIPI. Yes. I am hopeful that we will have the options to me in June, later this month, in June. There are some draft options now which are being linked to the data, to the criteria, and as soon as that work is done we can get into the decision-making process.

Have we learned anything? There was some concern on the part of some of the leaders of the veterans service organizations that although they were kept informed, they really did not feel like they were part of the process. So, we are holding a 1-day workshop with them to alleviate their concerns and make sure that they are read into it, and have a voice in that process.

ST. LOUIS VAMC PARKING NEEDS

Senator BOND. Finally, speaking of strategic sound investments, VA has identified a number of projects validated by VA's Capital Investment Board in the past few years that have not made it into the President's budget. One of those happens to be a parking garage at the St. Louis Hospital, where parking is very limited for patients and staff. Are there any innovative solutions you might look at for addressing the problem in St. Louis, and could you work with us to come up with some solutions to it?

Secretary PRINCIPI. Yes. The project had been approved by the Capital Investment Board for advanced planning funds, but it did not hit that priority. However, because of its importance we are looking at enhanced use, and will have an enhanced use assessment within 30 days. We will get back to you with the results of that assessment, but I believe going the enhanced use route is a viable option to meet the parking care needs, which is very important and very critical.

ADDITIONAL COMMITTEE QUESTIONS

Senator BOND. Mr. Secretary, thank you very much for your answers. Believe it or not, I still have a bunch of questions for the record, but I will submit those to you by staff, that we will keep the record open for any questions, and we would appreciate your answers.

We thank you very much for your testimony. Is there anything further you wish to add?

Secretary PRINCIPI. No, sir, thank you.

Senator BOND. Thank you very much.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

VETERANS BENEFITS ADMINISTRATION ISSUES

Question. A few years ago, VBA organized its 59 Regional Offices into "service delivery networks." What improvements, if any, are attributable to the SDNs?

Answer. The reorganization to nine Service Delivery Networks (SDNs) has resulted in more open and honest communication between operating elements within the Veterans Benefits Administration (VBA). In addition to improved communication, the reorganization has been successful in promoting cooperation and eliminating destructive competition. This is reinforced through VBA's Executive Performance Appraisal System. A part of every facility director's performance appraisal is based on the successful achievement of SDN and VBA performance goals, as well as local goals. This has resulted in stations within SDNs being more willing to share resources in the interest of SDN performance gains.

Several SDNs have created shared budget web sites to facilitate the tracking and sharing of resources at that level. SDNs frequently meet to discuss SDN-specific issues and five have created SDN-specific web sites. This level of cooperation and participation is unprecedented in VBA. The SDN reorganization has opened up formal channels of communication that did not exist in VBA previously.

Communication within the SDN has resulted in improved service to veterans. In some cases, directors have adjusted traditional geographic barriers in the interest of providing enhanced service to veterans. Many SDNs participate in inter-SDN brokering arrangements initiated at the SDN level. Several SDN 1 stations share the processing of overpayment waiver requests by their Committees on Waivers. SDN 1 also utilizes shared resources for conducting local Systematic Technical Accuracy Review (STAR) quality reviews. This fosters uniformity in decision-making and error identification within the SDN. SDNs 1, 8, and 9 have developed community Web sites for the sharing of best practices. SDN 6 has consolidated burial flag processing at the St. Paul Regional Office to increase efficiencies within the SDN. SDN 9 developed an electronic system for marketing and selling VA-acquired properties across all Regional Offices within the SDN. This initiative has been exported nationwide and has resulted in significant cost savings to the government. These are only a few examples of cooperation among SDN members resulting in improved service to veterans.

Question. Performance varies considerably amongst the 59 VBA Regional Offices and there seems to be no accountability. How will you improve accountability for performance?

Answer. The restructuring of VBA's field organization into SDNs was designed to increase the responsibility and accountability of field managers for performance. Through the SDN structure, decision-making authority is pushed down to lower levels of the VBA organization. This allows VBA to hold managers accountable for their decisions and their performance and for identifying and effectuating the changes needed to improve performance.

The Regional Offices are organized under nine SDNs. Directors and program managers in each SDN function as a team, jointly responsible for the delivery of benefits and services within the SDNs' geographic boundaries. The SDNs operate with a practical degree of autonomy; however, there are systems in place to ensure accountability and measure performance on the basis of improvement and outcomes. Performance measures are tied to VBA's Balanced Scorecard and strategic goals.

In restructuring the VBA organization, direct line authority over field organizations was maintained. Ensuring a direct line of authority was particularly critical during the initial stages of team-based SDN development. This line of authority is provided through the Deputy Under Secretary for Operations and the two Associate Deputies. The Associate Deputies are responsible for overseeing the operations of the SDNs, including monitoring performance against goals and standards and assuring progress in the implementation of national policies and initiatives.

Variations in performance among the Regional Offices occur because of a variety of factors, including workload, resources, and staff experience levels. Our target setting process, designed to achieve performance targets at the national level, assures that individual station-specific targets are as appropriate as possible. In order to make sure targets are challenging—yet achievable for all Regional Offices—and to hold managers accountable for performance, targets are individualized for each station in each Balanced Scorecard measure. It is with these performance targets that the foundation of accountability is set.

Accountability is established through the performance briefings and discussions that are conducted within the SDNs and at VBA leadership meetings. These discussions include detailed explanations about workload issues at each station. Directors and SDN representatives are responsible for explaining to each other their progress in achieving national, SDN, and station targets; identifying current performance problems; citing solutions that are being implemented; and sharing best practices.

Formal accountability is maintained through our performance management system. Element 1 of the Directors' performance standards measures the achievement of the Balanced Scorecard targets. A weighted composite score is developed to assess how each station and SDN are performing overall based on their business lines' performance on the Balanced Scorecard. The performance standard element itself weights the national score at 15 percent, the SDN score at 50 percent, and the station score at 35 percent. Directors must achieve 85 percent of the composite performance target. Thus, the directors are held accountable for how their stations perform and contribute to the SDN and national performance. Directors are provided feedback at the mid-year review, as well as during their annual performance appraisal.

Question. Have SDNs helped in improving accountability?

Answer. As discussed in response to the preceding question, the SDN structure has significantly improved accountability. An additional aspect of accountability is provided in element 2 of the Directors' performance standards. Under this element, his/her SDN directors rate each other on teamwork and cooperation. The rating is done using a web-based questionnaire. Directors are provided with written feedback developed from the input of the other directors. That feedback is discussed in a closed session of the SDN directors in consultation with the appropriate Associate Deputy Under Secretary for Operations. Each director is responsible to the group of SDN members, thus strengthening overall individual accountability.

Question. VBA expects to improve its accuracy rate from 59 percent in 2000 to 72 percent this year. What specific efforts will result in such a large increase?

Answer. VBA has placed an increased emphasis on the timeliness and accuracy of the claims process. In the past few years, VBA implemented a number of initiatives designed to improve the accuracy of claims processing. VBA established Quality Countermeasures Teams to identify processing errors and focus resources on corrective actions. The STAR program identifies specific errors. Countermeasures are developed to address the most prevalent errors, and "Just in Time" training is provided to mitigate the most frequent errors.

The Decision Review Officers (DRO) program provides a level of review to ensure that accurate decisions are made and that the decision is fully explained to the veteran. Feedback from the DROs is used to improve accuracy. The Training and Performance Support Systems (TPSS) initiative provides comprehensive training for the core claims processing work. TPSS and the Systematic Individual Performance Assessment (SIPA) initiative will provide accountability and uniformity to the claims process and result in improved accuracy.

These initiatives and capitalizing on the information technology investments will provide VBA with the opportunity to make significant strides in our efforts to improve the accuracy of the claims process.

Question. VBA is requesting an additional 890 FTE for fiscal year 2002. What workforce analysis or data was used to support the need for these additional FTE? Do you foresee the need for additional increases in VBA staff in fiscal year 2003? Has VBA done any analysis showing exactly how many employees and what skill mix are needed in each regional office to support the expected disability claims workloads? Has VBA developed a formal workforce succession plan?

Answer. In 1998, as VBA began development of the fiscal year 2000 budget request, we identified a number of critical management challenges that would adversely impact the VBA organization in the near-term and long-term future. The workload was becoming increasingly more complex and would increase in direct proportion to that complexity. A significant percentage of the experienced workforce was approaching retirement age.

The organizational structure did not lend itself to providing quality veteran/customer service. In the fiscal year 2000 plan and budget formulation process, VBA outlined an ambitious, multi-year approach to address these management challenges.

VBA began addressing the human capital challenge in their fiscal year 2000 budget submission; further efforts to resolve the challenge were included in the fiscal year 2001 and fiscal year 2002 submissions. VBA developed a workforce plan that includes succession planning. Staffing needs of each regional office are assessed, and a matrix that assesses employee skill levels is currently under development. A comprehensive VBA training program (TPSS) is addressing the training needs of new and current employees.

Analysis is underway to determine whether VBA has successfully addressed the human capital challenge by the end of fiscal year 2002. The results of this analysis will determine whether VBA will request additional FTE in fiscal year 2003.

Question. VBA expects duty-to-assist requirements and diabetes claims to increase the pending workload dramatically in fiscal year 2001 and fiscal year 2002. What is VBA's forecast of the pending workloads in fiscal year 2003 and fiscal year 2004? Do these forecasts show the workload will decrease? When will it begin decreasing?

Answer. The legislation regarding these issues not only resulted in an influx of new claims, but essentially changed VA's procedures for processing both. The new duty-to-assist law requires additional wait time be built into the claims process as part of the development. Added development is also required prior to making a decision. As a result, we do not anticipate that the increase in workload resulting from this change will dramatically decrease in the coming years. Similarly, the change to the law involving diabetes also changed the fundamental work process involved in adjudicating this type of claim. While the initial flood of claims will gradually dissipate, we expect a steady stream to continue.

We do anticipate an overall decrease in workload by late 2003 or early 2004. We have seen a downward trend in number of claims received, and barring any new legislation, we expect this trend to continue.

Question. In processing initial compensation claims, how long on average do Regional Offices wait to receive evidence needed from external sources? Other than establishing predischarge sites, what has VBA done to reduce waiting times and what else can be done?

Answer. VBA has analyzed the delays encountered in obtaining evidence from its primary information providers. This analysis shows that, depending on the sources, it takes 2–166 days to obtain evidence necessary to adjudicate claims. The chart below shows the number of days it takes to receive evidence from the major providers of this information.

Access to Evidence

Evidence Source	*Days to Receive*
CURR (U.S. Army Center for Unit Records Research)	166
National Personnel Records Center	100
Private Medical Records	50
VA Physical Exams	35
VHA Records	31
Records Management Center	2

In the past, VBA had difficulty in obtaining service medical records to process compensation claims. In 1992, VA entered into an agreement with the Department of Defense (DOD) to resolve this issue. Now, DOD sends the veteran's service medical records to the VA Records Management Center at the time the veteran is discharged. This process has reduced access time to this information to 2 days. VBA initiated several efforts to improve the timeliness of its evidence-gathering efforts. The National Personnel Records Center is the major source of information to process compensation claims. VBA developed an automated system to requests veterans' service medical records (veterans discharged prior to 1992) and military service records from the National Personnel Records Center in St. Louis. The Personnel Information Exchange System (PIES) was fully implemented in fiscal year 2000. In addition, VBA has placed VA staff at the National Personnel Records Center to assist in alleviating the backlog of requests for information.

VBA and VHA have partnered to create a joint exam office that will improve the timeliness of processing initial claims. A Compensation and Pension Records Interchange (CAPRI) was developed in order to improve VBA's access to VHA medical records.

VBA continues to work closely with the United States Army Center for Unit Records Research (CURR) to reduce the delays encountered with stressor verification requests required in the processing of PTSD claims. The Compensation and Pension (C&P) Service has issued a Statement of Work for an electronic data exchange system similar to PIES to improve the timeliness of those requests.

Question. What is VBA doing to identify, evaluate and disseminate best practices to the field?

Answer. In recent years VBA has developed systems and mechanisms for evaluating practices used by its field facilities. A prime example is the establishment of the Business Process Reengineering (BPR) case management demonstration sites. These sites by their very nature are test beds for best practices. Within the six identified sites initiatives designed to improve claims processing are tested prior to implementation nationwide.

These demonstration sites are modeling the case management service process to include: defining and implementing this process; testing PC-based case management tools; and developing and utilizing a series of reader-focused writing letters that provide customers with process expectations, evidence needs, and claims status. The sites are also measuring the impact of this approach on claims processing by tracking a number of processes and service indicators including timeliness, accuracy, customer satisfaction, employee satisfaction, pending workload, and telephone service. After careful testing and evaluation, the initiatives, which are considered best practices, are rolled out to other stations.

The following represents a number of initiatives that were developed and tested locally in the field. Based on the merits of these local efforts, the concepts were developed, evaluated and are being (or about to be) implemented nationally.

—Training Responsibility Involvement in the Preparation of Claims (TRIP)
—Personnel Information Exchange System (PIES)
—Social Security Administration (SSA) Link
—Center for Unit Records Research (CURR) Link
—Compensation and Pension Record Interchange (CAPRI)
—Expectation Letter

—Case Management
—Veterans Service Representative (VSR) Position
—Veterans Service Center (VSC)
—National Automated Responses System (NARS)
—Reader Focused Writing (RFW)
—Decision Review Officer (DRO)
—Skills Matrix
—Claims Adjudication Processing System (CAPS)
—Balanced Scorecard Utilization

Another initiative designed to evaluate and report on best practices is VBA's Virtual VBA lab at its Regional Office in Washington, DC. This lab is testing a paperless claims folder process that will result ultimately in a controlled rollout to other stations.

Other initiatives aimed at evaluating and disseminating best practices include VBA's telephone strategy, which is described in detail in VBA's semi-annual BPR report, and quality improvement plans and best practices.

As new initiatives are implemented, their impact is measured through the monthly Balanced Scorecard. The scorecard is also used to monitor performance nationwide through on-going VBA Leadership meetings. The Office of Field Operations holds regular conference calls with each of the SDNs to discuss quality improvement efforts, to include any best practices.

Earlier this year, VBA developed a process for the dissemination and implementation of best practices that stem from efforts at the local level, i.e., grass roots initiatives. Further development of the associated evaluation process at the local and national levels is underway. The focus of the process is to evaluate and disseminate for implementation locally developed initiatives that can demonstrate real improvements.

The best practice evaluation process will begin at the local level where the initiative is initially implemented. Applying an appropriate evaluation methodology, the Regional Office will assess the effectiveness of the practice on improving business operations.

A defined format will be utilized for reporting best practices to include a description of the practice, operation impacts (scorecard), policy and procedure impacts, cost, resource requirements, and lessons learned.

Upon review and approval as a best practice, the initiative will be posted on VBA's Intranet site. Best practices will be publicized further on the field operation's hotline calls. Initiatives demonstrating high impacts may be evaluated further via the BPR demonstration sites and adopted as a mandatory practice nationwide.

Question. What are your views on consolidating disability claims processing operations?

Answer. We believe consolidation of some specific types of claims processing to be appropriate. We are developing plans that would consolidate the processing of our means-tested programs, as well as small programs such as the Spina Bifida Allowance for children of Vietnam veterans.

Question. What benefits could be gained from such consolidation?

Answer. Consolidation of our means tested pension and very small "specialty" programs will enable us to focus a highly trained staff on these complex programs and thereby improve the timeliness and accuracy of claims processing and reduce overpayments. It will also minimize the complexity of the Veterans Service Representatives (VSR) position, allowing the Regional Offices to focus on the compensation benefits programs. We will be able to provide better oversight of the means-tested programs and stage the workload throughout the year, evening out the processing cycles and avoiding surges in pension claims workload. Consolidation will also provide opportunities for enhancing the effectiveness of our training and employee development programs.

Question. Could the predischarge initiative have any implications for future Regional Office structure?

Answer. Expansion of our presence at military separation centers is an integral part of our current and future plans for delivery of VA benefits and services. Original compensation claims filed at predischarge sites currently represent approximately 14 percent of the total claims received. We expect this volume to increase as more sites become fully staffed and operational. At the same time, our data indicates that veterans today file claims for increased disability benefits more frequently than veterans in past years. The major portion of our claims receipts are from veterans who are either reopening their claims or are filing claims for increased benefits, and we expect that trend to continue. Our future structure therefore needs to be flexible to respond to the changing needs of both separating service members and veterans. We recognize that there are many factors that will change our organization and influence our future field structure. Our goal is to create an organization that can quickly and efficiently respond to our rapidly changing world.

Question. What percentage of the original claims workload does VBA forecast that the predischarge sites will ultimately receive?

Answer. Based on the claims filed in the first half of fiscal year 2001, we believe that about 25,000 claims will be filed at our Benefits Delivery at Discharge sites this year. This represents 31 percent of the 80,000 claims we expect to receive from veterans during their first year after separation from active duty. We would like to expand the predischarge program to 100 percent of all service members who wish to file claims for disability compensation. However, it may be difficult because of the remote assignments of some service members, such as on ships at sea, in small military bases not near VA medical facilities, or in some foreign locations such as U.S. Embassies.

Question. Despite recent efforts to improve service at the Washington, DC Regional Office, their performance still lags well behind all other offices. Average number of days for rating-related actions in March was 297, compared to the national average of 185 days. Why is this, and what specific actions does VBA take to address the worst performing offices, other than shifting their workload to other offices in the SDN?

The Washington Regional Office has made significant progress over the last 24 months in workload management. With assistance from other Regional Offices within SDN 3, the number of pending claims has been reduced by 40 percent (from 12,712 claims in July 1999 to 7,480 in June 2001). The number of claims pending in excess of 180 days has been cut in half (from 7,691 to 3,458). It should be recognized that this reduction has been accomplished at the same time that the pending inventories have been climbing nationwide as a result of the duty-to-assist legislation and other regulatory changes. The Washington Regional Office still has a much higher than average percentage of claims pending in excess of 180 days. As the office continues to work through these older claims, the average days to complete a rating-related claim will remain significantly above the national average.

Additionally, the Washington Regional Office has jurisdictional responsibility for claims from veterans residing in foreign countries. Foreign claims currently represent about 30 percent of the offices pending rating workload. Due to the complexities of foreign mail and correspondence and the need to coordinate medical examinations through the U.S. Embassies, the time required to process these cases is far greater than that of domestic cases. This is a factor that must also be considered when assessing the performance of the Washington Regional Office. The average days to complete foreign rating claims exceeded domestic claims by 83 days for the month of May 2001. The average days pending for foreign rating claims currently exceeds domestic by 64 days.

The Washington Regional Office has historically experienced more difficulty than any other Regional Office in attracting and retaining a highly trained workforce. This has a significant impact on performance. The fact that VA's headquarters organization is in the same location and offers job opportunities within a significantly higher-grade structure provides unique challenges that are difficult to overcome. There is also intense competition for federal employees from other agencies in the Washington, DC metropolitan area at all grade levels, and entry-level salaries in the Veterans Service Center (VSC) are not competitive with similar opportunities in the area.

We have developed a proposal to realign workload within SDN 3 that we believe offers great potential for improving the operations of the Washington Regional Office. We will be expanding the predischarge program into the Washington, DC Military District, which is one of the most highly visible points of separation for the military services. The Washington Regional Office will be responsible for this program. At the same time, we will transfer responsibility for claims from veterans residing in the Northern Virginia area from Washington to the Roanoke Regional Office, and claims from veterans residing in the Maryland counties of Prince Georges and Montgomery from Washington to the Baltimore Regional Office. This plan will decrease the complexity of C&P claims processing at the Washington Regional Office, as the tenets of service connection are easier to apply in original disability compensation claims when continuity is not an issue and claims are typically "cleaner." The proposal will reduce some of the workload volume and complexity in the rating activity, which is the area that the office has the greatest difficulty in maintaining the necessary levels of expertise.

In addition to the workload and the performance challenges of the Washington Regional Office, this question also asks how we address other offices experiencing performance difficulties. In order to monitor performance in all SDNs and Regional Offices, we have established bimonthly Leadership Meetings with Headquarters staff (including top management staff from the Office of Field Operations and all Services) and the SDN team representatives. These meetings provide opportunities to discuss performance, establish clear goals and build organizational accountability. The meetings also enable us to gain a better understanding of our business and the tools available to manage performance, and to share best practices and new ideas.

Accountability for performance is emphasized through these Leadership meetings. At every meeting, we make it a practice to analyze VBA performance across all business lines and in all SDNs. Each team representative is responsible for identifying significant gaps in performance for each office within the SDN, and discussing actions the SDN has taken to remedy those gaps. We review the success of interventions undertaken to improve performance in offices with more difficult workload situations. This process ensures that we are constantly assessing the level of service delivery in all program areas and in all regional offices, sharing best practices and working together to correct deficiencies and improve performance, and appropriately holding top managers accountable for performance achievements (or lack thereof). The Service Directors frequently participate in these performance reviews.

Regional Offices not performing well against critical scorecard measures must develop a "wellness plan" that outlines actions to be taken to address performance deficiencies. These plans are monitored against monthly goals. This process dovetails with performance reviews conducted by the Associate Deputy Under Secretaries on regularly scheduled conference calls with each SDN and top managers from the C&P Service.

We are committed to instituting and evaluating performance measures that will ensure accountability and drive our future success in benefits delivery. With the Balanced Scorecard approach, goals are clearly defined at the national, SDN and local levels that identify where we are and where we need to go. Management is focused on performance achievement, and scorecard information is used to develop workable plans for improvement at all levels of the organization. Since instituting the Balanced Scorecard, we have identified both strengths and weaknesses in our performance and we are learning how we can improve our service to veterans.

In addition, the directors of all of our Regional Offices have a complete set of performance standards that clearly identify performance expectations. Performance on the Balanced Scorecard measures is the first element of the standard, and is identified as a critical element. As such, it weighs heavily in the assignment of annual performance ratings and any bonuses that may be awarded to senior managers.

MEDICAL SERVICES

Question. VA's budget assumes that 65,000 military retirees (27 percent of age 65 and over military retirees using VA) will leave the VA, reducing VA medical costs by $235 million. Are you confident that there will be a net decrease of this many or more military retirees as a result of TRICARE for Life? On what basis was this estimate made?

Answer. The Administration estimated that approximately 27 percent of military retirees who are age 65 or older and currently enrolled in the VA health care system would voluntarily choose to shift their medical care to the TRICARE system. This estimated shift is based on convenience (retirees can go to any Medicare provider) and new out-of-pocket co-payments for medicare services. Military retirees will have to evaluate which system serves their needs best taking into consideration such things as cost, convenience, location and quality of health care. The following figures were used in the calculations: 64,540 enrollees at an average cost of $3,705 per enrollee equals $239 million. This amount is then reduced by the nearly $4 million in collections that would otherwise have been anticipated for those enrollees. The net savings is, thus, approximately $235 million.

Question. According to GAO, 13 percent of VA users (432,000 veterans) are not within 30 miles of a VA medical facility. GAO found that the majority of patients who lack reasonable access are concentrated in six networks. Do these networks have management or financial issues that need to be addressed?

Answer. The General Accounting Office (GAO) study limited its definition to distance, which can disadvantage the Veterans Integrated Service Network (VISN) with large geographic areas and urban veteran populations in terms of assessing need. For more urban settings, some Networks assess access in terms of travel time rather than distance. Nationally, a VHA taskforce proposes the use of 30 minutes or 30 miles as a measure for adequate access. Also, when there is an insufficient population to support a viable Community Based Outpatient Clinic (CBOC), i.e., a panel size of approximately 1,000 users per provider, other options are made available to veterans.

Management in VISN 6 is aware of the need to improve veteran access and has done an analysis of veteran population data to justify the already established clinics and areas for potential future expansion. CBOCs are established in a phased manner determined by need, budget, staff, etc. VISN 6 has CBOCs in: Greenville, North Carolina; Tazewell, Virginia; Winston Salem, North Carolina (Satellite Outpatient Clinic); Charlotte, North Carolina; Raleigh, North Carolina; Braxton, West Virginia; Fredericksburg, Virginia; and Danville, Virginia.

The Raleigh and Fredericksburg clinics were opened in fiscal year 2001. The Wilmington, North Carolina CBOC has a scheduled opening date for later this year. An additional site at Havelock/Morehead City, North Carolina received Congressional approval in May 2001 and will be activated over the next few months. Additional potential CBOC sites are examined via an analysis of veteran population density, remoteness of a veteran's residence from care, and a local medical center's ability to support the CBOC. Possible sites for fiscal year 2002 are: Lynchburg, Virginia; Norfolk, Virginia; Franklin/Cherokee, North Carolina; Hickory, North Carolina; Lewisburg, West Virginia; and Charlottesville, Virginia.

Sites considered for fiscal year 2003 through fiscal year 2006 are: Goldsboro, North Carolina; Greensboro, North Carolina; Galax, Virginia; Tidewater, Virginia; Staunton, Virginia; Williamsburg, Virginia; and Elizabeth City, North Carolina.

The possible CBOC sites for fiscal year 2002 and fiscal year 2003 are under consideration and may change. VISN 6 management continues to analyze veteran population shifts with the intent of establishing community clinics in areas where veteran population justifies the need.

In fiscal year 2000, VISN 7 set aside $10 million as start-up funds for its six recently approved CBOCs. Two of the six are fully implemented, and the goal is to have the remaining four implemented by the end of this fiscal year. When there is an insufficient population to support a viable CBOC (panel size of approximately 1,000 users per provider) other options are made available to veterans.

VISN 9 continues to support the further development of community-based primary care services for our Nation's veterans. Currently, 18 CBOCs are operational within the Network. While this has improved access to primary care, gaps still remain. Strategic planning for this Network is based on a 3 to 5 year cycle, and their planning for community-based clinics was developed with assistance from a consultant using weighted criteria to assess potential sites (a two-phase approach with a high priority and secondary list of potential sites.) Stakeholder input was sought and incorporated into the planning process. With over a million veterans residing in this service area, the VA mid-South Healthcare Network is committed to improving access and has aggressively developed community based clinics during the past 3 years. This network will continue to move forward in the planning and implementation of these services.

VISN 13 Medical Center management continues to financially support improved access to VA health care due to the rural nature of the upper Midwest. Prior to 1997, VISN 13 treated veterans at 4 VA off-site clinics and used 12 traveling health care teams. Since then, VISN 13 has opened nine new CBOCs and will open two more this summer. CBOC business plans will soon be submitted to VA Central Office for three more sites. VISN 13 continues to support improving access to veterans through CBOCs while maintaining cost-effective operations at the core VA medical centers.

VISN 15 has established 36 CBOCs since 1995. These new points of care have decreased the average distance a veteran must travel to receive medical care from approximately 75 miles to less than 20 miles. The geography and demographics of the veteran population in VISN 15 prevent all veterans from being within 30 miles of care, e.g., in western Kansas there are a small number of veterans spread across a vast area.

VISN 16 reviews management and financial issues on a regular basis through performance measures such as the ones noted in the paragraph above.

Question. Is there something inherent in these networks that make improving access for veterans more difficult?

Answer. As stated previously, a distance measure may not be appropriate in all cases. The geography and veteran demographics of the network make providing access in some parts of a Network much more difficult than others. Difficulties in improving access for veterans in certain geographic areas can be caused by: insufficient number of patients to support a cost-effective CBOC; difficulties recruiting medical personnel to staff CBOCs; lack of appropriate, affordable space to house CBOCs; and difficulty in arranging cost-effective contract care with local health care providers.

VISN 6 has a widespread geographic area covering 90,000 square miles, 222 counties, four states, and 1.2 million veterans. VISN 6 contains significant mountainous terrain, an area of low population density along the coast where veterans are widely dispersed. Many of these areas do not contain adequate numbers of patients to be cost effective for a CBOC, we will continue to monitor for future needs. In other areas where the veteran population does justify the need for a CBOC, there have been a few cases where it was difficult to arrange local health care due to lack of providers (contract or staff), and cost negotiations. These challenges were overcome, with time, and approved CBOCs opened as planned.

VISN 7 has experienced difficulties in finding qualified contractors able to provide quality health care at a reasonable cost. The VISN has opted, in spite of the difficulties associated with establishing a VA-staffed model CBOC, to pursue the VA-staffed model in order to better ensure consistency and quality service for veterans.

VISN 9 strategic plan includes creating a distributed system of multi-site models including CBOCs, hospital based primary care services, and primary care clinics (owned and contracted), and developing new sites in high priority areas to increase access to eligible veterans and enhance quality. Linkages between CBOCs and medical centers will be strengthened to ensure standardization and continuity of care delivery.

VISN 13 operates 25 CBOCs at 41 locations in a very large urban and rural geographic area over 700 miles wide. The Network encompasses all or portions of eight states: Iowa, Minnesota, Montana, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming. Even though such a large number of CBOCs provide services to veterans, pockets of veterans reside in rural areas further than 30 miles from VA health care. VISN 13 reduced veterans' average travel time from 31.35 miles in fiscal year 1998 to 28.2 miles in fiscal year 1999 according to a VA study by the Planning and Systems Support Group.

For VISN 15, the geography and veteran demographics of the network make providing access in some parts of the network much more difficult than others. The small number of veterans spread across large distances makes the placement of a CBOC in many areas not economically viable. It is difficult to recruit staff, particularly physicians, for remote areas.

VISN 16 serves the largest veteran population in VHA encompassing 170,000 square miles in Arkansas, Louisiana, Mississippi, Oklahoma, and portions of Texas, Missouri, Alabama, and Florida. Since 1995, the VISN has opened 16 new CBOCs targeting areas with large numbers of medically underserved veterans. Network 16 has 28 operating CBOCs, 2 pending activation and 4 recently approved. VISN 16 has many rural, poor, and sparsely populated areas that pose great difficulties in staffing CBOCs (whether contract or VA-staffed) and has re-emphasized its primary goal of improving access to care via CBOCS in fiscal year 2000. A CBOC Steering Committee was established and, in conjunction with the VISN Business Office, developed a process for evaluating CBOC proposals. Travel time, veteran age, and waiting times are criteria used to evaluate the impact a CBOC will have on improving veteran access to primary care. This process allowed the Steering Committee to identify four additional sites as potential CBOC locations. These sites were approved by the Executive Leadership Council and will be submitted for approval, based on available resources. The VISN is continually analyzing data to strategically meet the access needs of veterans within their service area.

Question. Should there be more consistency among Networks?

Answer. The local VISNs plan CBOCs within the context of national policies and procedures. There are often unique circumstances in local market areas that impact CBOC planning and decision-making, including veteran demographics, availability of health care providers, community resources, travel issues, veteran preferences, etc. VHA is in the process of enhancing its National CBOC policy and developing a national strategy to ensure that CBOC planning is focused on a consistent set of evaluation factors and that CBOC proposals are evaluated consistently at the Network and National levels.

Question. What is VA's goal with respect to increasing accessibility of service, and when will it have been achieved?

Answer. Providing easy access to medical care is one of VHA's strategic "6 for 2006" goals. The strategic target goals are:

[In percent]

Performance Measure	*Strategic Target*
Increase the percent of enrolled veterans who will be able to obtain a non-urgent patient appointment with their primary care provider or other appropriate provider within 30 days	90
Increase the percent of patients who will be able to obtain a non-urgent appointment with a specialist within 30 days of the date of referral	90

Performance Measure	Strategic Target
Increase the percentage of patients who report being seen within 20 minutes of their scheduled appointments at VA health care facilities	90

VHA measures performance in terms of waiting times for care and evaluates the percentage of veterans who travel more than 30 miles to reach VA primary care services. In fiscal year 2000, 69.9 percent of our patients were within 15 miles and 87.4 percent were within 30 miles, with a national overall average distance of 13.4 miles compared to 14.1 miles in fiscal year 1999. Since 1995, the average distance decreased 42 percent from 23.1 miles to 13.4 miles. The decrease in average distance and increase in access is partially attributable to the increased number of service sites that have become operational since 1995.

Question. How many more CBOCs are needed to meet your goal, and over what time period?

Answer. CBOC planning is Network-based. Networks strategic plans include projections for additional CBOCs. A recent GAO survey of Networks found that if all planned CBOCs were implemented within the next 3 years, new openings would average about 50 CBOCs annually. This includes CBOCs that have already gone through the Congressional review process, as well as new proposals. The actual number of CBOCs is dependent upon the annual development of Network strategic plans and their constant modification to meet changing veteran demands.

Question. In some CBOCs, 50 percent of the patients are Priority 7s. What is VA doing to manage the utilization of these patients to ensure that services are not diminished for traditional patients—those with service-connected disabilities or lower incomes?

Answer. GAO found that new CBOCs are not primarily responsible for the marked increase in the number of higher income patients who have sought health care through VHA over the past few years. On a national level, Priority 7 patients make up a relatively small percentage of total health care expenditures. In fiscal year 2000, 15 percent of our patients were Priority 7s and exhibited the lowest expenditure per patient than for any other priority grouping of patients (source: Table 2 September Enrollment Report). The cost per enrollee per month, a common yardstick in the health care sector, shows that Priority 7 veterans cost relatively little to treat.

Description	Fiscal Year 2000 Market Share (Percent Veteran Population Enrolled)	Cost per Enrollee per Month (as of February 26, 2001)
Priorities 1 through 4	70	$511
Priorities 5 and 6	29	$271
Priority 7	8	$89

In terms of access, nationally the Priority 7 patients are the same average distance to the closest VHA service site as other priorities. The VHA CBOC policy specifically states that clinics shall not be established for the purpose of attracting new VA patients and that any new users must be accommodated within existing allocations and treatment priorities. The local health care system manages utilization of services within the context of eligibility rules, patient needs and resources.

Question. VA has identified 69 facilities as "exceptionally high risk" for seismicity and in need of repair. What is VA's plan to address seismic needs, and how will the CARES process impact this?

Answer. With VA having identified 67 facilities as "exceptionally high risk (EHR)," the Under Secretary for Health, in a letter to VISNs 19, 20, 21, and 22, directed the development of project applications for these buildings in a multi-year program to identify detailed projects for consideration in the Capital Investment Board (CIB) project selection process for major projects and/or the VISN approval process for minor projects.

Phase II of the CARES studies includes VISN 21 and VISN 22 where a majority of highest priority EHR buildings are sited. The $85 million proposed for the CARES Fund (construction, major) and CARES Activities (construction, minor) will allow VHA to initiate design through construction for any major and/or minor seismic capital initiative stemming from CARES recommendations.

The absence of a completed CARES study should not prohibit funding of a major project, but certainly careful analysis must be accomplished before making such a proposal. There are facilities that require seismic safety improvements where it is extremely unlikely that CARES will conclude VHA does not need the building in question. Examples include the main hospital buildings at Los Angeles, San Francisco, and San Diego. Criteria would include importance of the facility to veterans' health care, seismic risk, current condition of building infrastructure and compliance to current national codes and VA facility criteria.

Question. Are there other areas in which critical infrastructure needs exists, and how does VA propose to address such needs pending completion of CARES?

Answer. A system as large as VHA's cannot maintain quality and productivity over time without appropriate recognition of the need for infrastructure improvements. The pace of change in health care delivery has been an impediment to supporting major construction. Implementing CARES options will no doubt require major construction funding in many instances. However, the absence of a completed CARES study should not prohibit funding of a major project, but certainly careful analysis must be accomplished before making such a proposal.

SPECIAL NEEDS POPULATIONS

Question. VA has an important responsibility to take care of its "special needs" population—spinal cord injury, blind rehabilitation, mentally ill, PTSD, homeless, and substance abuse. In all but one area, VA has increased the number of patients treated since 1996, but I'm very concerned that in the area of substance abuse, VA has decreased the numbers of patients treated over the last five years by 12 percent—about 10,000 veterans. Why is this and what is being done to ensure this critical need is met?

Answer. The number of patients treated for substance abuse has decreased, especially between fiscal year 1999 and fiscal year 2000. Early this year, as authorized by the Veterans Millennium Health Care and Benefits Act, we provided over $9 million in funding to 31 facilities to expand substance abuse treatment capacity. We expect this increased funding to affect an increase in treatment capacity this year. However, we are working to better understand the reasons for this decrease in use of specialized substance abuse treatment programs, and to ensure access to substance abuse programs in our clinics as well as in our larger facilities. To this end, VHA plans to establish a National Mental Health Improvement Program (NMHIP). This program will be modeled after a number of well-established VA data-driven improvement programs, such as the Continuous Improvement in Cardiac Surgery Program (CICSP), the National Surgical Quality Improvement Program (NSQIP), the VA Diabetes Program, the Pharmacy Benefits Management Program (PBM), and the Spinal Cord Injury/Dysfunction National Program. This new program will use validated collection, expert analysis, and active intervention by an oversight team to continuously improve the access, outcomes, and function of patients in need of our mental health programs. These programs include those for patients who are Seriously Chronically Mentally Ill, or who suffer from Post Traumatic Stress Disorder, Substance Abuse, or Homelessness. This program will draw upon existing resources in our Health Services Research and Development Service (HSR&D) including existing initiatives in our Quality Enhancement Research Initiative (QUERI) and our Mental Health Strategic Health Care Group (MHSHG) including the Northeast Program Evaluation Center (NEPEC).

DEPARTMENT OF DEFENSE/DEPARTMENT OF VETERANS AFFAIRS (DOD/VA) SHARING

Question. Currently, services shared between VA and DOD's health systems amount to only $65 million. What ideas do you have to improve collaboration, and how much money might be saved?

Answer. VA and DOD are working closely to improve collaboration. On May 28, 2001, the President announced the formation of the "Task Force to Improve Health Care Delivery for the Nation's Veterans" comprised of health care experts, officials familiar with Department of Veterans Affairs and Department of Defense (DOD) health systems, and representatives from veteran and military service organizations. This group will identify ways to improve benefits and services for veterans and for DOD military retirees who are also eligible for VA benefits; review barriers that impede coordination; and, identify opportunities to maximize use of resources and infrastructure to include buildings, information technology and procurement of supplies.

An over-riding goal in all of these activities is to obtain more value from the federal dollar spent. However, it would be premature to make cost savings estimates at this time.

Question. What specific steps does VA plan to take to improve not only sharing of services, but also opportunities to maximize joint purchasing power, such as in the area of pharmaceuticals and supplies?

Answer. VA entered into a December 1999 Memorandum of Agreement (MOA) with DOD to combine the purchasing power of the two Departments and eliminate redundancies. The MOA has three appendices (pharmaceuticals; medical and surgical supplies; and high-tech medical equipment).

A major breakthrough occurred in late calendar year 2000, when DOD agreed to eliminate their Distribution and Purchasing Agreements (DAPAs) for pharmaceuticals and instead rely upon the Federal Supply Schedule (FSS) for pharmaceuticals. As a result, DOD's Distribution and Purchasing Agreements were eliminated in January 2001, for all pharmaceuticals that are available in the FSS.

A joint VA/DOD Data Management Group is developing data gathering and assessment plans for medical/surgical items. However, a major impediment towards standardizing and consolidating medical/surgical supply items is the lack of a Universal Product Numbering (UPN) system. VA is currently taking the lead by developing requisite cost-benefit analyses to support requiring federal contractors to provide UPNs for medical/surgical commodities. This proposed requirement will undergo scrutiny at the Office of Management and Budget (OMB) under the auspices of the Office of Information and Regulatory Affairs (OIRA).

As of March 1, 2001, there are 33 joint DOD/VA contracts for pharmaceuticals. The estimated cost savings in fiscal year 2000 for both Departments from these contracts totaled $42.5 million ($30.8 million for VA; $11.7 million for DOD). These savings were realized from 24 contracts. To date in fiscal year 2001, an additional eight contracts have been awarded with discounts off the lowest Federal Supply Schedule price ranging from 0.19 percent to 53.75 percent. Once purchase/utilization data is available for these eight new contracts, cost savings data will be updated. Also as of March 1, 2001, 24 additional joint contracts are pending award; four joint contracts were not awarded due to lack of savings afforded the government through their award. It is difficult to project how much additional savings will be achieved due to the dynamics of the pharmaceutical market place, i.e. branded products going generic and the clinical strategies employed by both Departments in the provision of their drug benefit. It should be noted that VA alone would accrue an estimated $745.7 million in cost avoidance, i.e. cost avoided through contract prices lower than the Federal Ceiling Price, for the period 1996–2002 through national contracts for high volume/high dollar pharmaceuticals. Many of these contracts will be considered for joint DOD/VA contracting activity when individual contracts expire.

The next major phase of the MOA implementation is underway, converting Distribution and Purchasing Agreements to FSS for medical/surgical products, and identifying joint opportunities for standardization that would promote even greater savings.

CO-PAYMENTS

Question. When will the new co-payments for prescriptions and outpatient care be in place?

Answer. Medication co-payment proposed regulations were published in the Federal Register for public notice and comment on July 16, 2001. We anticipate implementing increased co-payment for pharmacy by December 1, 2001.

The outpatient co-payment regulations are still being developed. These proposed regulations would follow the regulatory process as we described for the medication co-payment regulations; however, we expect to have them in place by May 1, 2002.

Question. What are some of the issues currently being considered with respect to changing the current outpatient co-pay from $50.80?

Answer. VHA is reviewing several options regarding proposing changes to the outpatient co-payment. Some of the options include a combination of co-pays, coinsurance and an out-of-pocket maximum. Another possible option may involve establishing a tiered outpatient co-payment. This would be based upon the level of service provided, such as one co-payment rate for primary care services and another co-payment rate for specialty care services.

Question. The Inspector General recommended a co-pay increase for prescriptions to $10. Why does VA believe $7 is more appropriate?

Answer. Language contained in Public Law 101–508 states that VA cannot charge a co-payment amount that would exceed VA's cost of the medication. The VHA Office of Finance completed an extensive review of the fiscal year 2000 costs associated with the administration of outpatient prescriptions. A VHA Co-payment Work Group, assisted by a contractor, also conducted a literature review of medication co-payment industry practices. The outcome of these reviews assisted the VHA Office of Finance in determining the proposed medication co-payment amount.

EMERGENCY ROOM CARE

Question. VA estimates it will spend $138 million next year for emergency room care, the same amount estimated in fiscal year 2001. It is my understanding that costs eventually could go as high as $400 million or more annually. By what year do you anticipate this will occur?

Answer. VA cannot start paying for the costs of emergency care covered by the emergency care provisions of the Veterans Millennium Health Care and Benefits Act until final regulations are published. VA hopes that these regulations will become effective before the end of fiscal year 2001. VA will begin paying these costs as soon after that as possible including retroactive payments to May 2000. There will be a start up period during which time eligible veterans and providers must be given information concerning the emergency care benefits and the process for payment. For this reason, we estimate that fiscal year 2002 costs will be $138 million. The fiscal year 2003 budget will provide an updated estimate of the full year impact of the emergency care provisions. That estimate will reflect actual experience and projected demand. Initial estimates from the actuary have indicated that full implementation could result in costs above $400 million.

HEPATITIS C SCREENING

Question. Do you agree with GAO that it would be helpful to establish performance goals for hepatitis C screening—such as a target percentage of enrolled veterans to be screened each year? If so, why have none been established and when will such goals be put in place?

Answer. VHA agrees that establishing feasible and measurable performance measures for hepatitis C screening is helpful. Therefore, for the purpose of fiscal year 2002, performance goals for hepatitis C, screening for hepatitis C risk factor is included as follows:

Hepatitis C Screening.—Percent of veterans screened for hepatitis C risk factors: Measurement will be External Peer Review Program (EPRP) until the hepatitis C Clinical Reminder System is fully implemented and reporting data. Fiscal year 2001 EPRP data will be used as a baseline.

Hepatitis C Testing.—Percent of veterans who get tested for hepatitis C subsequent to a positive hepatitis C risk factor screening: Measurement will be EPRP until the hepatitis C Clinical Reminder System is fully implemented and reporting data. Fiscal year 2001 EPRP data will be used as a baseline.

RECOVERY AUDIT PROGRAM

Question. The fiscal year 2000 VA–HUD bill required VA to conduct a recovery audit program for its fee-basis care. What is the status of the program?

Answer. The contract has been awarded and the government and the contractor continue to work together to begin operations. Collections are expected to begin in mid-summer.

Question. How effective do you think this program will be, considering the initial lessons learned during the start-up phase?

Answer. We anticipate that the program can recover funds and provide valuable operational lessons in the way the VA pays for non-VA care.

Question. To date, what is the percentage on overpayments discovered? What is the percentage of overpayments recovered? What has VA learned from seeing the differences/similarities between those overpayments identified and those collected that will improve the level of collections and also help VA avoid these problems in the future?

Answer. The contractor began operations in February 2001. Since that time, the contractor has retrieved the necessary data from the VA medical center and the Health Administration Center to begin their screening or payments. This screening has begun and potential collections are being identified. However, to comply with various laws, the providers are given a series of appeals and notifications. We have not yet completed this entire process so there has been no collection of funds to the VA at this time. Some lessons learned are being developed but we are still in the learning phase.

This phase of the contract is not expected to begin until later this summer.

NATIONAL CEMETERY ADMINISTRATION

Question. What is VA's policy with respect to establishing additional national cemeteries? What is the current backlog of maintenance and repair needs in VA cemeteries nationwide, and what are VA's plans to eliminate the backlog?

Answer. One of the National Cemetery Administration's (NCA) strategic objectives is to ensure that the burial needs of veterans and eligible family members are met. In order to achieve this objective, NCA needs to increase access by developing additional national cemeteries in unserved areas, expand existing national cemeteries where appropriate, develop more effective use of available burial space, and encourage individual states to develop state veterans cemeteries through the State Cemetery Grants Program.

NCA is planning for the development of new national cemeteries to serve veterans in the areas of Atlanta, Georgia; Detroit, Michigan; Miami, Florida; Oklahoma City (Fort Sill), Oklahoma; Pittsburgh, Pennsylvania; and Sacramento, California. These locations were identified in a May 2000 report to Congress as the six areas most in need of a new national cemetery, based on demographic studies. When open, these cemeteries will provide a burial option to nearly two million veterans who are not currently served. The President's 2002 budget provides $48 million to build, design, or acquire land for the establishment of new national cemeteries and $25 million for the State Cemetery Grant Program. NCA anticipates that these national cemetery projects and additional state construction will increase to 88 percent the number of veterans served by a burial option in a national or state cemetery within 75 miles of their residence by the year 2006.

The Veterans Millennium Health Care and Benefits Act of 1999 directed VA to contract for an independent demographic study to identify those areas of the country where veterans will not have reasonable access to a burial option in a national or state veterans cemetery, and the number of additional cemeteries required to meet veterans' burial needs through 2020. The contractor's report is due in October 2001. The Department will evaluate its policy of establishing additional national cemeteries when the data from this report is available.

Another of NCA's strategic objectives is to ensure that national cemeteries are shrines dedicated to preserving our Nation's history, nurturing patriotism, and honoring the service and sacrifice that veterans have made. In order to achieve this objective, NCA must maintain occupied graves and developed acreage in a manner befitting national shrines. NCA has an initiative called the National Shine Commitment. Its purpose is to improve the appearance of burial grounds and historic structures of our national cemeteries by addressing deferred maintenance needs.

The fiscal year 2001 appropriation contained $5 million to initially address the needs of the National Shine Commitment. The President's 2002 Budget requested an increase in the amount of funding for this initiative by another $5 million, bringing the total requested amount in fiscal year 2002 to $10 million.

To begin the process, NCA has identified deficiencies in the appearance of headstones and markers and the condition of some gravesites at a number of its national cemeteries. Repair of these deficiencies is estimated at about $40 million. The $5 million provided in the 2001 appropriation will be utilized at Long Island National Cemetery, the Willamette National Cemetery, the Golden Gate National Cemetery, and the Fort Sam Houston National Cemetery.

When the study directed by Section 613 of the Veterans Millennium Health Care and Benefits Act is completed this fall, NCA will be provided with an assessment of required one-time repairs at each national cemetery. This data will be used in the budget and planning processes to help NCA keep its commitment to maintain our cemeteries as national shrines.

STATE HOME PROGRAM

Question. VA's budget proposes to cut in half the budget for the state home grant program, yet the backlog of need going into fiscal year 2002 will be at least $241 million. Why isn't this program a higher priority?

Answer. The State Home Program is very important in meeting VA's overall responsibilities to veterans. During this past year, significant strides have been made in improving the management of the program and preparing for future challenges.

The Veterans Millennium Health Care and Benefits Act (Public Law 106–117) requires VA to revise the State Home Construction Grant regulations. Due to delays in revision of regulations, as well as instituting some management improvements, this program has experienced a backlog. However, the revision reflects guidance that will have a positive impact on the program and our stakeholders. An interim final rule was published in the Federal Register on June 26, 2001, and the revised regulations will be in place for the fiscal year 2002 Priority List and funding cycle. The Revised Priority List of Pending State Home Construction Grant Applications for Fiscal Year 2000/2001 identified 61 projects, with a total value of $228,321,000 (federal portion). The funding request in 2002, when combined with unobligated funding from previous years' appropriations, represents a continued commitment to support VA-sponsored nursing home care through less expensive State and community programs.

Program improvements and additional staffing are helping VA aggressively address future program needs. This program is a high priority for VA and we are continuing to make improvements in the system.

COMPENSATION FOR CHILDREN OF VIETNAM VETERANS

Question. The Secretary has announced his support for providing compensation to children of Vietnam veterans with myelogenous leukemia. When will legislation be submitted to Congress?

Answer. Our announcement on April 20th of this year to create benefits for certain sick children of agent orange-exposed Vietnam veterans was based on a recent report by the National Academy of Sciences Institute of Medicine (IOM). The report concluded that there is “limited/suggestive” evidence of an association between herbicide exposure and the occurrence of acute myelogenous leukemia (AML) in the children of exposed persons. The IOM's finding relied on evidence from three studies, including a study of the offspring of Australian Vietnam veterans. However, the Australian Institute of Health and Welfare (AIHW) has recently issued corrected information indicating that the study's findings concerning AML are not statistically significant. At this time, it is unclear how the revised findings of the AIHW might have affected the IOM's conclusion's regarding AML. We believe it is necessary to seek further guidance from the IOM regarding the impact, if any, of the revised AIHW findings on its conclusion with respect to AML. We are presently discussing with the IOM the prospect of such further review. As soon as this review is completed, we will be in a better position to provide our views on this issue.

Question. What is the estimated number of recipients and the associated cost?

Answer. Initially we had estimated the costs for paying benefits to certain sick children of agent orange-exposed Vietnam veterans based on the IOM report that concluded there are “limited/suggestive” evidence of an association between herbicide exposure and the occurrence of acute myelogenous leukemia (AML) in the children of exposed persons. We believe it is necessary to seek further guidance from the IOM regarding the impact, if any, of the revised AIHW findings on its conclusion with respect to AML. We are presently discussing with the IOM the prospect of such further review. As soon as this review is completed, we will be in a better position to provide, if necessary, a cost estimate.

COMMUNITY NURSING HOMES

Question. I have asked the GAO to review VA's processes to assure nursing home care provided to veterans is adequate and safe. The GAO has briefed my staff and reported that their examination of selected VA Medical Center records indicates that required annual inspections of community nursing homes, and visits to veterans in these homes, have not regularly been conducted at all locations. Further, VA managers at headquarters do not know where and when the required oversight has been conducted. In other words, no one really knows which medical centers have been making inspections and visits and which have not. Can you provide the Committee with the number of Community Nursing Homes under contract to VA that should have been inspected in 2000 and the actual number that were inspected?

Answer. At the present time, VHA cannot provide information on the number of Community Nursing Homes (CNH) inspected in 2000. Based on survey information, VHA estimates that 2,500 nursing homes have local VA contracts. The recording of this information is inconsistent between sites. VHA is in the process of developing guidance to the field for the record and transmission of the information. VHA is also revitalizing the system that collects the CNH information and expects the revised system to be operational in the first quarter, fiscal year 2002.

For the Regional CNH contracts, all 900 nursing homes were assessed before approval.

Question. For those that did not receive the appropriate inspection, please explain what prevented VA from conducting the inspections.

Answer. VHA needs more information on local VA Medical Center (VAMC) program operations before reaching an overall conclusion on non-compliance with the CNH inspection policy. The General Accounting Office (GAO) concluded the VAMCs that chose not to follow published policy did so for a variety of reasons, mostly linked to local management priorities.

VHA's own assessment of non-compliance with VHA policy on local CNH evaluations will follow from information collected. VHA expects to complete its review in the second quarter, fiscal year 2002.

Question. Similarly, for the same period, please provide the Committee with the number of veterans that VA should have visited on a monthly basis in all its community nursing homes, and, for those that it failed to visit as required, please provide the reasons for its lack of compliance.

Answer. At the present time, VHA cannot provide data on the timeliness of monthly visits. VHA collects information on the number of VAMC staff visits to veterans in CNHs. Another data system tracks days of care by veteran. Currently, VHA is working to integrate these two systems to generate a report on monthly monitoring compliance. Analysis of this new report will be completed in the fourth quarter, fiscal year 2002.

The assessment of non-compliance with VHA policy on CNH monthly monitoring will follow the resolution of data system integration. VHA expects to complete its review in fiscal year 2002.

Question. I understand that VA is proposing a new policy regarding its oversight of Community Nursing Homes, and that under the new policy VA will no longer inspect the homes annually but will rather use the results of HCFA-sponsored inspections and other data to determine the homes' adequacy for veterans. Can you provide an estimate of the possible savings to VA if it discontinues the requirement for inspections of these homes?

Answer. VHA does not envision any savings by limiting on-site CNH inspections. The CNH teams will assume the responsibilities of reviewing the Health Care Financing Administration's (HCFA) expansive nursing home reports, consulting with State Survey Agencies and implementing the improved monthly monitoring and re-hospitalization review protocols.

Question. There appears to have been no attempt by VA to ensure that medical centers were using consistent methods of overseeing community nursing homes. As a result, VA's current nursing home program is highly decentralized, with each medical center left to its own devices to determine how best to conduct an effective nursing home inspection program. In the future, what training or guidance does VA plan to provide (both initially and on an ongoing basis) to medical centers for conducting inspections, evaluating HCFA data, visiting veterans, or using other oversight tools?

Answer. VHA is planning a training effort for CNH team members in fiscal year 2002. The training will include guidelines for: monitoring care in CNHs and HCFA's databases; appropriate interpretation of State Survey Agencies' findings; organizing re-hospitalization reviews; assessing patient and family satisfaction; and improving relationships with State Survey Agencies and HCFA staffs. VHA began training on HCFA databases in fiscal year 2001.

Question. Regardless of the policies and the potential for their revision, what steps is VA planning to take to (1) keep informed about medical centers' oversight activities, and (2) ensure that all Medical Centers follow oversight policies?

Answer. VHA is introducing a new collection process to determine the timeliness of CNH assessments, prior to contract execution or renewal. VHA will also integrate existing data systems to determine the timeliness of monthly monitoring.

As a result of the two initiatives described earlier, VHA will identify out-of-compliance situations and will work with the VISNs and VAMCs to develop a plan of correction.

Question. I understand that VA's community nursing home program is essentially composed of two parts: those community nursing homes that have contracted with local VA medical centers in the field, and a headquarters-based regional community nursing home program that centrally acquires the services of regional and national nursing home chains at national rates. The Committee is also concerned that annual inspections are not required of these multi-state homes and that VA performs little oversight of these homes once they are under contract. Why are these homes not subject to the same inspection and review policies as those under local contract with medical centers?

Answer. The inspection process for regional CNH and local CNH contracts differ more in style than in substance. VHA believed that initial decisions on CNH quality could be made solely on a review of State Survey Agencies'(SSA) results. Both regional and local contracts processes use SSA reports as their base. The monthly monitoring standard and re-hospitalization reviews apply to both regional and local CNHs.

Regional CNH contracts and its predecessor, Multi-State Contracts (MSC), were designed without annual VA on-site inspections. VHA reasoned that this streamlined process would improve veterans' access to CNHs without adding to VAMC administrative cost and would be attractive to the nursing home industry. The regional CNH design assumed the VAMCs' on-site inspections were of dubious use, based on field reports. A 1997 Health Services Research & Development Service review of the first year of MSC operations found no overall differences in quality between local contracts and MSCs. On a number of variables, MSC homes had better quality scores.

Regional CNH rates are not national but state-specific, with different prices for urban and rural areas in each state.

Question. How will VA ensure that centrally contracted nursing homes are reviewed in the future with appropriate frequency?

Answer. At the present time, 60 percent of all regional CNH contracts are reviewed for quality on an annual basis. Recently, VHA has taken steps to ensure that all regional CNHs are evaluated each year.

Question. What oversight has VA conducted in the last year to assure that each centrally contracted community nursing home meets the minimum quality standards required of all its community nursing homes?

Answer. Seventy-two percent of all MSCs were reviewed for quality in the year ending November 30, 2000. In addition to this effort, nursing home companies removed 4 percent of their homes for quality reasons prior to a formal decision by VHA. VHA denied approval to 29 percent of the homes that applied for MSC status.

STATE VETERANS HOMES

Question. It is my understanding that nearly half of the State Veterans Homes are inspected by HCFA through state inspection agencies. If VA plans to rely more heavily on the results of HCFA inspections of Community Nursing Homes, could VA discontinue its own inspections of state veterans' homes that have had HCFA reviews, as long as VA has evidence that the reviews were thorough?

Answer. By law, VA is responsible for the oversight of State Veterans Homes and is required to establish VA standards for annual survey review. As a grant-in-aid program to States, the State Veterans Home Program requires consistent national standards across all homes. The State Veterans Home grant requirements are broader than the HCFA requirements. In addition, VA conducts recognition surveys at the time the home becomes operational and admits the first patients. Surveyors are required to have knowledge of the laws and regulations related to the grant program. Thus, VA would not discontinue the recognition and annual survey process for State Veterans Homes.

Question. What are your future plans for VA inspections of State Nursing Homes and how do they differ from those envisioned for VA's Community Nursing Homes?

Answer. VA provides training for VA State Nursing Home inspection team members. Web-based assessments will be implemented to assure ongoing competency in the inspection process. In June 2001, inspection results were entered into a Web-based format and transmitted to headquarters electronically. The data repository is an Access database that will be used to compare findings among state nursing homes, including over time. VA will continue to dialogue with VA staff and state home constituents about evolving quality issues.

The role of VA oversight in the two nursing home programs is quite different. In State Homes, VA is the lead agency in assuring that quality care is provided and that standards are met. This is a major regulatory function. Most State Veterans Homes are not certified under Medicare/Medicaid and are not inspected by SSA. This factor highlights the significance of VA inspections. In the Community Nursing Home (CNH) program, VA acts as an informed purchaser of care. It relies heavily on SSA reports, in addition to its own monitoring, to determine whether VA should initiate or continue a contract with the CNH. VA performs no regulatory function in the CNH program, although that authority still resides with the Secretary.

QUESTIONS SUBMITTED BY SENATOR LARRY E. CRAIG

VHA STAFF SHORTAGES

Question. In recent years there have been staff reductions which have compromised the Veterans Health Administration's ability to provide much needed services. What are you doing to deal with staff shortages to ensure the highest quality of health care for our Nation's veterans?

Answer. The Veterans Health Administration (VHA) has achieved remarkable efficiencies in the restructuring of its workforce from an inpatient-based hospital system to an outpatient-based system of clinics. During the last five years, VHA expanded access to 500,000 additional veterans for health care, improved quality as assessed by performance measurement and patient satisfaction, and reduced the cost of care per veteran served by more than 20 percent. VA is now seen as a leader in many health care areas including patient safety, computerized patient records, telehealth, surgical quality assessment, rehabilitation, mental health care, and clinical and health services research.

During this same period, VHA's total full-time employment has declined. VHA was able to manage this decline by shifting resources through improvements in health care service delivery and efficiencies gained through program and organizational restructuring, technology improvements, and business process reengineering.

When VHA encounters difficulties at specific locations recruiting for a particular clinical discipline or specialty, there are a number of options available to ensure the quality of care. Among the options VHA can use are aggressive recruitment and retention efforts, including bonuses; use of temporary employment agencies, contract personnel, and fee basis; and redeployment of current staff on a temporary basis.

MILITARY RETIREES BENEFITS

Question. How are you planning on developing the relationship between the VA and DOD in order to best implement the National Defense Authorization Act of Fiscal Year 2001 and provide the necessary benefits for military retirees over age 64 who have Medicare coverage?

Answer. As you know, Public Law 106–398 expands TRICARE benefits to all military retirees, spouses and survivors ages 65 and older who are eligible for Medicare Part A, and enrolled in Medicare Part B. This new benefit for Medicare-eligible military beneficiaries, TRICARE for Life, is scheduled to take effect on October 1, 2001.

The DOD implementation plan for TRICARE for Life is particularly important since VA medical centers do not currently qualify for Medicare payments. VHA has asked DOD for clarification of VA's role in TRICARE for Life. Additionally, the VA/DOD Executive Council has established new work groups specifically charged with addressing various aspects of VA's role in relation to TRICARE. These work groups, which are required to make monthly reports to the Executive Council, will examine collaboration opportunities for geriatric care, assess the impact of TRICARE on current sharing agreements between VA and DOD, recommend coordinated delivery of VA and TRICARE benefits, and suggest improved reimbursement policies. It is my hope that these actions, combined with the commitment DOD has made to include VA in future TRICARE negotiations, will ensure that VA can provide necessary benefits for military retirees over age 64.

COMMUNITY BASED OUTPATIENT CLINICS

Question. Do you plan to provide more Community Based Outpatient Clinics (CBOC) and expand services in the existing facilities?

Answer. In keeping with its commitment to improve access to care, VHA will continue to plan additional CBOCs. Planning for CBOC services is Network-based, taking into account local market areas, demographics, resources and veteran preferences. Local health care systems continually evaluate the services available at their CBOCs and expand or modify services, based on veteran needs, utilization and resources, among other factors. In an effort to improve the consistency in how VA plans and operates CBOCs, VHA is developing new standards and criteria for CBOC planning, operations and service delivery.

TRAVEL RATES

Question. Are you considering the rising gas prices and will you adjust the travel reimbursement rates?

Answer. Each year, the Department conducts an analysis of the actual cost of travel to beneficiaries, taking into consideration a number of factors, including gasoline and oil costs. This issue is currently under review and we anticipate a decision by December 2001.

INFORMATION TECHNOLOGY

Question. In general terms, how are you planning on reducing the bureaucracy and incorporating the latest information technology in order to eliminate problems and reduce administrative costs?

Answer. A panel of experts in the area of systems architecture has been meeting with key VA decision makers to develop the VA Integrated Enterprise Architecture. The VHA Chief Information Officer is an active participant in these meetings and is dedicated to the success of these efforts.

Following this direction, VHA has defined an "ideal" Health and Health Information approach. Under this methodology, all new IT projects will be developed by working with VHA health care providers to examine the current work environment and identify areas where IT can enhance the current business practices. Additionally, VHA stakeholders provide direct input and help VHA to identify and prioritize potential new solutions.

In addition, VA has implemented a stringent IT Capital Investment Process. Through this process, VA IT decision makers assess and prioritize current and proposed IT projects that have high investment costs. All major VHA IT acquisitions meeting the capital investment threshold ($10 million acquisition costs or $30 million life-cycle cost) or projects with high visibility must go though this process to ensure that VA selects those IT projects that best support our mission.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

Mr. Secretary, I appreciate the many challenges that you are faced with in heading the Veterans Administration. Considering your significant experience, I am confident that you will successfully meet those challenges.

Fully implementing a one-VA, improving claims processing, and ensuring that all veterans have access to quality health care are among your agency's priorities. And even with all of that, and much more on your plate, we, in Congress continue to pass legislation expanding your responsibilities.

Veterans are an educated and active constituency who understand your mandate and realize that improvements do not happen overnight. For example, an article in the veterans' publication, "The Stars & Stripes" noted the VA's challenging mission in implementing the Veterans Claims Assistance Act. The author, retired Colonel John Howell, said that there is always an initial delay whenever a law is implemented, and that everyone should do their part to help during the transition.

As you know, I introduced a $1.4 billion bill to fully fund the Department of Defense's health care plan for military retirees, known as TRICARE for Life. We all recognize that this program will require a transition phase, and that Defense and the VA are still working out a Memorandum of Understanding on how implementation between the two agencies will occur.

I wanted to follow up on our earlier discussions about that program and other issues facing veterans in New Mexico and the rest of the nation.

ALBUQUERQUE VAMC

Question. The VA Medical Facility in Albuquerque is a joint venture between the VA and the Department of Defense. This unique relationship has been widely regarded as a success to be emulated. Considering TRICARE for Life, what assurances can you give that successful joint ventures, like the one in Albuquerque, are allowed to continue functioning?

Answer. As you know, the new benefit for Medicare-eligible military beneficiaries, TRICARE for Life, is scheduled to take effect on October 1, 2001. Determining the impact of TRICARE for Life on VA-DOD joint ventures, such as Albuquerque, as well as on VA facilities as a whole is a priority for the Department of Veterans Affairs. The DOD implementation plan for TRICARE for Life is particularly important since VA medical centers do not currently qualify for Medicare payments. The Veterans Health Administration (VHA) has asked DOD for clarification of VA's role in TRICARE for Life. Additionally, the VA/DOD Executive Council has established new work groups specifically charged with addressing various aspects of VA's role in relation to TRICARE. These work groups, which are required to make monthly reports to the Executive Council, will examine collaboration opportunities for geriatric care, assess the impact of TRICARE on current sharing agreements between VA and DOD, recommend coordinated delivery of VA and TRICARE benefits, and suggest improved reimbursement policies. It is my hope that these actions, combined with the commitment DOD has made to include VA in future TRICARE negotiations, will ensure that successful joint ventures such as Albuquerque will continue to thrive and expand.

Question. We are experiencing a national shortage of health care professionals, particularly with respect to nurses and doctors. This shortage has forced many VA health care facilities to close beds. Due to insufficient staff, the Albuquerque facility has had to cut about fifty of its 211 beds. What steps are you taking, in the long and short-term, to address this shortage of health care professionals to make sure that our nation's veterans get the health care they deserve?

Answer. New Mexico, like many other regions of the country, faces a shortage of registered nurses. In Albuquerque, the shortage is impacting both VA and private facilities. Over the past twelve months the medical center has been unable to operate a full complement of beds due to the nursing shortage. Currently about 60 beds are not being utilized because of the lack of nurses.

The Albuquerque facility is dealing with the shortage by delaying admissions and deferring some elective surgery, and obtaining care in the community.

Nurse recruitment continues to be a problem in Albuquerque, despite recent pay increases of 16.8 percent. The efforts at Albuquerque include a variety of bonuses, including sign-on, relocation, and headhunter bonuses.

VHA is taking steps on a national basis to address shortages in health care occupations on both a short-term and long-term basis. Short-term steps include salary increases, bonuses, aggressive recruitment, and focused efforts to retain current employees. Long-term, VHA is "growing our own" through education programs like the National Nursing Education Initiative and the VA Learning Opportunities Residency Program (VALOR). The National Nursing Education Initiative provides scholarships to current VA employees to obtain baccalaureate and higher degrees in nursing. The VALOR program provides training and work experience to nursing students in return for financial support and special employment consideration upon graduation. VA is also conducting an all-employee survey to learn employees' issues. The results of this survey will help VHA identify and address areas of concern to improve the work environment and make VHA an "Employer of Choice."

Question. New Mexico is a large rural state, which means that distributing services and benefits to everyone can be especially challenging. The VA's opening of health care clinics is remedying veterans' access to health care to some degree. What is your plan to ensure that all of our nation's veterans have access to quality health care and other benefits that they earned by serving our country?

Answer. As noted in the report "Geographic Access to VHA Services in fiscal year 1999: A National Perspective" 85 percent of the fiscal year 1999 patients were within 30 miles of the closest VHA service site. A recent analysis finds that access to the closest VHA service site has improved over the past year. Looking at the fiscal year 2000 patients, 69.9 percent of our patients are within 15 miles and 87.4 percent within 30 miles with a national overall average distance of 13.4 miles compared to 14.1 miles in fiscal year 1999.

This decrease in average distance and increase in access is partially attributable to the increased number of service sites that have become operational since February 1995. Since 1995, VHA has approved 471 new CBOCs (includes multiple-site contracts); 82 percent of these CBOCs are activated and 18 percent are in the development phase.

VHA will continue to operate existing VA medical centers and CBOCs, and look for opportunities to partner with other government agencies or local community agencies to expand access to high-quality care. Every year, in the development of their strategic and financial plans, all VHA Networks assess veteran preferences, demographics, and market areas, and develop plans for service expansion and/or enhancements. In addition, VA continues to work with DOD on their TRICARE for Life initiative as well as other sharing opportunities.

QUESTIONS SUBMITTED BY SENATOR MIKE DEWINE

CARES

Question. The Veterans Health Administration (VHA) is undergoing a significant process of reviewing and realigning VA capital assets to enhance the overall health care services provided to our nation's veterans. It is my understanding that the Ohio network, VISN 10, will be incorporated in Phase II of the CARES initiative. During this assessment, I anticipate the absence of inpatient care for veterans in the Central Ohio area will be identified. Although Columbus is the largest city in Ohio, and the 15th largest U.S. city, veterans and their families must travel at least an hour and a half to receive inpatient treatment.

While I recognize the VA has been shifting its attention from inpatient to outpatient care, I would like to know what consideration has been given to contracting out for private hospital services in the Columbus area. For example, a partnership between the VA and a local facility such as Doctors Hospital could be beneficial for the entire community. Funding resources for such a partnership could be tied in with ongoing CARES efforts.

Answer. The VA Healthcare System of Ohio (VISN 10) anticipates participating in the second round of CARES studies to be conducted within VA. VISN 10 has undertaken a number of activities in preparation for the CARES study, including an ongoing analysis and internal assessment of the challenges within the Central Ohio area. There are numerous complex inter-related issues within this market. The CARES process will provide for a comprehensive assessment of needs and options, including a review of options for contracting for inpatient medical services. It is anticipated this study will be completed within the next six months.

The Central Ohio "market" includes both the Columbus Independent Outpatient Clinic (IOC) and the Chillicothe VA Medical Center (VAMC), which is located approximately 50 miles south of Columbus. VAMC Chillicothe provides basic inpatient support to the Columbus IOC. In addition, VAMC Dayton provides a full array of tertiary inpatient support to both of the Central Ohio VA medical facilities. The CARES process will provide for a complete assessment of the complex relationship among these three facilities. This will include the impact of decreasing the referral workload from the immediate Columbus area to VAMCs Chillicothe and Dayton. Workload volume is critical within health care to ensure appropriate clinical competencies and to support a variety of capital-intensive specialty medical services. A change in any one market area has the potential to dramatically impact the viability of specific programs and services at the other two VA medical facilities. Until the CARES study is completed, VISN 10 will continue to undertake appropriate actions to ensure the full continuum of care is provided in the Central Ohio area.

Emergent inpatient care for veterans is provided within the immediate Columbus area via a longstanding contractual arrangement with the Ohio State University (OSU). The OSU East medical facility is located only a short distance from the Columbus IOC. This successful partnership has allowed for the expansion of complex specialty medical services at the Columbus IOC, and has served to reduce the amount of travel required to provide the full continuum of care to veterans residing in Central Ohio. In addition, VA's Fee Basis Program provides a high degree of flexibility in terms of procuring medical services from the private sector within the Central Ohio area. This program is utilized to provide a wide variety of specialty services to veterans residing within and outside the immediate Columbus area.

A project has been developed to expand the capacity of the Columbus IOC by approximately 6,000 square feet through converting existing warehouse space for clinical functions. Construction will begin within the next six months. CBOCs have been opened in Grove City and Zanesville. VISN 10 plans to seek approval to open additional CBOC sites in Marion and Newark. The CARES process has not delayed or impeded efforts to improve access to services in the immediate Columbus area.

VERA

Question. It is my understanding that the Veterans Millennium Health Care and Benefits Act has placed a sizeable financial burden on the VISN 10 budget. For example, the Ohio network is expecting to spend approximately $5 million to pay for emergency room visits that are now mandated as a covered service. While I fully support the important health care advancements which took effect last year, it is critical that these additional services do not come at the expense of existing VA programs. What consideration has been given to restoring current VISN operating expenses? I hope appropriate attention has been given to ensure adequate funding of all VHA initiatives.

Answer. Since 1997, VHA has used the Veterans Equitable Resource Allocation (VERA) model, a capitation-based resource allocation system, to equitably distribute medical care resources to the 22 Veterans Integrated Service Networks. Budgeted and appropriated funding for emergency care claims payments is included in the VERA allocation. VISNs expect to have sufficient resources to continue to deliver high-quality and cost-effective health care to all veterans who enroll in the VA health care system and receive treatment. They will operate within their appropriated medical care resources and will continue to enhance those resources through effective collection of alternative revenues. All VHA initiatives should be funded with these resources.

In the event that networks cannot operate within their workload-based allocated budget and maintain their current level of patient care, VA will continue to maintain a National Reserve Fund (NRF). VA has a process for networks to request additional funding from the NRF. If a VISN requires additional supplemental funding during the fiscal year, a request is submitted to Headquarters, and it will be reviewed using that process.

QUESTIONS SUBMITTED BY SENATOR BARBARA A. MIKULSKI

FORT HOWARD

Question. Are you familiar with the Mission Change and Enhanced Use project underway at Fort Howard?

Answer. In June 2000, the former VA Secretary approved the plans to revise the mission at the Fort Howard Medical Center. This plan includes:

—Relocation of Fort Howard inpatient beds and administrative functions to other sites in the VA Maryland Health Care System (VAMHCS).

—A proposed continuum of care retirement community perhaps to be accomplished through the use of enhanced-use authority if that is determined to be the best means of achieving the change.

—A primary care outpatient clinic to remain on the Fort Howard campus.

Question. Will the new Administration continue to move forward with this project?

Answer. The Administration supports this project. The Fort Howard project has the potential to become a model for implementation at other VA sites.

Question. What changes can veterans, their families, and VA employees expect in the coming months?

Answer. Changes in the upcoming months are:

Date	Description
December 2001/January 2002	Move 12-bed Ventilator/Respiratory unit to Perry Point
May 2002	Relocate administrative functions to Perry Point
September 2002	Relocate remaining inpatient functions to the Loch Raven campus
September 2002	Relocate the current Fort Howard primary care outpatient clinic to building 249 (located behind the existing hospital building and adjacent to the main parking lot)
January 2003	Contract award for enhanced-use project, if approved as best means of achieving Mission Change.

Question. Is the new Administration committed to maintaining outpatient services at the Fort Howard campus throughout the entire transition?

Answer. Yes. The current outpatient clinic will remain intact with no break in operations on the Fort Howard campus. As noted in answer to question number 68, a relocation of the primary outpatient clinic will be made to more suitable accommodations. During the process of redeveloping the campus, a new primary care clinic building will be built perhaps by utilizing VA's enhanced-use authority.

Question. Will the VA stick to the current timetable that calls for the mission change to be complete by September 2002, and for the enhanced use to be complete by January 2003?

Answer. The VAMHCS is doing everything possible to assure the timelines presented to date are maintained. As has been previously presented, all of the mission change relocations are dependent on completion of various construction projects. The mission change is scheduled for completion by September 2002. A contract award for an enhanced-use project, if approved as the best means of achieving the mission change, is scheduled in January 2003.

Question. Will the VA be ready to bid the enhanced use portion of the project in January 2002 as planned?

Answer. The schedule for considering and developing an enhanced-use lease for this project is as follows:

Date	Description
January 2002	VA Medical Center develops a Business Plan. Business/Concept Plan is the first step in the formal process leading to execution of an Enhanced-Use project.
February 2002 thru May 2002	Plan initial consideration and possible approval
	Public Hearing
	Notification to Congress of the Department's designation of the site for possible Enhanced-Use lease
June 2002	Solicitation of bids
July 2002 thru December 2002	Evaluation
	VA Capital Investment Board review and recommendation
	Secretary's review and determination
	OMB review
	Congressional notification of the Department's intent to execute the contract, if approved
January 2003	Award of Enhanced-Use lease, if approved

Question. If the State does not authorize a new State Veterans Home at Fort Howard, what impact will it have on the Enhanced Use plan?

Answer. If the State of Maryland chooses not to authorize a new State Veterans Home, the impact would be minimal to a possible Enhanced-Use project. Without a State Veterans Home, it is anticipated that substantial nursing home beds will be included with the development of the Fort Howard campus. The greater loss of not having a State Veterans Home at the Fort Howard campus is to the local veterans (40 percent of Maryland State veterans reside in the surrounding Baltimore area).

Question. Could the Fort Howard project be a national model for changing the way we deliver care to our veterans so that we can better meet their needs as they age?

Answer. Presently, the Fort Howard project is too early in its development to ascertain whether a national model is in the offing. The concept has promise and potential. VA is encouraged by the interest of the State of Maryland.

LONG-TERM CARE

Question. What is the status of the long-term care regulations?

Answer. The regulation that adds non-institutional extended care services to the medical benefits package is currently under review in the Office of Management and Budget. This regulation adds non-institutional geriatric evaluation, non-institutional respite care, and adult day health care to the benefits package.

Question. What is the timetable for implementation of these regulations?

Answer. VA plans to publish the proposed long-term care benefit and co-payment regulation on October 4, 2001. Following public comment and possible changes to the regulation, based on the comments, VA anticipates a March 2002 implementation date.

Question. How much funding will VA spend to implement long-term care in 2002?

Answer. VA estimates it will spend $3.4 billion in 2002 to implement long-term care.

Question. CBO tells us that long-term care will cost at least $400 million per year. Why does the budget request show a $79 million reduction for long-term care?

Answer. The budget does not show a $79 million reduction for long-term care. Due to delays in implementing the Veterans Millennium Health Care and Benefits Act, the 2002 President's Budget shows a $228 million increase in 2002 and a base adjustment of (−$334 million) in 2001 from the 2001 budget estimate versus 2001 current estimate for long-term care.

$228 MILLION INCREASE IN 2002

[In millions]

	Fiscal Year 2002 President's Budget		
	2001 Estimate	2002 Estimate	Increase
Obligations	$3,134	$3,362	+$228

BASE ADJUSTMENT OF (−$334 MILLION) FROM FISCAL YEAR 2001 PRESIDENT'S BUDGET, 2001 BUDGET ESTIMATE TO FISCAL YEAR 2002 PRESIDENT'S BUDGET, AND 2001 CURRENT ESTIMATE

[In millions]

	Fiscal Year 2001 President's Budget 2001 Budget Estimate	Fiscal Year 2002 President's Budget 2001 Current Estimate	Decrease
Obligations [1]	$3,123	[2] $2,789	($334)

[1] Excludes Subacute Care.
[2] Adjusted for correction in accounting for Geriatric Evaluation and Management (GEM) programs.

CLEVELAND PLAIN DEALER ARTICLES

Question. Are the incidents described in these articles largely anecdotal? Or are they symptoms of a larger problem? What is VA doing to respond to the issues raised by these articles?

Answer. The articles written by Ms. Mazzolini were factual to some extent but not representative of all sides of the issue and were taken out of context. Despite the bias of the articles, VHA has taken the allegations seriously and had already dealt with much of the substance prior to any of the incidents being chronicled in the press. In those instances where care was deemed to be substandard, action was taken including separation and reports filed to the State Licensing Board and/or National Practitioner Data Bank. Tort Claims were filed in three of the six cases. Cases were peer reviewed at the facility level with corrective actions taken where quality of care issues were raised. Processes were improved, such as better coordination among the inpatient ward staff, gastroenterology service, and the testing laboratory; notification of abnormal x-ray findings; and scheduling staff surgeon to be in-house during working hours when surgery is taking place.

Many of the patient incidents pre-dated our revised national patient safety policy which emphasizes a systems approach focused on prevention, not punishment, as the most effective way to improve care for our patients. Incorporation of a widely understood methodology for dealing with these safety-related issues allows for a clear and more rapid communication of information within the organization.

Several of the incidents raised by Ms. Mazzolini involved the supervision of residents. VHA policies and procedural requirements for the supervision of residents are established in VHA Handbook 1400.1, Resident Supervision (http://vaww.va.gov/publ/direc/health/handbook/1400-1hk.html). The Handbook describes responsibilities for monitoring resident supervision at VA facilities, and is being updated to clarify policy in areas such as consultation and supervision on weekends and holidays. Options for the collection and analysis of resident supervision data are under development. The developed tools will be applied across medicine, surgery and psychiatry bed services, as well as ambulatory care settings in all affiliated centers. VHA is currently designing tools that will be used to assess the adequacy of resident supervision. We also plan to develop an external monitoring process devised to assess compliance with VHA policies on resident supervision in areas involving diverse aspects of inpatient and outpatient care.

Question. Do VA doctors routinely supervise surgery over the phone?

Answer. No.

Question. What is the VA's resident supervision policy?

Answer. Resident supervision is the process through which clinical care is provided to patients in this educational context. Supervision refers to the dual responsibility that a staff practitioner has to enhance the knowledge of the resident and to ensure the quality of care delivered to each patient by any resident.

Policies governing resident supervision in VA were recently reviewed. "Resident Supervision, VHA Handbook" published in March 2000 clearly outlines the requirements for attending supervision of residents in all VA facilities. The handbook is currently being updated to clarify policy in areas such as supervision on weekends and holidays and consultation. The overriding consideration must be "safe and effective care of the patient that is the personal responsibility of the staff practitioner." Supervision may be provided in a variety of ways. The specific level of supervision is generally left to the discretion of the staff practitioner and requires judgment of the experience and competence of the resident and the complexity of the particular medical situation. The overwhelming consideration is the safe and effective care of the patient.

Question. What is the VA's policy for hiring foreign trained doctors?

Answer. A VHA facility may hire a foreign trained non-citizen physician in the absence of qualified citizens. Appointments of non-citizen physicians are temporary in nature and each must meet the same qualifications standard which is applied to all VHA physicians. Additionally, some non-citizen physicians hired by VHA are admitted to the United States for residency training in accordance with the requirements of the Exchange Visitor Program administered by the Department of State. Therefore, while educated outside of the United States, the Exchange Visitor physicians are trained in the United States, many in the VHA Healthcare System. Citizens, who complete their medical education and/or training in a foreign country, may be hired on a permanent appointment, provided they meet the qualifications requirements.

COLLECTIONS

Question. How confident is VA that it will actually collect $896 million in 2002?

Answer. VA is confident that it will collect the $896 million in fiscal year 2002. The $896 million is composed of:

—$775 million for first- and third-party collections ($207 million first-party and $568 million third-party).

—$120 million for pharmacy co-payments.

—$1 million for enhanced use-lease.

The Veterans Millennium Health Care and Benefits Act authorized the Secretary to increase the $2 medication co-payment. In addition, VA plans to collect $24 million in first party-collections for long-term care.

Question. Billing third parties is a new mission for VA. How is the process going?

Answer. Actually, VA has been billing third parties since 1986, though not on the same basis or with the same sophistication as occurs today. Public Law 99–272 (April 7, 1986) authorized VA to implement third party billings. Major improvements have been implemented throughout the years in the third-party billing process and collections have steadily increased since 1986. The first full year of collections was accomplished in fiscal year 1987 and totaled $23 million. In September 1999, we implemented a new billing rate structure called reasonable charges which resulted in fiscal year 2000 Medical Care Cost Fund (MCCF) third-party collections of $394 million. For fiscal year 2001, we are projecting over $472 million in third-party collections. As facilities improve their documentation, coding, and billing processes, we expect a continuing increase in collections.

Question. What efforts is the VA taking to increase collections from third parties?

Answer.

Compliance.—One objective of this initiative is to improve coding accuracy for billing and medical record purposes and to conform with insurance industry standards enabling VA to maximize payments on claims submitted to third-party carriers.

Reasonable Charges.—The implementation of reasonable charges in September 1999 allowed VA to bill health care insurance companies using rates that approximate community charges. This has increased the dollar value of VA bills and should therefore increase revenue. VA is continuing to adjust this new billing structure by adding charges for new Current Procedural Terminology (CPT) codes and updating all charges to Year 2001 levels.

Medicare Remittance Advice (MRA).—This initiative will enable VA to receive a Medicare equivalent explanation of benefits document that will be used by Medicare supplemental payers to determine their appropriate payment to VA.

Electronic Data Interchange (EDI).—EDI will enable VA nationally to transmit data through a clearinghouse to third-party payers. This should result in more timely payments by ensuring that bills are transmitted electronically to the payer. This initiative deals with cost savings as opposed to increased collections.

Treasury Offset Program (TOP).—VA is utilizing TOP to recover first-party debts that are over $25. The TOP has a number of different options for withholding money owed to an individual by the Government if the individual has any outstanding debts owed to the Government. In addition, the TOP will send two additional notices to an individual prior to offset of the individual's tax refunds or social security payments.

Lock Box.—This initiative nationally consolidates the collection of first-party medical payments to a Treasury-designated lockbox provider and automates the posting of payments to the patients' accounts at individual medical centers-with cost savings to VA.

Outsourcing.—The VA is considering a number of alternative business concepts to enhance its ability to collect health care revenue. Outsourcing various revenue collection activities is one alternative that is being evaluated by several pilot tests currently underway. In addition, VISN 5 is designing a new pilot test at selected medical centers within the VISN that will focus on specific billing (e.g., bill "scrubbing," code verification, and claim submission) and collection (e.g., claims follow-up, explanation of benefits (EOB) analysis, and decreasing adjustments) activities. Other billing functions will remain in-house; e.g., verifying non-service connected treatment, validating coding and medical documentation, and assembling billing information from various components of the VA information system, VistA. The decision to keep these functions in-house was based on issues relating to VA-to-vendor IT interfacing, and assuring system security, data integrity and confidentiality.

Revenue Office Improvement Plan.—The CFO Revenue Office has recently completed a study of the Revenue Program as requested by the Secretary of Veterans Affairs. The plan outlines recommended actions required to improve the core business process areas: patient intake, documentation, coding, billing, and accounts receivable. Twenty-four major recommendations have been made to improve the revenue program. Additionally, this plans proposes eight primary performance measures to track the improvement of the Revenue Program. The plan also identifies a number of critical improvement factors (i.e., leadership commitment, accountability and standardization, training and education, standardized policies, and information systems that support the revenue cycle) to areas to determine which areas could be immediately centralized and/or consolidated within VA or outside VA (e.g., contracted out).

Additionally, VA is reviewing the entire revenue process to identify areas that need improvement. Subsequent to the study, we will develop an action plan to effect the needed improvements. We expect to complete that study in late summer.

Question. Why has the VA chosen to keep billing in-house, rather than contracting it out to the private sector, which has more experience in billing issues?

Answer. VA is considering a number of alternative business concepts to enhance its ability to collect health care revenue. Outsourcing various revenue collection activities is one alternative being evaluated by several pilot tests currently underway. In addition, VISN 5 is designing a new pilot test at selected medical centers within the VISN that will focus on specific billing (e.g., bill "scrubbing," code verification, and claim submission) and collection (e.g., claims follow-up, explanation of benefits (EOB) analysis, and decreasing adjustments) activities. Other billing functions will remain in-house; e.g., verifying non-service-connected treatment, validating coding and medical documentation, and assembling billing information from various components of VA information system, VistA. The decision to keep these functions in-house was based on issues relating to VA-to-vendor IT interfacing, and assuring system security, data integrity and confidentiality.

Question. Has VA been able to develop a list of "lessons learned" to maximize collections?

Answer. VA did a review in April 1999 of existing process procedures and organizational configurations at various VA medical centers with successful collections programs. The purpose of the review was to determine if there was any relationship of organizational alignment relative to the overall success of billing and collections. In an attempt to identify the key factors that may influence the process, VA turned to the Diagnostic Measures, based upon industry standards that have been successfully utilized in identifying areas with opportunity for improvement as well as "best practices" or "lessons learned."

Upon completion of the review, we could not find a common link to explain the success of individual MCCF programs. What worked at some facilities did not or was not utilized at other facilities. Most of the successful programs maximize the use of software, maintain a high level of compliance, provide formalized training and, at some facilities, benefit from strong leadership. Some facilities also benefit from strong TRIAD (director, associate director, and chief of staff) support and physician buy-in into the MCCF program.

It should be noted that almost all of the facilities reviewed were located in rural or small metropolitan areas. It also appeared that most medical center staff had been with the MCCF program for a number of years. When interviewed, the MCCF program coordinators at these sites stated that the employees were very much interested in the success of the program. It should also be noted that at a number of these facilities, the staff was cross-trained for other jobs within MCCF.

The results of this review have been shared with all MCCF program coordinators. In June 2001, we will distribute new and improved Diagnostic Measures. The new measures will provide reports that give a more comprehensive snapshot of individual and VISN-level facility performances.

Question. Does the VA know to what extent it is owed by deadbeat third parties? Is VA able to estimate how much?

Answer. Currently, third-party active claims over 60 days old secondary to Medicare, have a total billed amount of $394.6 million, with an estimated collectable of approximately $78.9 million. Those active claims not secondary to Medicare over 60 days old have a total billed amount of $113.4 million with an estimated collectable of $68 million.

The recording of the amount to bill the health insurance company is based on the dollar value of the medical treatment that is provided to an individual. In most instances, that amount is greater than the expected payment to be received for the treatment rendered. An example is: the VA will bill a Medicare supplemental plan for the full value for the service provided even though the plan is a secondary payer to Medicare, as the VA does not have authority to bill Medicare. Therefore, the Medicare supplement plan will pay only for the Medicare deductible and a percentage of the professional fees assessed for the treatment provided. This inflates the value of our outstanding receivables because approximately 70 percent of VA's billings are secondary to Medicare.

The problem of our overstated receivables for Medicare supplemental claims will be remedied when the Medicare Remittance Advice software development project is completed and released in the winter of 2002. This software will record the receivable to the secondary payer at the anticipated value for the service provided.

Question. How did the VA arrive at the prescription co-pay increase from $2 to $7?

Answer. Language contained in Public Law 101–508 states that VA cannot charge a co-payment amount that would exceed VA's cost of the medication. VA completed an extensive review of the fiscal year 2000 costs associated with the administration of outpatient prescriptions. A VHA Co-payment Work Group, assisted by a contractor, conducted a literature review of medication co-payment industry practices. The outcome of these reviews assisted the VHA Office of Finance in determining the proposed medication co-payment amount. This proposal is now undergoing internal VHA review prior to submission to the Secretary for review and approval.

Question. Does the VA plan further increases or adjustments to the co-pay?

Answer. Under the proposal now being considered by VA, the co-payment amount will be reviewed on an annual basis, and recommendations for increases or adjustments will be made as appropriate.

Question. What process will be used to determine any future changes to the co-pay?

Answer. Under the proposal now being considered by VA, VHA will monitor the medication co-payment amount and will refer to the pharmacy component of the medical consumer price index (CPI) as an index that would establish future medication co-payment increases. This is the indicator that is most specific to pharmaceuticals.

MEDICAL RESEARCH

Question. Veterans Service Organizations are recommending $395 million for medical and prosthetic research. The Administration's budget request is $360 million. Have you reviewed the organizations' request?

Answer. VA personnel attended the Independent Budget release presentation and closely reviewed the document.

Question. Can you explain the reason for the difference?

Answer. The differences between the two budgets are shown in the following table.

[In thousands of dollars]

Description	2002 Appropriation	
	Independent Budget	President's Budget
Personnel Compensation	161,581	192,650
Employee Travel	2,162	3,737
Communications, Utilities and Misc. Charges	1,081	1,227
Printing and Reproduction	2,087	198
Research and Development Contracts	164,734	106,507
Supplies and Materials	42,228	34,666
Equipment	21,530	21,252
Total	395,403	360,237

Question. The VA expects about $151 million in private contributions to VA medical research. What efforts has VA undertaken to maximize private contributions?

Answer. Non-governmental entities represent an inconsistent source of funding for VA research. VA maximizes funding from private sources through active contacts, advising field researchers of funding announcements, and closely monitoring updates on developmental drugs. Virtually all private-sector contributions are directed to support specific research projects, not to general support of the VA research program.

Question. Why does the budget request cut 79 employees from the medical research program?

Answer. The increase in the fiscal year 2002 budget is less than current services. The FTE level is reduced in an effort to maintain the number of new projects funded in fiscal year 2002.

Question. How will these cuts effect current research efforts? New research projects?

Answer. The cuts will not affect current research efforts. The FTE level is reduced in an effort to maintain the number of new projects funded in fiscal year 2002. Ongoing, multi-year projects will continue to be funded.

WAITING TIMES

Question. What can the VA tell us about current waiting times? How long do veterans wait to get a doctor's appointment?

Answer. The average waiting time (days) for "next available" clinic appointments has greatly improved over the past year. (See the following table.)

AVERAGE NUMBER OF DAYS FOR "NEXT AVAILABLE" APPOINTMENT

Description	April 2000	March 2001	Difference
Primary Care	65.1	44.4	−20.7
Eye Care	101.0	72.9	−28.1
Audiology	49.9	39.7	−10.2
Cardiology	51.7	40.4	−11.3
Orthopedics	44.6	39.7	−4.9
Urology	80.7	52.7	−28.0

Similarly, the percentage of patients who reported waiting greater than 20 minutes to see their provider has decreased significantly.

Percent of Outpatient Respondents Waiting >20 Minutes to See Provider

	Percent
1995	55.33
1996	48.69
1997	43.63
1998	33.43
1999	31.02
2000	30.20
March 2001	28.39

Question. How long do they sit in the waiting room?

Answer. In the most recent VHA Veterans Customer Satisfaction Survey (patients who received care between March 24, 2000 and September 24, 2000), veterans were asked, "How long after the time when your appointment was scheduled to begin did you wait to be seen?" The responses were:

Response	*Percent of Respondents*
No wait	11.33
1 to 10 minutes	33.02
11 to 20 minutes	26.05
21 to 30 minutes	14.67
31 to 60 minutes	8.44
More than 1 hour	5.28
Cannot Remember	1.20

These data demonstrate that 70.4 percent of patients report waiting 20 minutes or less.

Question. What are the goals for patient waiting time?

Answer. The goals for patient waiting time are:

—90 percent of enrolled veterans who will be able to obtain a non-urgent patient appointment with their primary care provider or other appropriate provider within 30 days.

—90 percent of patients who will be able to obtain a non-urgent appointment with a specialist within 30 days of the date of referral.

—90 percent of patients who report being seen within 20 minutes of their scheduled appointments at VA health care facilities.

Question. How were these goals developed?

Answer. In the late 1990s, VHA recognized through its own analyses that access remained a critical concern. In response to these concerns, VHA began work to establish system-wide goals.

It is the perception of direct care providers, administrators and Veteran Service Organizations that the single most common concern with VA care is access. While VA has made tremendous strides in geographic access improvement, waits for non-emergency, non-urgent care are considered to be excessive.

In order to develop a data-driven approach, community benchmarks were sought. One of the more robust sources for related data was Healthcare Benchmarking Systems International (HBSI). HBSI benchmarks hospitals for "15th next available appointment." ("Fifteenth next available" reduces the effect of appointment cancellation. Cancellations can affect the validity of "next available" measures by creating an artificial appearance of timely availability of appointments. They are in fact, not really usable because of their last-minute nature). A significant limitation of HBSI data is that they are based on self-report. Further, a recent survey of university medical centers addressed the expected availability of non-urgent primary and specialty care appointments. The study found no consistent definition of acceptable waiting times and no consistent mechanism of validating the relationship between expectations and actual practice.

Given the lack of standard methodology or benchmarks, VHA established the 30/30/20 (90 percent of requested next available non-urgent primary care appointments should be scheduled within 30 days; 90 percent of requested next available non-urgent specialty (eye care, audiology, orthopedics, cardiology, urology) appointments should be scheduled within 30 days; and 90 percent of patients should be seen within 20 minutes of the scheduled appointment time) goals based on their perception of veterans' expectations. Implicit in these goals is an understanding that providers clinically "triage" all patients requesting urgent care and provide care on a more urgent basis if clinically appropriate. The ultimate objective for reduction of waiting times is to care for the patient within a timeframe that is both clinically valid and meets the patient's expectations.

Question. What is the VA doing to develop a system to accurately quantify the current situation?

Answer. In support of the 30/30 strategic goals, VHA established a process to measure the average waiting time for a requested appointment. Both fiscal year 2000 and fiscal year 2001 performance plans require the measurement of the average waiting time for primary care and five high-demand specialty clinics. Data issues have been addressed; software continues to be enhanced; and training is being implemented to enhance data accuracy.

The ability to collect other data on patient appointment waiting times is currently being evaluated. A new scheduling software patch was released to VHA field stations on January 31, 2001. This patch was designed to collect information on the percentage of patients receiving next available appointments within 30 days of their request. Field stations installed the patch in late April 2001, and that data was available for further evaluation of reliability. Data will continue to be scrutinized for reliability, validity, reproducibility and usefulness, and the data collection process will be modified as necessary.

The "20" of the 30/30/20 is measured through patient surveys. Patient surveys are an accurate assessment of the patient's perception, at that point in time, of their waiting time. The data is exceptionally stable over time. The survey is a well-validated instrument, fundamentally developed by the Picker Group. All VHA clinics are reviewed. Each outpatient survey includes approximately 110,000 patients, and in seeking to propel improvement in satisfaction by more tightly linking actions with results, two surveys were administered this year encompassing a total of about 220,000 patients. For the 2000 (wave2) survey, 108,007 patients were sampled and 75,939 patients responded. This represented patients who received care in the primary care clinics during August 2000 at 22 VISNs, including 136 medical centers, and 637 clinics. The overall response rate to the survey is consistently and remarkably high at 70 percent. The results from the national surveys indicate that younger patients are under represented in the results. VA survey response rates are among the highest known in the health care industry, perhaps a benefit of military service history.

Question. How much funding does VA anticipate devoting to quantify this problem in 2002?

Answer. VA requested an additional $164 million in 2002 for improvements to access and service delivery.

Question. VA planned to spend $400 million for this effort in 2001. How is this funding being spent? Has VA developed a reliable system?

Answer. Between fiscal year 2000 and fiscal year 2001, the total of yearly planned additional investments in improvements to access and service delivery is estimated to be $346 million. The networks reported their planned progress in investments and performance for 2000 and 2001 in their January 2001 submission to VHA's financial plan. The following table shows the areas receiving additional investment.

[In millions of dollars]

	Additional Investment Per Year	
	2000	2001
Timeliness:		
CBOCs	37	74
Improvements to Work Processes	68	130
Infrastructure	2	7

[In millions of dollars]

	Additional Investment Per Year	
	2000	2001
Telephone Care: Ensure all veterans have access, 24/7	2	8
Timely Access to Clinical Information:		
Telemedicine	3	2
Information Technology	6	7
Total	118	228

The system is designed consistent with the Government Performance and Results Act (GPRA) to monitor the overall objective being the targeted goals of 30/30/20. Although $346 million has been identified for Access and Service Delivery, the appropriation specifically provided for this initiative totaled $77 million in fiscal year 2001. The remaining dollars must be absorbed from within existing funding levels.

CLAIMS PROCESSING TIMES

Question. What is the current processing time for claims and what is the goal?

Answer. At the beginning of each fiscal year, performance targets are established for each of the performance measures contained on the balanced scorecard. The fiscal year 2001 national performance for Compensation and Pension claims processing timeliness is as follows:

[In days]

Timeliness Measure	Fiscal Year 2001 Actual (through March 2001)	fiscal Year 2001 Target	Fiscal Year 2002 Target
Rating-Related Actions (completed)	176.5	195	210
Non-Rating-Related Actions (completed)	50.9	54	52

Question. What lessons has the VA learned from past efforts to improve processing times?

Answer. Past efforts to improve claims processing timeliness and accuracy have resulted in valuable learning experiences. One of the most constructive lessons has been in pilot testing major processing changes before national implementation. For example, VBA tested the case management approach to claims processing before national implementation. Customer surveys were also conducted at the test sites. As a result of both of these measures, improvements were made to the implementation plan before all stations made the transition to case management. In addition, VBA recognizes that a moderate amount of specialization can help improve timeliness. VBA will be consolidating pension claims processing and creating resource centers to concentrate on specialized claims work. Finally, enhanced partnerships with information resources are critical to improving claims processing timeliness. VBA is working to enhance access to VHA medical records, establish joint C&P/VHA exam offices, and hire additional employees for the St. Louis Records Management Center.

Question. How much funding does VA anticipate devoting to improving claims processing time in 2002? How many employees?

Answer. VBA has requested over $732 million to fund the administration of the Compensation and Pension programs. The funding in the fiscal year 2002 budget submission, as in past submissions, is devoted to improving the timeliness and accuracy of VBA claims processing. It is not possible to separate specific dollar amounts or FTE resources that will impact only one performance measure, timeliness. VBA expects to have 2,000 Rating Veterans Service Representatives (RVSRs) and 3,500 Veterans Service Representatives (VSRs) on board by the end of fiscal year 2001.

Question. How will VA train new employees so they will be able to make a real difference?

Answer. The Compensation and Pension Service (C&P) launched a national recruitment initiative, Challenge 2001, for RVSRs and VSRs to assist in succession planning.

In order to meet this need, C&P Service has created an initial twelve week training program that will provide RVSRs and VSRs the foundations of technical training. The major goal of this training is to ensure RVSRs and VSRs can be productive as soon as possible while still learning the basic job responsibilities.

The initial 16 weeks of RVSR training incorporates an intense six weeks of classroom instruction along with ten weeks of practical application at the student's home office. This is accomplished using the Training and Performance Support System (TPSS), which is a computer assisted, cooperative learning, and case study tool. This will be followed by another twelve weeks of classroom instruction and practical application at the student's home station.

The initial 12 weeks of VSR training incorporates an intense four weeks of classroom instruction along with eight weeks of practical application at the student's home office. This is accomplished using the award winning Field Guide to VSR Training, which is a web-based repository of training instruction and materials. There will another thirty-six weeks of classroom instruction and practical application conducted at the student's home station.

Question. How will the VA's new "duty-to-assist" requirements impact processing times?

Answer. The number of pending claims decreased each year from fiscal year 1998 to fiscal year 2000. In addition, the appeals workload showed significant improvement over the same time period. VBA began to see the effects of the recent legislative changes on our workload. Since the implementation of the duty to assist legislation, our pending claims and appellate workload have increased significantly since the start of fiscal year 2001. During the same period, the timeliness of claims processing remained relatively study, with some improvement in the timeliness of appeals. The impact of duty to assist requirement has had a significant negative impact on processing time. The fiscal year 2002 projections for rating related processing times is 100 days higher than the actual performance achieved in fiscal year 2000.

Question. Is the VA developing safeguards to ensure times won't get worse as it does more to help veterans develop their claims?

Answer. VBA has developed countermeasures that will minimize the potential negative impact on workload and timeliness created by "duty to assist" and diabetes legislation. The Secretary of Veterans Affairs has initiated a comprehensive plan to expedite the processing of our oldest pending claims, with priority given to those claims filed by veterans age 70 or older. This plan incorporates a three-pronged approach:

—Establish a special processing unit.

—Revise the mission for the SDN Resource Centers.

—Provide Level III case management service at all ROs for veterans age 70 and older, and for any customer whose claim has been pending more than 1 year.

Work on all three approaches is now in progress, with full implementation by November 1, 2001. Additionally, efforts are underway to investigate and develop modifications to legislation and regulations that will improve claims processing timelines. These proposals will allow oral evidence gathering, simplify issues pertaining to effective dates and simplify certain pension program adjustments. Among other countermeasures planned, VBA will consolidate pension claims process and enhance the accessibility of records from VHA and the St. Louis Record Management Center. Further recommendations from the VA Claims Processing Task Force report are anticipated to advance VBA's potential to process claims promptly.

HEPATITIS C

Question. The budget request is $168 million below the 2001 appropriated level for hepatitis C. Can you please explain the reason for this cut?

Answer. Since initiation of the tracking of hepatitis C-specific utilization and expenditures, VA has increased the number of patients screened, tested and treated every year. VA expenditures for hepatitis C have risen every year, reflecting this increased activity.

Hepatitis C is a new disease. The virus that causes this disease was identified in 1988. The blood test for it began in 1992 and the first treatments were approved in 1997. VA's previous budget estimates were based on assumptions because no reliable data on hepatitis screening, testing and treatment existed. Based on VA's actual experience in testing for and treating veterans with hepatitis C, we are now better able to understand where those early best guess' assumptions were inaccurate. This is why there are significant differences between appropriated and reported budgets for fiscal year 2001. Specifically, areas of large discrepancy between the earlier estimates and our actual experience involve: Number of patients who agreed to be tested for hepatitis C; actual number of people who test positive (prevalence); and number who agree to treatment for hepatitis C.

It is important to point out the continuing medical uncertainty surrounding some aspects of hepatitis C treatment, including, for many patients with minimal clinical disease, the value of treatment versus the risk of treatment side effects. Since hepatitis C infection may persist for decades without clinical symptoms or signs of liver damage, some patient and their providers opt to defer therapy until more effective and better-tolerated therapies are available.

The magnitude of difference between previous models and actual experience justifies a reexamination of the models and assumptions currently used to project hepatitis C expenditures. As a preliminary step in this direction, the Department has revised the projections for fiscal year 2002 to $171.6 million. The budget planning process for fiscal year 2003 will include a more comprehensive revision of the hepatitis C model.

Question. VA requested $340 million for hepatitis C in 2001, but now tells us it will only spend $152 million. Why has VA been unable to spend as much hepatitis C funding as it previously requested?

Answer. See response to above question.

Question. What guidance does the VA provide to Regional Offices on the testing of hepatitis C? What guidance is provided on treatment?

Answer. VA's hepatitis C program ensures that all VA clinicians are provided the most up-to-date scientific information about the disease in order to deliver the highest quality care to veterans, and ensures that they receive appropriate information about hepatitis C screening and testing. This is based on the Under Secretary for Health's Information Letter (IL 10–98–013), dated June 11, 1998, which establishes the criteria for provider evaluation, screening and testing for hepatitis C. As stated in the Information Letter, providers are to evaluate patients with respect to risk factors for hepatitis C and document the assessment. Based upon the hepatitis C risk assessment or patient request, antibody testing is offered based on an algorithm (see attachment, Hepatitis C Virus Antibody Screening for the Veteran Population). In addition, VA Hepatitis C Centers of Excellence maintain a Web page, www.va.gov/hepatitisc, (for both clinicians and patients) as a guide for hepatitis C screening and testing.

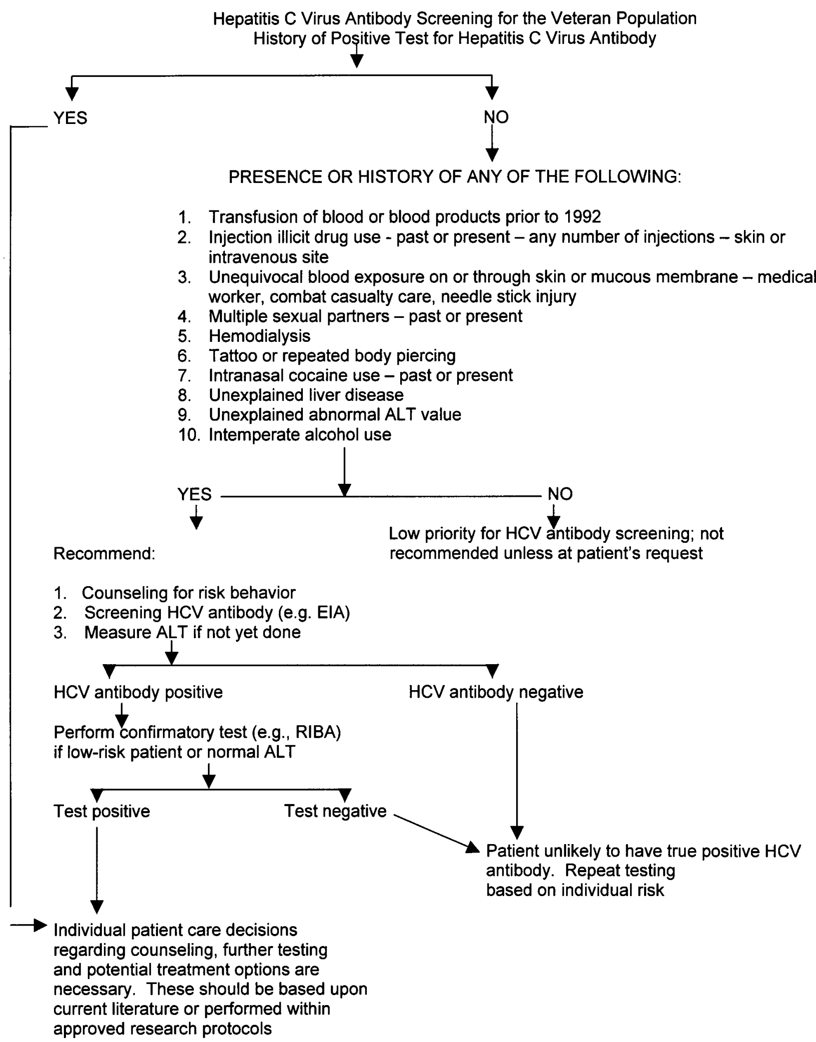
Several national educational conferences have also been conducted to ensure that VA clinicians are provided with the most up-to-date scientific information about hepatitis C in order to deliver the highest quality care to veterans with the disease. These programs were designed to assist providers in identifying those at risk, provide testing and prevent them from becoming infected with the virus that causes hepatitis C, as well as to provide the most current scientific information about treatment. These conferences which included updating hepatitis C, also provided special emphasis on:

—March 2000—Pre- and post-test counseling for nurses, pharmacists and counselors.

—August 2000—Psychiatric evaluation of patients and treatment of complex patients.

—December 2000—Psychosocial needs of the patient with hepatitis C and his/her family.

To ensure that VA health care is state-of-the-art for hepatitis C, treatment guidelines first issued in August 1998 were updated in January 2000 (see attached). They are currently being updated again.



QUESTIONS SUBMITTED BY SENATOR ROBERT C. BYRD

OUTPATIENT CLINIC IN CHARLESTON, WEST VIRGINIA

Question. In the late 1990's, the reports accompanying several VA–HUD Appropriations Bills included, at my request, language urging the Department of Veterans Affairs (VA) to accelerate the establishment of community-based outpatient clinics in Charleston, Logan, Petersburg, and Franklin, West Virginia.

Do some of our veterans forego medical care they need because they find travel too difficult?

Answer. Prior to the opening of Community Based Outpatient Clinics (CBOC) in Charleston, Logan, Petersburg, and Franklin, many veterans cited distance and time required to travel as reasons for not going to a VA facility.

Question. Are outpatient clinics a solution to this barrier?

Yes. Outpatient clinics appear to be one solution.

Question. Before the opening of these clinics, what health care options were available to veterans of the above-mentioned West Virginia cities?

Answer.

CBOCs	Type of Care	Description of Health Care
Charleston	Non-Emergent	29 Independent Physician Clinics in Charleston area
	Emergent	Major Hospitals include Highland, St. Francis, and Thomas Memorial
Franklin	Non-Emergent	Two local medical doctors within the county
	Emergent	1 hour to the west at Rockingham Memorial Hospital, Harrisonburg, VA
		45 minutes to the north at Grant Memorial Hospital in Petersburg, WV
Logan	Non-Emergent	5 Independent physician clinics in Logan area
	Emergent	Logan General Hospital
Petersburg	Non-Emergent	Providers in Grant, Hardy, Pendleton, and Mineral counties
	Emergent	Grant Memorial Hospital

Question. On average, how far did a veteran have to travel from each city for VA health care?

Answer.

Description	Nearest VA Facility Prior to CBOC Opening
Charleston	Huntington VA Medical Center—50 miles one way
Franklin	Martinsburg VA Medical Center—150 miles one way
Logan	Huntington VA Medical Center—75 miles one way
Petersburg	Martinsburg VA Medical Center—130 miles one way

Question. How many veterans received health care at each of the new outpatient clinics in fiscal year 2000? Have these numbers increased since fiscal year 1999? By how much? Is usage of these clinics surpassing expectations, particularly in such a relatively short time period? Are they providing better health to more veterans in West Virginia? Do you anticipate the numbers of visitors to increase even more?

Answer.

CBOCs	Unique Veterans			Comments
	1999	2000	2001 Est.	
Charleston	1,857	2,936	3,500	Steady growth. Kanawha County has the largest concentration of veterans in West Virginia
Franklin	55	100	134	Veterans averaging 2.7 visits per year. It is anticipated that the number of veterans will continue at the current rate.
Logan	N/A	N/A	200	The Logan Clinic opened in fiscal year 2001. Access will be increased the following two years to a maximum of 600 patients.
Petersburg	373	580	701	Veterans averaging 3 visits per year. It is anticipated that the number of veterans will continue at the current rate.

Veterans at CBOCs receive the same level of care as provided in primary care clinics at VA medical centers. This is monitored through the External Peer Review Program (EPRP) Program. Likewise, each veteran at a CBOC has the same access to specialty care as a veteran seen at a medical center.

Question. Are there any additional areas in West Virginia where there are unmet needs with respect to veterans health care?

Answer. The four VISNs serving the state of West Virginia review the unmet needs of veterans on a regular basis and react accordingly. For example, we plan to activate a new, contracted CBOC in Williamson, West Virginia, and is anticipated to open in February 2002.

NURSING HOME CARE UNIT AT THE BECKLEY VETERANS AFFAIRS MEDICAL CENTER

Question. The fiscal year 2001 VA–HUD Appropriations Bill included, at my request, an amount of $1 million over the budget request for design of a 120-bed VA Nursing Home construction project on thirteen acres of available space owned by the Beckley VA Medical Center.

What is the status of the $1 million design work for the nursing home?

Answer. An Architect/Engineer (A/E) contract for design/build documents was awarded August 2001.

Question. When will the nursing home project be ready to go to construction?

Answer. If construction funds were available, an award could be made by February 2002.

Question. I understand that this project must first pass muster with the so-called Capital Asset Realignment for Enhanced Services initiative, which is a prerequisite for any new major construction project throughout the VA system. Please tell me more about this process and how the Beckley project fits into this process. Will this new process delay construction beyond the point it would otherwise be eligible to go to bid? If so, what is the rationale for holding up this project and causing delays that can only increase the costs of the construction of the project?

Answer. CARES is a process being undertaken by VA to evaluate health care delivery needs of veterans through 2010. Once the preferred option(s) for clinical service delivery are decided for each VISN, an appropriate alignment of capital assets, in which those services will be delivered, can be made.

Because VA health care facility capital asset sizing is dependent on clinical workload, most investment initiatives are being reevaluated as the CARES projections are made. Initiatives underway prior to fiscal year 2000 were allowed to continue. However, those still in the development or design stage are being further reviewed. VA is on record that we cannot stop investing in our aging infrastructure and addressing new program needs before the CARES process is completed. VA is aware of the need for continued investments, and will consider this nursing home care unit project along with other nationwide priorities when developing future budgets.

An AE contract award for design/build was awarded in August 2001 in accordance with the fiscal year 2001 VA–HUD Appropriations Bill. Pending Congressional authorization and construction funding for this nursing home project, VA cannot proceed with a construction contract. Consequently, we are completing as much of the process as authorized to do.

Question. What other advice can you give me that would accelerate this project, which is designed to provide much needed long-term care for our veterans in Southern West Virginia?

Answer. Utilizing the design/build method of construction and using the design funds appropriated in our fiscal year 2001 budget have accelerated the design schedule.

DEMONSTRATION PROJECT—CLARKSBURG VA MEDICAL CENTER AND RUBY MEMORIAL HOSPITAL

Question. VA supports amendments for initiating, continuing, and enhancing the demonstration project involving the Clarksburg VA Medical Center, Ruby Memorial Hospital, and West Virginia University (WVU). The pilot demonstration project allows Ruby Memorial Hospital to provide specialized treatment to veterans in the Clarksburg/Morgantown areas, rather than requiring them to travel out of state to receive care at other VA hospitals.

Has this project greatly improved the access of veterans to a number of specialized services? In what particular areas?

Answer. Yes, the Ruby Memorial Project has greatly improved the access of veterans for a variety of specialized services. The major referral to Ruby Memorial is ophthalmology. This service includes evaluations and testing but also cataract surgery, glaucoma surgery, laser treatments for retina disorders and other eye surgeries. Imaging is another area for which many veterans receive referrals to Ruby Memorial. Services include mammograms, dexa scans (bone density studies for women, as well as male/female veterans having chronic obstructive pulmonary disease who are treated with steroids/prednisone), Magnetic Resonance Imaging (when timeliness or urgency of the study is a priority) and arteriograms (when the service is not available at Clarksburg and is urgent in nature. Other imaging referrals, especially for our women veterans, include ultrasounds of the breasts and pelvic area.

Ruby Memorial Hospital also performs gastrointestinal tests, including pH monitoring and enterclysis, which are not performed at Clarksburg or at Pittsburgh.

Referrals are also made to Ruby Memorial for gynecology surgeries and sentinal node biopsies for melanoma (the standard of practice in the work-up of this disease).

Cardiac patients also benefit from referrals to Ruby Memorial. Two services not available within VA include a congestive heart failure clinic and enhanced external counter pulsation treatment. Both of these services are for veterans with end-stage congestive heart failure or inoperable cardiac disease. Several veterans have benefited from the treatments, and quality of life has been improved.

Finally, patients with emergent medical conditions are transferred to Ruby Memorial when Clarksburg VA does not provide the needed service and services are not available at Pittsburgh. Such transfers can include: cardiac, respiratory, vascular, neurosurgery, or orthopedic conditions.

Question. What are the most common health conditions found in veterans at the Clarksburg VA Medical Center? Are there other areas of specialized care that WVU could be providing to veterans in these areas?

Answer. The most general health problems treated at Clarksburg VA include chronic ischemic heart disease, diabetes, chronic obstructive lung disease, and hypertension.

As noted above, most specialty services are used at Ruby Memorial currently. Referrals to Ruby are based on service not available at Clarksburg or Pittsburgh, urgency or timeliness of the referral, and hardship (when travel to Pittsburgh is not in the interest of the veteran).

Question. Is there potential for similar demonstrations between other VA Medical Centers in West Virginia with other West Virginia medical facilities, such as the Huntington VAMC and Marshall University?

Answer. Currently, there are plans to locate an eastern panhandle campus of the West Virginia University (WVU) School of Medicine in the Eastern Panhandle. Once this program is established, the potential exists for clinical opportunities between the Medical Center, the CBOCs and WVU. The Beckley VAMC is not affiliated with a nearby medical school, so collaboration as described is not foreseen. In addition, Beckley has no contractual agreements with the two local community facilities; however, as with most VAMCs, they do have cooperative arrangements to refer patients when the need arises. Most typically, this would be for patients requiring emergency/critical care beyond the scope of the Beckley VAMC capabilities for which transfer to Salem/Richmond is neither practical nor safe.

Question. Is there merit to constructing a VA Research Center on the campus of the West Virginia University Health Sciences Center in Morgantown?

Answer. VA Research and Development is an intramural program: appropriated research funds are allocated to VA facilities to conduct research on the high priority health care needs of veterans under the supervision of VA employees. Unlike the NIH and Department of Defense, VA does not make research grants to colleges or universities, cities or states, or any other non-VA entity. Moreover, more than 70 percent of VA researchers are also clinicians requiring proximity to their patients. Accordingly, VA opened a new research building at the Huntington VAMC in 1998. An additional research facility at Morgantown would place VA investigators 205 miles from the Huntington VAMC and 150 miles from the Martinsburg VAMC. Researchers at the Clarksburg VAMC would still be 40 miles from the proposed center, and to date, that medical center has no active VA research funding.

We believe that funding construction to improve existing VA research facilities would best serve America's veterans.

VA HEALTHCARE INFORMATION SECURITY

Question. I am awaiting a report from the VA regarding a constituent proposal I sent to the agency on March 1, 2001, regarding ways in which to improve the security of health records of our nation's veterans. I understand that these computerized records are very accessible to hackers, and that there have been numerous reported incidents of stolen records, stolen identities, changed results, and denial of insurance and/or employment.

What is the VA's current plan to protect the privacy, confidentiality, and integrity of the sensitive medical records of the VA patient population, as recommended by a recent GAO report?

Answer. VA uses both physical and electronic controls to safeguard patient information in the Veterans Health Information System and Technology Architecture (VistA). Access to computer rooms at health care facilities is limited by appropriate locking devices and restricted to authorized VA employees and vendor personnel. Computer peripheral devices are placed in secure areas or are otherwise protected. Access to file information within VistA, for authorized staff, is controlled at two levels. The system recognizes authorized employees by a series of individually unique passwords and access via menu assignment. Security keys within the Patient Sensitivity function of VistA control access to restricted or sensitive computerized records. Sensitive record access logs are available through VistA to track user access to information on employees, volunteers, and specific patients. Paper records are kept in physically controlled areas. VA file areas are locked after normal duty hours, and the Federal Protective Service or other security personnel protect the facilities from outside access.

In November 2000, VA established a department-level information security program, led by an executive-level official. This plan provides the framework for addressing department-wide information security on a near- and long-term basis. The plan addresses security problems, and responds to risks documented in a department-wide risk assessment that VA completed in June 2000.

VA's information security management plan emphasizes accelerated enterprise-wide improvements that are directed primarily at improving access controls. The plan identifies near-term actions including:

—Requiring more secure passwords on computer workstations.
—Removing unsecured dial-in connections.
—Conducting focused reviews of access and personnel controls.
—Requiring incident reporting as a standard practice.
—Implementing configuration standards for external electronic connections.
—Conducting a total workforce review of VA standard security awareness curriculum.
—Implementing personnel controls.
—Performing penetration tests at selected VA locations.

These near-term actions have been completed.

VA's plan also identified a number of longer-term actions that emphasize broader assessments and proposed measures to improve information security on a more comprehensive basis. These actions include establishing a regular cycle to test the Department's compliance with established security requirements and certifying and accrediting general support systems and major applications.

VHA is fully supporting this plan. Based on monthly status reports, VHA is in compliance and on schedule with implementation of all phases of the Department's information security program.

Question. Does the President's fiscal year 2002 Budget contain sufficient funding to implement such a plan? If not, what level of funding would be required?

Answer. The department-wide information security plan is defined in an approved Capital Investment Proposal. Funding for this initiative is identified and supported in the fiscal year 2002 budget submission.

QUESTIONS SUBMITTED BY SENATOR TIM JOHNSON

VETERANS EDUCATION

Question. Given your history of strong support for a dramatically improved GI Bill, what are your current plans for enhancing this important legislation during the next year or two, especially within the context of the President's proposed budget for fiscal year 2002?

Answer. Veterans no longer are well represented in the top leadership positions in business, industry, or government because graduates of schools that most veterans cannot afford to attend disproportionately fill these positions. Further, entry or advancement into positions in our Nation's increasingly high-tech business environment often demands completion of high-cost, short-term courses that lead to advanced degrees, certification, or licensure. To begin to address these realities for veterans, we believe MGIB improvements, within the current budget context, should focus on reasonable rate increases and a benefit payment option that permits acceleration of benefit usage, in that order.

Question. As you may be aware, bi-partisan GI Bill related legislation has been introduced in the Senate to help fulfill the promise to those who serve in the defense of our nation. The Johnson/Collins bill (S. 131), not only enjoys the support of the leadership of the Senate, but also has indirectly received the endorsement of the Senate as a whole through the creation of a reserve fund amendment to the Senate Budget resolution. Since this bill is similar in nature to the recommendation of the Servicemembers and Veterans Transition Commission in that it links the GI Bill to the cost of education, what support can you and the Administration provide to assist with the enactment of this important legislation?

Answer. Indexing the basic MGIB benefit to the annual cost of attending a 4-year public college certainly is a worthwhile goal. However, we believe the significant tiered rate increases proposed in S. 1114 would, to the extent the increases can be accommodated within the overall budget guidelines agreed to by the President and Congress, represent an important first step toward such goal. We note that identical tiered increases are contained in H.R. 1291, which already has passed the House.

VETERANS HEALTH CARE

Question. Of the Administration's requested $1 billion increase, only approximately $800 million of that discretionary amount would be available for health care—for routine increased costs as well as new initiatives such as emergency care and implementation of the long-term care provisions in the Millennium Act. Specifically, please explain how this increased funding would address these programs.

Answer. With the $1 billion increase. VA intends to address the following:

[In thousands of dollars]

Description	
Pharmaceuticals—New patients accessing the system for their pharmaceuticals coupled with the increased treatment of enrolled patients in the ambulatory care environment	259,002
Long-Term Care—Moves VA towards satisfying the requirements of the Veterans Millennium Health Care and Benefits Act	196,000
Access and Service Delivery—VA's overall service and access goal is to provide medical care when and where it is needed in ways that are timely, convenient and cost-effective	164,000
Prosthetics—Increase due to the continuing impact of mandated eligibility reform, advances in technology, as well as the effects of aging on the veteran population	57,338
Compensation & Pension (C&P) Exams—Expansion of the past practice of using Veterans Health Administration (VHA) resources to obtain medical opinions, which results in increased workload	50,000
Core Financial and Logistics System (coreFLS)—CoreFLS is expected to reduce operation and maintenance costs, as well as improve the data integrity, timeliness, and reliability of financial data within the VA	38,676
Capital Asset Realignment for Enhanced Studies (CARES): Non-Recurring Maintenance (NRM) Enhancement—In anticipation of implementing the outcome of the Phase I and Phase II CARES studies	30,000
CHAMPVA Workload and Regulatory Changes—Increase necessary to support the anticipated increase in workload based on past experience and expanded CHAMPVA coverage to ensure dependents eligible under VA's program receive comparable benefits as those provided to dependents under the TRICARE program	29,782
Child Care Supplement—Public Law 106–58 authorizes Federal agencies to use appropriated funds from the salary account to assist Federal employees with childcare tuition costs	22,226
Entry Pay Increase for Information Technology—Special pay rates targeted to entry-level and mid-level technology jobs, because Federal agencies reported they had trouble hiring and retaining these types of employees	20,738
Hepatitis C—Cost is expected to increase recognizing both a new VERA allocation format and an increasing number of treatments	20,000
Special Salary Rates for Pharmacists—Allow VA to improve retention of the most senior members of the current pharmacy workforce and will improve its competitiveness in recruiting new pharmacists	16,852
Dentist Special Pay—Public Law 106–419 provides for medical center directors to utilize the full range of pay increases authorized to optimize dentist recruitment and retention efforts	14,326
State Home Changes—VA currently has a legislative obligation to pay states for care provided to eligible VA patients	13,817
Nurse Special Pay—Public Law 106–419 provides the guarantee that VA nurses receive a national comparability increase equivalent to the amount provided to other federal employees	13,726

Other budgeted adjustments including changes in medical collections, predicted changes in enrollment associated with TRICAARE for Life program and a reduction to correct for under spending in three specific programs budgeted in prior years result in an overall increase of $1 billion in medical care obligations.

Question. I understand that OMB rejected your first budget submission which was $1.9 billion. Obviously you felt you needed more than what OMB was willing to provide. Obviously, as well, the Senate felt you needed more than that when they approved my amendment to the Budget Resolution called for a $2.6 billion increase—the amount recommended by the Independent Budget. What is the Administration's plan for bringing veterans' health care funding more in-line with that proposed by the Independent Budget?

Answer. We are confident the President's Budget is sufficient to support the VA health care system and provide needed services to our veterans. The Administration will continue to provide a high level of resources to veterans' health care programs based upon the demand for health services by these dedicated men and women who have sacrificed so much. VA appreciates the work of the Veterans Service Organizations that develop the Independent Budget and how it focuses public debate upon services and resources should be provided to those whom have served the call to defend freedom. VA and Congress are fortunate to have the Independent Budget provide a detailed alternative view of where the federal government should allocate limited resources.

Question. With the rising cost of health care, demands of an older veteran population, and increasing responsibilities of new mandates, please explain how the VA plans to maintain current services at the level recommended by the Administration's budget.

Answer. The total budgetary resources provide enough to fund uncontrollable cost increases (payroll and inflation) and initiative increases contained in the fiscal year 2002 budget request. To account for a greater volume of services provided and an aging population, VA realizes the need to provide sufficient resources for hepatitis C, long-term care, increased access, which will be addressed within the budgetary resources requested.

Question. Your statement indicates that you place a priority on the specialized services the VA provides related to spinal cord injury, mental health, and prosthetics. The Congress recognized the importance of these core missions of the VA health care system by mandating in Public Law 101–262 that the VA maintain its capacity to provide these services. However, in the area of mental health, the VA has already lost a major portion of its service capacity since the law was enacted. What actions are being taken to restore capacity in mental health programs?

Answer. From fiscal year 1996 to fiscal year 2000, VA has maintained or increased capacity to treat veterans in both the Seriously Mentally Ill (SMI) and Post-Traumatic Stress Disorder (PTSD) categories in terms of patients served. However, there has been a decrease in the number of veterans with substance abuse served in specialized programs by the system as a whole, from 107,074 in fiscal year 1996 to 94,603 in fiscal year 2000. In addition to this apparent loss of treatment capacity for substance abuse, there are also system-wide variations in the capacity to provide specialized treatment services to veterans for the other categories as well as in substance abuse. VHA is currently conducting a detailed review of specialized mental health treatment programs. This review is being conducted to determine if the apparent loss of substance abuse treatment capacity is due to counting errors or to actual loss of services. The quality of care provided to patients with the target diagnoses (e.g., PTSD, Substance Abuse Disorders) both within specialized VHA treatment programs and outside of these programs will also be addressed. Results of this review are expected in April 2002.

Public Law 106–117 required that VHA dedicate not less than $15 million for new specialized PTSD and Substance Use Disorder treatment programs. Because of a loss of capacity for specialized Substance Use Disorder care in VHA between 1996 and 1999, $5.5 million of these monies were targeted for PTSD care while $9.5 million were allocated to new Substance Use Disorders programs. A total of 31 new Substance Use Disorder programs in 19 networks were funded through this process. Similarly, 18 new PTSD specialized programs in 17 networks were initiated.

In October 2000, VHA Directive 2000–034 encouraged the development of Intensive Case Management programs for severely mentally ill veterans. As of June 2001, VA had 54 active Mental Health Intensive Case Management (MHICM) programs with another 10–12 in various stages of development. Further, VACO has initiated a planning process through which VISNs are encouraged to implement these programs as needed. All VISNs have submitted plans for expansion of MHICM teams. These plans are currently under review.

VA's fiscal year 2000 budget increased funding for specialized services for homeless veterans by $50 million. Of this increase, $39.6 million was included in medical care appropriations. Sixty-six new programs were established with 120 new FTEE. In addition, four demonstration projects were initiated to evaluate new approaches to outreach to homeless female veterans, facilitate employment, provide dental care for homeless veterans and to support hospitalized homeless veterans through their transition to community life. $2.3 million was committed to the activation of new CWT programs and other therapeutic work initiatives for homeless veterans. When these programs are fully operational, it is expected they will serve an additional 1,600 veterans annually. $3 million was utilized to establish 11 programs dedicated to homeless women veterans. These programs are expected to serve 1,500 homeless women veterans per year when they are fully operational. VA committed $18.8 million to the expansion of the Health Care for Homeless Veterans (HCHV) program in fiscal year 2000. The program offers extensive outreach, physical and psychiatric health exams, treatment, referrals, and ongoing case management to homeless veterans with mental health problems, including substance abuse. When all new staff and new programs are fully operational, it is expected that 12,000 additional homeless veterans will be treated. Approximately one-fourth of these veterans will be provided contract residential treatment.

The remainder of these new monies was made available to guarantee loans made under the Multifamily Transitional Housing for Homeless Veterans Program. This program will allow VA to guarantee loans made by lenders to help non-VA organizations develop transitional housing for homeless veterans. VA plans to guarantee 5 loans in the next two years, with a total of 15 loans guaranteed over the next 4 years. The Homeless Providers Grant and Per Diem Program provide grants and per diem payments to assist public and nonprofit organizations to establish and operate new supportive housing and service centers for homeless veterans. Grant funds may also be used to assist organizations in purchasing vans to conduct outreach or provide transportation for homeless veterans. VA announced a new round of grants in April 2001, and has committed $10 million for the 8th round of funding. With the new Loan Guarantee for Multifamily Transitional Housing for Homeless Veterans Program and additional grant awards under the Grant and Per Diem Program, VA expects to help community service providers develop approximately 6,000 more transitional beds for homeless veterans over the next 4 years.

VA recently announced the creation of VA Advisory Council on Homelessness Among Veterans with the mission of providing advice and making recommendations on the nature and scope of programs and services within VA. This Committee will greatly assist VA in improving the effectiveness of our programs and will allow a strong voice to be heard within the Department from those who work closely with us in providing service to these veterans.

Question. While there has been progress to restore beds and staffing in spinal cord injury centers, I understand overall VA is still far below directed levels, particularly for SCI long-term capacity. What actions are being taken to restore capacity in spinal cord injury programs?

Answer. Significant progress has been accomplished in restoring capacity to the spinal cord injury centers. A recent June 2001 survey indicated that 93 percent of the 949-staffed beds required by VHA Directive 2000–022 were staffed. VHA Directive 2000–022 established the minimal number of available and staffed SCI Center beds, the minimal number of staff for certain aspects of the SCI program, and the need to identify additional extended care beds for this population. There has been considerable progress made in meeting the requirements of this directive. Active recruitment for nurses, physicians, psychologists, and SCI therapists is ongoing, within the SCI Centers. One of the most challenging areas is nurse recruitment. To assist in this effort, many of our facilities are using or considering recruitment and retention incentives. Working with the Paralyzed Veterans of America (PVA), an additional focus at this time is the designation of 68 extended care beds. VA is committed to meeting the specialty and extended care needs of this population.

Question. Please update me on the VA's progress with implementation of several important initiatives contained in the 1999's Millennium Act, including provisions dealing with long-term health care.

Answer. A number of provisions that did not require regulations have been implemented, as follows:

—Section 101(a)—Priority for Nursing Home Care for Service-Connected (SC) conditions and 70 percent or greater SC veterans. Directive issued in February 2000.

—Sections 102 and 103—Sites selected for long-term care pilot and assisted living pilot. Two sites are currently operating and the other two are expected to come on line in the next few weeks.

—Section 112—Eligibility for Combat Injured veterans (Purple Heart recipients). Directive issued in February 2000.

—Section 115—Sexual Trauma Counseling. Directive implementing new program requirements issued in February 2000.

—Section 116—PTSD and Substance Use Disorder Programs—$15 million was distributed to new Substance Use Disorder and Post-Traumatic Stress Disorder (PTSD) program initiatives on January 26, 2001. A full report to Congress was submitted on February 15, 2001.

—Section 208—Enhanced Use Lease Authority—Directive revised to include provision that allows networks to retain proceeds from enhanced use leases after expenses was issued March 24, 2000.

—Section 303—Chiropractic Treatment—National policy directive issued in May 2000.

A number of provisions require significant policy development and publication of regulations to fully implement:

—Section 101(b)—Expanding non-institutional and extended care services—VA determined benefits package services. Regulations on the provisions of non-institutional extended care in the enrollment medical benefits package expands the definition of "medical" to include extended care services, and specifically defines the expanded non-institutional services to include non-institutional geriatric evaluation, non-institutional respite care and adult day health care. The Long-Term Care regulation has been combined with the Extended Care Co-Pay regulation. VA approved a revised package in July 2001 and has forwarded it to OMB. VA is working with OMB on final set of revenue estimates.

—Section 101(c)(1)(c)—Co-payments required for long term care services from most NSC vets and SC vets. Proposed regulations being reviewed by OMB should be published soon, with an estimated effective date of March 2002.

—Section 111—Emergency Care—VA authorized to reimburse certain vets as payor of last resort for emergency care in non-VA facilities. On July 12, 2001, VA published an Interim final rule titled, "Payment or Reimbursement for Emergency Treatment Furnished at Non-VA Facilities" in volume 66, Number 134 of the Federal Register. This interim final rule set forth the regulatory requirements for reimbursing claimants the lesser of the amount for which the veteran is personally liable or 70 percent of the applicable Medicare fee schedule for treatment. VA facilities will begin processing these claims during August 2001, with an effective retroactive date of May 1, 2000.

—Section 201—Medication Co-Payments—VA to increase the amount of the Pharmacy Co-Pay and to establish maximum monthly and annual pharmacy co-pay amounts for individual veterans. Proposed regulations were published in the Federal Register, 60-day comment period on July 16, 2001. VA expects this regulation to be implemented before the end of the year.

—Section 207—State Home Construction Grants—The new regulations on grants to States for construction or acquisition of State Home facilities change the priorities for awarding these grants to give higher priority to renovation and life safety projects. In addition, the new criteria include definitions of need for additional beds, by State. Regulations were published in the Federal Register on Tuesday, June 26, 2001 and were issued as an interim final rule to apply to the fiscal year 2002 State Home construction funding cycle (grants due August 15, 2001).

—Section 201—Outpatient Co-Payments—VA to set the outpatient co-pay for each visit. VHA is considering lowering the outpatient co-payment and regulations are expected to be sent to OMB in August 2001, with an expected effective date in early 2002.

VA RESEARCH

Question. How does the VA intend to use the $10 million increase called for in the Administration's budget? Could the VA effectively spend an additional $20–$30 million for research? If yes, please provide me with some idea as to the priority areas where VA needs to increase its research efforts?

Answer. VA will use the Administration's proposed $10 million increase to maintain current services. We believe the President's Budget sufficiently funds VA's research efforts. However, an additional $20–$30 million would be used to expand high priority research in the areas of:

—Neurodegenerative diseases of the brain such as Alzheimer's disease, Parkinson's disease, brain tumors and genetic diseases of the nervous system, and Amyotrophic Lateral Sclerosis (Lou Gehrig's disease).

—Special population needs such as spinal cord injury, multiple sclerosis, low vision. Enhancement through development of an artificial retina, and upper extremity prostheses using nanotechnology.

—Treatment of chronic diseases such as AIDS treatment and compliance studies, PTSD in women, heart surgery (arteries for grafts and heart bypass pump), and stroke prevention.

—Quality of care studies that will enable VA to exploit advances in clinical practices including the treatment of cerebrovascular diseases (stroke), and lung, prostate, and colon cancer.

—New National Centers of Excellence to include minority health and rehabilitation outcome assessment.

Question. It is my understanding that there is a critical need for improvements in the VA research infrastructure (laboratory and other research facility upgrades, local oversight for human studies, etc.). How does VA plan to address these needs?

Answer. VA has several mechanisms with which it is addressing research infrastructure needs. First, the Veterans Equitable Resource Allocation (VERA) funding that is distributed to VA medical facilities includes a component for research and development. In fiscal year 2001, the Research and Development component totaled $331 million and was allocated based on the level of research activity that each medical facility conducts. The medical facility uses these funds in part for equipment purchases, renovation and maintenance of research space, and local oversight of human studies.

Second, the Office of Research and Development (ORD) also helps medical facilities improve their infrastructure by providing funding for local facility research support offices and for research equipment (the medical and prosthetic budget may not be used to fund capital improvements). In addition, ORD has funded the field offices of the Office of Research Compliance and Assurance, the VA's watchdog organization for ensuring the safety of human subjects.

Third, ORD identifies construction requirements necessary to support the physical infrastructure of VA's research enterprise. Based on an evaluation of the individual research programs the ORD has compiled a list of 30 priority sites that would benefit from infrastructure improvements. These needed improvements range from construction or renovation of "wet" laboratories, construction of new research structures, and other capital improvements. Three sites (Ann Arbor, MI; San Antonio, TX; and Palo Alto, CA) have renovation and/or construction projects underway, all of which is classified as minor, and the remaining projects are being planned for the future.

Question. What is the VA system doing to ensure patient safety in clinical trials?

Answer. VA is constantly reassessing patient safety protocols to ensure that the well being of our veterans is not compromised in any way, both in clinical trials and in all other aspects of health care delivery. Innovations include the establishment of the Office of Research Compliance and Assurance (ORCA), as well as initiating a groundbreaking program to accredit the VA Institutional Review Boards (IRB) by an external non-government accrediting agency that reviews and monitors human research projects (National Committee for Quality Assurance).

ORCA verifies that VA researchers comply with patient protection protocols and standard operating procedures, and it also serves as the Department's interface with the Office of Human Research Protection (OHRP), in the Department of Health and Human Services. The effort to accredit IRBs reinforces efforts to enhance patient protections through improved oversight at the facility level. VA is working closely with the National Committee for Quality Assurance to make this initiative the benchmark for non-VA research programs to follow.

The Office of Research and Development (ORD) has required its investigators to receive training and certification on human subject protection. Moreover, ORD is updating the policy handbooks that govern the protection of human subjects in VA research projects.

Multi-center clinical trials funded by VA receive at least four levels of patient safety review: Human Rights Committee; Institutional Review Boards; Research and Development Committee; and the Data Safety and Monitoring Committee.

In addition, ORD and when applicable, the Food and Drug Administration may conduct inspections during clinical trials.

Question. What recent research advances have been supported by VA research funds?

Answer. VA's research portfolio of more than 2,000 projects has produced numerous discoveries that have improved the quality of health care for veterans and the American public. The attached document "Impacts 2001" details 45 recent advances. Some of the more significant research results include:

—VA researchers have identified a promising new treatment for kidney cancer. Using a laboratory-developed analog of a hormone that inhibits the release of growth hormone, scientists were able to reverse cancer growth. Nobel Prize winner Andrew V. Schally, Ph.D., M.D.H.C, of the New Orleans VA Medical Center, leader of the research group, described the compound as "a magic bullet" that scientists have been seeking for 100 years.

—VA researchers in Seattle are developing new prosthetic limbs that will provide unprecedented mobility for veteran amputees. The resulting powered prosthetic limb is expected to reduce patient fatigue and produce greater propulsive forces for walking.

—Researchers have opened the door to the development of novel therapies for treating severe pain in bone cancer patients. They showed that osteoprotegerin, a substance that inhibits activity of bone-destroying osteoclast cells, also blocks pain in mice with bone cancer. Existing treatments for bone cancer pain can be ineffective, burdensome to administer, and accompanied by numerous side effects.

—Researchers found that some apparently healthy people showed signs of colon cancer. Using colonoscopy to examine the entire lining of the colon in seemingly healthy people aged 50–75, 10 percent were found to have colon cancer or serious precancerous growths. At least one-third of these lesions would have been missed by sigmoidoscopy; a more commonly used screening technique. Colon cancer usually can be cured if detected early.

—A VA team established that memory is made up of many systems, each supporting a different type of memory. This revolutionary concept may lead to treatments for learning disabilities, Alzheimer's disease, and other neurological problems.

—In a major breakthrough for understanding and treating schizophrenia, VA researchers have discovered a gene that plays a major role in schizophrenia and is linked to two physiological defects found in schizophrenics and their family members. Using a variety of genetic techniques, the researchers traced the chromosomal location of the defective gene to the site of a specific nicotine receptor.

—Researchers have identified a previously unknown dysfunction in neurons involved in multiple sclerosis (MS). They found that a specific sodium channel, the molecular "battery" that produces electrical impulses in nerve cells, occurs in cells of brains affected by MS but not in those without neurological disease. Their work could revolutionize the treatment of MS.

—VA scientists have identified a gene that plays a key role in development of Alzheimer's disease. More recently, a multi-center team of VA researchers found that a gene associated with the body's regulation of immune response might trigger earlier onset of Alzheimer's symptoms. VA investigators also identified a gene that causes a form of dementia characterized by tangles of long, stringlike filaments identical to those found in the brains of Alzheimer's patients.

—VA researchers in San Diego have discovered a cellular pathway that may offer a way to encourage liver cell growth in people with liver damage or to block the growth of liver tumors. This finding may also point the way to better artificial livers for people needing a transplant and may even suggest ways to restore lost cells in the brain and other tissues.

ATTACHMENT—IMPACTS 2001

DEPARTMENT OF VETERANS AFFAIRS, VETERANS HEALTH ADMINISTRATION, OFFICE OF RESEARCH & DEVELOPMENT, MAY 2001

A MESSAGE FROM THE CHIEF RESEARCH AND DEVELOPMENT OFFICER

The Office of Research and Development (ORD) focuses on health problems prevalent among veterans. This highly accomplished program spans the range of biomedical, clinical, health services, rehabilitation, and epidemiologic research. The mission of the VA research program is to discover knowledge and create innovations that advance the health and care of veterans and the nation. VA scientists are leaders in the development of cutting-edge health-care technology and are dedicated to their commitment in providing the best possible care for our veterans.

While pursuing the common goal of improving health care for veterans and the nation, the four services of VA research each bring unique strengths to our endeavor.

The Cooperative Studies Program, that I have the privilege of directing, is one of the most recognized large-scale clinical trial programs in the world. This program determines the effectiveness of new therapies through multi-center clinical trials. Investigators collaborate with colleagues across the nation and around the world to test new treatments that benefit veterans as well as the general population. Ongoing efforts range from testing the effectiveness of a vaccine against shingles in the elderly to determining whether intensified blood-sugar control can prevent major vascular complications in type II diabetes.

The Medical Research Service (MRS) is led by Paul Hoffman, M.D., and has a major role in serving veterans from its achievements in basic and clinical research. Major advances and contributions as a result of MRS include the successful treatment of tuberculosis, the first successful liver transplant, the concept that led to development of CAT scan, drugs for treatment of mental illness, and development of the cardiac pacemaker. New research is focusing on unraveling further the mysteries of cancer, multiple sclerosis, depression, stroke, Alzheimer's disease, Parkinson's disease, and diabetes.

The Health Services Research and Development Service (HSR&D) is led by John Demakis, M.D., and is a leader in identifying effective and efficient ways to organize and deliver health care. There are eleven HSR&D centers of excellence that focus on linking research to patient care. In addition, the HSR&D Quality Enhancement Research Initiative (QUERI) is translating research results into improved patient care. It targets conditions common among veterans, including chronic heart failure, diabetes, stroke, and spinal cord injury.

The Rehabilitation Research and Development Service (RR&D), led by Mindy Aisen, M.D., conducts research designed to maximize independence for patients by restoring lost function or decreasing the impact of disability. Research achievements range from new technology in the areas of amputation, spinal cord injury, vision impairment, and hearing loss to disabilities associated with aging. Recently, RR&D enhanced stroke therapy by being the first to demonstrate robot-assisted neurorehabilitation is more effective than the conventional treatment.

VA continues to focus its mission of providing excellent health care for America's veterans. VA researchers have long played key roles in developing important health care innovations and are dedicated to keeping VA at the forefront of science and medicine. I am pleased to present this document highlighting some of their major recent achievements.

JOHN R. FEUSSNER, M.D., M.P.H.

DESIGNATED RESEARCH AREAS

Aging and Age-Related Changes

Normal age-related changes
Aging syndromes (frailty, immobility, falls)
Compound problems and comorbidities (coexisting diabetes and coronary artery disease, dementia, hip fracture)
Care of elderly veterans
End of life issues

Acute Illness and Traumatic Injury

Amputation (injury or disease)
Bone fractures and joint injuries (repair and replacement)
(Traumatic) brain injury
Multi-organ failure
Shock (sepsis)

Military and Environmental Exposures

Emerging pathogens
Post-traumatic stress disorder (PTSD)
Psychological stress (violence, sexual abuse)
Thermal exposure (burns, hypothermia)
Toxins and irritants (dermal, reproductive, respiratory)

Chronic Diseases

Bone and joint disorders (chronic low back pain, osteoarthritis, osteoporosis)
Cancers (adult leukemia/lymphoma, solid tissue tumors, cancer pain)
Cardiovascular, cerebrovascular, and peripheral vascular diseases (related acute events: myocardial infarction, stroke, heart failure)
Chronic infectious diseases (HIV/AIDS, hepatitis)
Chronic lung disease
Chronic renal disease
Dementia & neuronal dysfunction (Alzheimer's and Parkinson's disease)
Diabetes & major complications
Gastrointestinal disorders (bowel and liver disorders)
Spinal cord injury & regeneration

Sensory Disorders and Loss

Hearing disorders
Vision disorders
Disorders of taste and smell

Mental Illness

Anxiety disorders
Behavioral disorders
Depression and mood disorders
Schizophrenia
Specialized VA mental health services (behavioral and medical interventions)

Substance Abuse

Alcohol
Drug
Tobacco
Dual diagnosis (alcohol and drugs)
Specialized substance abuse services (behavioral and medical interventions)

Special (underserved, high risk) Populations

Veterans with permanent disabilities (blind and paralyzed)
Veteran cohorts defined by shared military experience (prisoners of war, Persian Gulf veterans)
Historically underserved veterans (women, racial, ethnic, cultural minorities, rural veterans)
Veterans whose living arrangements pose challenges to their health (homeless, homebound)

Health Services and Systems

Supply and organization of resources & services
Delivery /coordination of resources & services
Outcomes of care

AGING AND AGE-RELATED CHANGES

Research in this area represents VA's efforts to identify the unique characteristics of the aging process and develop strategies to treat or prevent age-related health problems. Scientists have focused, for example, on the special nutritional needs of older adults; treatment and prevention of frailty, immobility and falls; and end-of-life issues. Following are a few examples of our recent research achievements in this area.

Post-stroke rehabilitation guidelines improve patient outcome

Stroke is one of the most costly, disabling, and deadly diseases. Stroke guidelines have been created to assist clinicians in providing standards for acute and post-acute care. These guidelines, however, have never been evaluated for their effect on patient outcomes. This observational study of nearly 300 patients for six months showed that complying with post-stroke guidelines has a positive effect on functional outcomes and patient satisfaction. Study results also show that guideline compliance was significantly higher for veteran patients who received inpatient post-acute rehabilitation in VA rehab units or non-VA acute rehabilitation settings compared to patients who received post-acute care in nursing homes. These findings support the use of guidelines to assess quality of care and improve outcomes. *Health Services Research and Development*

Hoenig H, Sloane R, Horner RD, Zolkewitz M, Duncan PW, Hamilton BB. A taxonomy for classification of stroke rehabilitation services. Archives of Physiology and Rehabilitation, 81(7):853–62, July 2000.

Reker DM, Hoenig H, Zolkewitz MA, Sloane R, Homer RD, Hamilton BB, Duncan PW. The structure and structural effects of VA rehabilitation bed service care for stroke. Journal of Rehabilitation Research and Development, 37(4):483–91, Jul–Aug 2000.

Age-associated memory loss may be reversible

A VA team and colleagues have identified a process by which the normal primate brain degenerates with aging and showed that this degeneration can be reversed by gene therapy. In a study of normal monkeys, the researchers found that aging was accompanied by significant shrinkage and loss of function in nerve cells of the brain's cholinergic system, which regulates the brain's cortex and hippocampus, allowing the cortex to process information. Equally important, these nerve cells were not dead, only atrophied, and returned to nearly normal function and appearance after gene therapy that delivered nerve growth factor to the impaired cells. In addition to implications for cognitive function in normal aging, the findings also may offer a new approach against the cognitive decline in conditions such as Alzheimer's disease, in which this same system of cells degenerates and dies. *Medical Research Service*

Smith DE, Roberts J, Gage FH, Tuszynski MH. Age-associated neuronal atrophy occurs in the primate brain and is reversible by growth factor gene therapy. Proceedings of the National Academy of Sciences, USA, 96(19):10893–8, 1999.

Patients' preferences for life-sustaining treatment in advance directives

An HSR&D project demonstrated the critical need for more informed advance care directives that accurately reflect patient preferences regarding life-sustaining treatment and inform provider decisions. Studies show that physicians may undervalue patient quality of life when compared with the patient's own perceptions. In addition, physicians, nurses and spouses generally were unable to judge accurately what, in the patient's opinion, would constitute "futile treatment."

This HSR&D research resulted in the publication of an advance care planning workbook entitled *Your Life, Your Choices*, which is now available on the internet at http://www.va.gov/resdev/programs/hsrd/ylyc.htm. This comprehensive workbook can be used to educate patients about advance care planning outside of the clinical setting. Exercises and other aspects of the workbook can promote meaningful communication between patients and proxies, facilitate efficient discussions between clinicians and patients, and guide future medical care in the event of decisional incapacity. Recommendations from this research have been distributed throughout the VA by the National Center for Clinical Ethics and at national meetings and conferences. The workbook's use in the VA health care system should improve the advance care planning process and advance directive completion rate in the VA. *Health Services Research and Development*

Pearlman RA, Starks HE, Cain KC, Rosengren D, Patrick DL. Your life, your choices—planning for future medical decisions: how to prepare a personalized living will. In: Pearlman RA, Starks HE, Cain KC, Rosengren D, Patrick DL, eds. Department of Veterans Affairs: Washington, DC, 1997.

Evaluation of geriatric evaluation and management (GEM) units

The proportion of veterans over age 65 will increase from 26 percent in 1990 to 46 percent in 2020, and VA must be prepared to serve the needs of this growing population. A large, multi-outcome study will determine whether specialized inpatient and outpatient units are the best way for VA to care for elderly patients. The impact of this study will extend far beyond VA, as millions of older Americans come under managed care. No other study is likely to provide the conclusive and incontrovertible evidence needed to guide policy in this critical area. *Cooperative Studies Program*

Evaluation of Geriatric and Management (GEM) Units and Geriatric Follow-up. CSP#6. Palo Alto.

Hospice study helps VHA improve end-of-life care

Increasing access to high-quality hospice services is an important element of VA's comprehensive strategy to improve care for terminally ill veterans. The Veterans Hospice Care Study provides important information on how to achieve this goal. The final report, which was submitted to Congress, highlights the different programs through which hospice care is delivered in the VHA, describes patient and family satisfaction with care, and identifies barriers to obtaining hospice care. These results are serving as the focal point for efforts to improve end-of-life care throughout the VA delivery system. *Health Services Research and Development*

Hickey EC, Berlowitz, DR, Anderson, J, Hankin C, Hendricks, A, Lehner L. The veterans hospice care study: an evaluation of VA hospice programs. Final Report. February, 1998. Report Number MRR 97–004.

New resource guide provides information on VA's long-term care services

A new, three-volume Guide to Long-Term Care Data in the VA is helping clinicians, researchers and policymakers plan care and services for those veterans who need long-term care. Now available through HSR&D's Veterans Information Resource Center web at http://www.virec.research.med.va.gov/DATABASES/LTCRGUID/EXPAGE.HTM, this guide was developed after researchers conducted a thorough review of VA databases for long-term care. It identifies sources of data for research, as well as clinical use, and documents the limitations of these data. *Health Services Research and Development*

ACUTE ILLNESS AND TRAUMATIC INJURY

The field of acute and traumatic injury centers on injuries due to blunt force, temperature extremes, electric shock, pressure, or diseases such as diabetes and cancer. Specific focus areas within this field include amputation, bone fractures, brain injury, multi-organ failure, stroke, and shock. Researchers are also investigating the physical, psychological, cognitive and behavioral effects of acute and traumatic injuries, and the health services and procedures required to treat them.

VA and non-VA hospitals comparable for heart attack care

This study found care for acute myocardial infarction to be comparable among patients in VA and non-VA facilities. Despite the fact that VA patients were significantly more likely to have other chronic complications, such as hypertension, chronic obstructive pulmonary disease (COPD) or asthma, diabetes, stroke or dementia, there were no significant differences in 30-day or one-year mortality for those receiving VA and non-VA hospital care. These data suggest a similar quality of care for acute myocardial infarction for patients in VA and non-VA institutions. *Health Services Research and Development*

Petersen LA, Normand SLT, Daley J, McNeil, B. Outcomes of myocardial infarction in Veterans Health Administration patients compared with medicare patients. The New England Journal of Medicine, 343:1934–41, December 28, 2000.

Improving amputee mobility and independence

VA researchers in Seattle are developing new prosthetic limbs that will provide unprecedented mobility for veteran amputees. Many individuals with amputations across the shin or thigh lack endurance because of the extreme effort simply to walk with today's prosthetic limbs. To combat this problem, researchers developed an artificial muscle and tendon to replace the lost musculature of the lower limb. The resulting powered prosthetic limb is expected to reduce patient fatigue and produce greater propulsive forces for walking. *Rehabilitation Research and Development*

Kllute GK, Hannaford B. Fatigue characteristics of McKibben artificial muscle actuators. Proceedings of the IEEEIRS7 1998 International conference on Intelligent Robotic Systems (IROS 1998), Victoria BC, Canada, 776–1781, 1998.

Popular arthritis drugs proven dangerous for ulcer sufferers

A new class of painkillers, COX-2 inhibitors, used to treat arthritis may prove dangerous for some individuals. These drugs differ from conventional nonsteroidal anti-inflammatory drugs (NSAIDs) in that they block the enzyme involved in pain and inflammation (COX-2) and do not harm COX-1, which protects the stomach. However, recent VA research shows that these drugs may block the body's natural ability to heal stomach ulcers by inhibiting angiogenesis, the formation of tiny blood vessels essential to wound and ulcer healing. Researchers treated rat and human cells with indomethacin, a conventional NSAID or NS–398, a COX-2 inhibitor. Results showed a significant decrease in angiogenesis with the COX-2 inhibitor. *Medical Research Service*

Jones MK, Wang H, Peskar BM, Levin E, Itani RM, Sarfeh IJ, Tarnawski AS. Inhibition of angiogenesis by nonsteroidal anti-inflammatory drugs: insight into mechanisms and implications for cancer growth and ulcer healing. Nature Medicine, 5(12):1418–23, December 1999.

Improved design and function of upper limb prostheses

A VA research initiative involving microcomputer technology will modernize the design of electric-powered upper limb prostheses. VA researchers have developed a position-sensitive controller that will improve functional performance, fitting flexibility, and ease of operation. The new controller provides sensory feedback from the prosthesis to the amputee, thus giving the amputee a better "feel" for the position of his prosthetic limb in space. This important research by VA will help assure better prostheses and better controllers for all upper-limb amputees. *Rehabilitation Research and Development*

Weir RF, Childress DS, Heckatborne CW. Towards achieving the goal of meaningful, coordinated, subconscious, multi-functional control of prostheses. Proceedings of the VA Rehabilitation Research & Development Service 1st Annual Meeting, "Enabling Veterans: Meeting the Challenge of Rehabilitation in the Next Millennium," Washington, DC, 1998.

Bertos YA. The design and development of an embedded microcontroller system for an E.P.P. based position controller for upper-limb prostheses. Master's Thesis, Department of Electrical Engineering, Northwestern University, 1999

MILITARY AND ENVIRONMENTAL EXPOSURES

Military and environmental exposures are a unique concern to veterans. Researchers working in this field are investigating the chronic health effects of events veterans experience during military service. This includes contact with foreign substances, such as toxins, irritants, or emerging pathogens, extreme temperatures, and post-traumatic stress disorder (PTSD). Gulf War veterans are a particular focus as we learn more about their special health concerns. Following are descriptions of selected studies in the areas of Gulf War veterans' illnesses, PTSD, and infectious agents.

Amyotrophic lateral sclerosis (ALS) among Gulf War veterans

The Durham Epidemiologic Resource and Information Center is conducting an epidemiological investigation of the incidence of ALS (Lou Gehrig's disease) among veterans of the Gulf War. The study is focusing in particular on three areas: defining the natural history of ALS; determining whether there is a higher-than-expected occurrence of ALS among Gulf War veterans; and ascertaining the possible or probable cause(s) of ALS if above normal event rates are determined.

Through a national survey of veterans and follow-up examinations, the study will increase the understanding of ALS among Gulf War veterans by developing descriptive epidemiology of cases. It will also compare the rate of ALS among Gulf War veterans with that of military personnel on simultaneous active duty but not deployed to the Gulf. Researchers are also investigating possible etiologic factors (with focus on environmental factors) in the Gulf and possible genetic-based susceptibilities to neurodegenerative disorders. *Cooperative Studies Program*

An investigation into the occurrence of ALS among veterans of the Gulf War. CSP# 500, Durham.

Testing antibiotic treatment for patients with Gulf War illnesses

VA researchers are testing a possible treatment for Gulf War illnesses (GWI). Although the cause of GWI is unknown, one explanation that has received fairly wide attention holds that infection with the microorganism Mycoplasma fermentans may be responsible. The purpose of this study is to determine the effectiveness of a one-year course of an antibiotic called doxycycline in patients with GWI who test positive for mycoplasma species. If doxycycline is shown to be effective, this relatively inexpensive and easily delivered drug could improve symptoms and possibly cure many veterans with GWI. *Cooperative Studies Program*

Collaborator: Pfizer Pharmaceuticals

Antibiotic treatment of Gulf War illnesses. CSP#475, Perry Point

Multi-modal therapy in veterans with Gulf War illnesses

There is no definitive therapy for treating patients with Gulf War illnesses (GWI), and veterans suffering from this symptom complex are frequently frustrated by continued pain, fatigue or cognitive difficulties. VA researchers are trying to determine whether cognitive behavioral therapy and aerobic exercise, two approaches that have provided relief for people with fibromyalgia and chronic fatigue syndrome, can be used to help veterans with GWI. The study has enrolled more than 1,000 veteran patients in one of four treatment groups: cognitive behavioral therapy plus aerobic exercise, aerobic exercise alone, cognitive behavioral therapy alone, and usual and customary care. This research may provide needed answers for veterans who suffer from these mysterious and often disabling illnesses. *Cooperative Studies Program*

A randomized, multi-center, controlled trial of multi-modal therapy in veterans with Gulf War illness. CSP#470, West Haven

Group-treatment model for PTSD

Despite the often devastating effects of post-traumatic stress disorder (PTSD) on veterans, there is no proven, effective method to treat this condition. This randomized clinical trial will test what VA considers to be the most promising approach for treating PTSD, trauma focus group therapy (TFGT). This study is evaluating the efficacy of TFGT for treating PTSD symptoms and its effect on other psychiatric symptoms, functional impairment, physical health and utilization of medical and mental health services. If this intervention is found to be effective and feasible, VA will have at least one proven therapy for veterans with this debilitating combat-related illness. *Cooperative Studies Program*

Group treatment of PTSD. CSP#420, Palo Alto

Flesh-eating bacteria studies point to better treatments

VA researchers have conducted landmark studies on the so-called "flesh-eating" group A streptococcal bacteria that can destroy body tissues and trigger fatal shock and organ failure. This team was the first to describe a group of patients who had suffered toxic shock syndrome caused by these strains of streptococci, the bacteria best known as the cause of strep throat. The researchers showed that toxins produced by these virulent strains cause the release of body chemicals that trigger the shock and organ failure. The team has also done critical work showing that penicillin, the antibiotic traditionally used to treat group A streptococcal infections, is ineffective against the flesh-eating strains and that patients must be treated with antibiotics that suppress toxin production. *Medical Research Service*

Stevens DL, Bryant AE, Hackett SP, Chang A, Peer S, Kosanke S, Emerson T, Hinshaw L. Group A Streptococcal bacteremia: the role of tumor necrosis factor in shock and organ failure. Journal of Infectious Diseases, 173(3):619–26, March 1996.

Stevens DL. The flesh-eating bacterium: what's next? Journal of Infectious Diseases, 179;Suppl 2:S366–74, March 1999.

CHRONIC DISEASES

VA research focuses on the range of chronic diseases and conditions that are highly prevalent among veterans, including life-threatening conditions and less severe problems that affect quality of life and the need for health services. The disease may be a primary ailment or a complication resulting from another disease. Specific areas of emphasis include bone and joint disorders, cancer, vascular diseases, chronic infectious diseases, lung and renal diseases, dementias, diabetes, gastrointestinal disorders, and spinal cord dysfunction. Below are short descriptions of VA research studies in some of these areas.

Optimal management of patients with HIV infection (OPTIMA)

VA's Cooperative Studies Program (CSP) has started a collaboration with the national health-research agencies for the United Kingdom and Canada, the UK Medical Research Council and the Canadian Institutes for Health Research.

The first study under the new partnership is a multi-drug strategy study designed to compare a "standard" treatment of three or four antiretroviral drugs to a "mega" treatment of five or more drugs in patients who have failed at least two "highly active" antiretroviral regimens. It is the first large-scale, multicenter, randomized controlled trial to compare the relative efficacy of the different therapeutic strategies. The overall goal is to prevent new or recurrent AIDS-related health events, such as pneumonia or death, through an optimal combination of drugs. A total of 1,700 patients will be randomized over a 2½ year period at 75 medical centers in three countries. The use of multiple settings in different therapeutic cultures' will allow for generalizability of the findings and provide evidence that will facilitate management of HIV disease in this group.

The study will be coordinated by the VA West Haven CSP Coordinating Center and is set to begin in 2001. Lead investigators are located at the Bronx and Palo Alto VA medical centers, the University of British Columbia, Canada, and the London School of Hygiene and Tropical Medicine, U.K. *Cooperative Studies Program*

Major trial testing new vaccine against shingles

Shingles in older people is extremely painful and can be disabling. Shingles is caused by the herpes-zoster virus that causes chickenpox in young people. After chickenpox is treated, the virus remains dormant in the body until late adulthood, when it may reactivate and cause shingles. There is no effective treatment for people who suffer from shingles lasting more than a month, nor is there an effective method to prevent shingles.

This study is testing a promising new vaccine for its ability to prevent shingles or reduce its severity and complications. This randomized, controlled trial will enroll 37,000 older veterans for a minimum of three years. If the vaccine proves successful, it will supply a safe and cost-effective means for reducing the severe impact of shingles and its complications on the health of older veterans. *Cooperative Studies Program*

Collaborator. Merck Pharmaceuticals

Trial of Varicella vaccine for the prevention of Herpes Zoster and its complications. CSP#403 West Haven.

Effect of custom orthosis on foot kinematics and forefoot pressure distribution

Foot ulcers related to conditions such as diabetes pose significant problems to patients and a vexing challenge to health care providers. Gaining an understanding of potential causes of foot ulcers, including increased pressures across the forefoot, bony malalignment, and changes in relative motions between bones can lead to a more systematic approach to treatment and prevention of this problem. An experimental flatfoot model is being used to determine the effects of rigid and compliant (flexible) orthoses on the movement of the foot. Computerized scans delineate the bone architecture of each foot and are used to create three-dimensional images for design of customized orthoses. Early results show that the rigid orthosis can correct eversion (outward turning) of three foot bones. *Rehabilitation Research and Development*

Sangeorzan BJ, Czerniecki JM. Rehabilitation Research and Development Center for Amputation, Prosthetics, Limb Loss Prevention, 2000.

Heart Disease

Rise in "good" HDL cholesterol vs. heart disease and stroke

The health benefits of reducing high levels of "bad" low-density lipoproteins (LDL) are widely known. VA researchers, however, have completed the first large-scale clinical trial to show that raising "good" HDL cholesterol levels (high-density lipoproteins) reduces the risk of heart disease and stroke. A VA Cooperative Study involving 2,531 men at 20 VA medical centers found that the drug gemfibrozil caused a 6 percent increase in "good" HDL cholesterol in comparison to a placebo. In addition, the medication reduced coronary heart disease death by 22 percent, nonfatal heart attacks by 23 percent, and stroke by 29 percent.

The finding is particularly encouraging because gemfibrozil is safe, economical, and available as a generic drug. The study results offer a new therapy for the 20 to 30 percent of coronary heart disease patients who do not have elevated "bad" LDL levels but do have low levels of HDL. Results indicating the benefit of gemfibrozil are being considered for inclusion within the Joint VA/DOD Clinical Practice Guidelines for the management of lipidemia in the subset of patients with this lipid profile. *Cooperative Studies Program*

Robins SJ, Collins D, Wittes JT, Papademetriou V, Deedwania PC, Schaefer EJ, McNamara JR, Kashyap ML, Hershman JM, Wexler LF, Rubins HB. Relation of gemfibrozil treatment and lipid levels with major coronary events, VA–HIT: a randomized controlled trial. Journal of the American Medical Association, 285(12):1585–91, March 28, 2001.

Rubins HB, Robins SJ, Collins D, Fye CL, et al. Gemfibrozil for the secondary prevention of coronary heart disease in men with low levels of high-density lipoprotein cholesterol. The New England Journal of Medicine, 5:341(6):410–8, August 5, 2000.

VA compares favorably with private sector in coronary angioplasty study

This quality-of-care evaluation showed that VA's tiered health care system produces excellent outcomes from high-tech cardiac procedures, compared with the private sector. In this study of coronary angioplasty patients, VA patients experienced no difference in hospital—or 30-day mortality compared with private-sector patients, even though the VA patients had more complicated conditions. In addition, VA patients underwent less bypass surgery (sometimes a complication of angioplasty) within 30 days of the angioplasty procedure. *Health Services Research and Development*

Ritchie JL, Maynard C, Chapko MK, Every NR, Martin DC. A comparison of percutaneous transluminal angioplasty in the Department of Veterans Affairs and in the private sector in the State of Washington. Journal of the American College of Cardiology, 81(9):1094–9, May 1, 1998.

Heart attack response findings offer hope for new treatments

Researchers from the VA San Diego Medical Center and the University of California at San Diego (UCSD) have discovered new information about the body's molecular response to hypoxia, a condition characterized by decreased oxygen levels in blood or tissue resulting from heart attack or closing of cardiac blood vessels. They successfully mapped the basic response period to these cardiac events, starting with the release of a protein (HIF–1) that stimulates the activation of blood-vessel-developing genes, and the progress of those genes in reparation of damaged tissue. The findings may lead to the development of new therapeutic treatments that could diminish the severity of heart attacks. Possible therapeutic implications may include the development of new treatments in emergency cardiac care.

The researchers are now planning to evaluate whether doctors can decrease heart attack severity and the damage done to heart tissue by increasing HIF–1 levels in cardiac patients, either pharmacologically or by gene therapy. Other researchers are investigating the effect of decreasing HIF–1 levels in cancer patients, with the intention of diminishing oxygen supply to cancer cells thereby prohibiting their growth and proliferation. *Medical Research Service*

Lee SH, Wolf PL, Escudero R, Deutsch R, Jamieson SW, Thistlethwaite PA. Early expression of angiogenesis factors in acute myocardial ischemia and infarction. The New England Journal of Medicine, March 2, 2000.

Cancer

New study results may lead to cancer pain treatment

Researchers have opened the door to the development of novel therapies for treating severe pain in bone cancer patients. They showed that osteoprotegerin, a secreted decoy receptor that inhibits activity of bone-destroying osteoclast cells, also blocks behaviors indicative of pain in mice with bone cancer. Osteoprotegerin actions seem to result from inhibition of tumor-induced bone destruction that in turn inhibits the neurochemical changes in the spinal cord, possibly involved in generating and maintaining cancer pain.

Although advances in cancer detection and therapy have increased the life expectancy of cancer patients, more than one million patients suffer from cancer-related pain each year. Pain is the first symptom of cancer in 20–50 percent of all cancer patients and 75–90 percent in advanced or terminal cancer patients. Bone cancer most frequently results from breast, ovarian, prostate, or lung cancer spreading to the bone. Progress in understanding and treating bone cancer pain will also provide insights into potential therapies for pains arising from soft tissue cancers.

Existing treatments for bone cancer pain can be ineffective, burdensome to administer, and accompanied by numerous side effects. Therapy for severe bone cancer pain nearly always involves morphine which, when given at doses required to the pain, induces unwanted side effects resulting in significant reduction in the patient's quality of life. *Medical Research Service*

Honore P, Luger NM, Sabino MA, et al. Osteoprotegerin blocks bone cancer-induced skeletal destruction, skeletal pain, and pain-related neurochemical reorganization of the spinal cord. Nature Medicine, 6(7):838, May 2000.

Colonoscopy may be best way to screen for colon cancer

Researchers at 13 VA medical centers found that a significant segment of an apparently healthy population showed signs of colon cancer. Using colonoscopy to examine the entire lining of the colon in 3,121 seemingly healthy people aged 50–75, 10 percent were found to have colon cancer or serious precancerous growths. In addition, at least one-third of these lesions would have been missed by sigmoidoscopy, a commonly used screening technique that reveals only the lower (distal) part of the colon's lining. The study is the first to directly compare exams limited to the distal colon with exams of the entire colon to determine possible additional benefits of colonoscopy screening in an asymptomatic group of patients. Researchers also found that colonoscopy appeared reasonably safe with few complications such as bleeding or reactions to sedation used to make patients more comfortable during the procedure.

Colorectal cancer is the second leading cause of cancer deaths in North America. It is marked by a premalignant phase in which growths called polyps develop in the colon lining. Not all polyps become cancerous, but those that progress to cancer typically develop abnormalities that flag them as dangerous. In the United States alone, it is now estimated that 138,000 men and women will be diagnosed with colorectal cancer each year and about 55,000 will die from the disease. The findings from this study provide the basis for a more sensitive colon cancer screening test and earlier detection and treatment. *Cooperative Studies Program*

Lieberman DA, Weiss DG, Bond JH, Ahnen DJ, Garewal H, Chejfec G. Use of colonoscopy to screen asymptomatic adults for colorectal cancer. The New England Journal of Medicine, 343(3):162–8, July 20, 2000.

VA research suggests path to more effective breast cancer treatment

Retinoic acid, a radioactive iodide currently used in fighting thyroid cancer, may have a role in the fight against breast cancer. Researchers and colleagues from the Molecular Endocrinology Laboratory, VA Greater Los Angeles Healthcare System, suggest that there is a potential for retinoic acid to increase the uptake of radioiodine into certain breast cancers. They found that retinoic acid stimulated the production of a specific protein, the sodium/iodide transporter, responsible for the increased uptake.

Findings to date are specific only for breast cancer cells that were capable of reacting to estrogen. However, retinoic acid may also be useful in the diagnosis and treatment of other types of breast cancer. *Medical Research Service*

Kogai T, Schultz JJ, Johnson LS, Huang M, Brent GA. Retinoic acid induces sodium/iodide symporter gene expression and radioiodide uptake in the MCF–7 breast cancer cell line. Proceedings of the National Academy of Sciences USA, 97(15):8519–24, July 18, 2000.

Landmark prostate cancer trial will illuminate treatment options

The management of localized prostate cancer in older men has generated considerable debate due to the risks and potential benefits associated with different treatment options. Prostate cancer is the second most frequent cause of cancer deaths in men. Research shows patients' treatment preferences vary significantly, depending on the risk associated with surgery, life expectancy, symptoms and tolerance for their symptoms. As a result, patient preference and experience are critical factors in making treatment decisions for prostate cancer.

Important questions remain concerning long-term outcomes for prostate cancer treatment. VA, in collaboration with the National Cancer Institute (NCI) and the Agency for Healthcare Research and Quality (AHRQ), is addressing these questions through a landmark study that compares the two most widely used treatment methods: radical prostatectomy, in which the prostate is surgically removed, and "watchful waiting" in which only the disease symptoms are treated. The Prostate Cancer Intervention Versus Observation Trial (PIVOT) is a 15-year randomized study involving 2,000 men from approximately 80 VA and NCI medical centers throughout the country. All patients will be followed for at least 12 years. The results will supply information on treatment-specific survival rates, complications and quality of life.

When completed, this study will provide more definitive answers on the best treatment for early-stage prostate cancer. If watchful waiting is as effective as surgery, millions of health care dollars could be saved every year by avoiding unnecessary surgery. On the other hand, results favoring surgery would highlight the need for early detection and treatment of this disease. *Cooperative Studies Program*

Collaborator. National Cancer Institute; Agency for Healthcare Research and Quality. Wilt TI, Brawer MK The prostate cancer intervention versus observation trial (PIVOT). Oncology, 11(8):1133–43, 1997.

Neurological Disorders

Award-winning research breaks important ground on human memory

Pioneering research by Larry R. Squire, Ph.D., winner of the 1994 Middleton Award, has shed new light on the nature and processes of memory, generating knowledge that may lead to treatments for learning disabilities, Alzheimer's disease, and other neurological problems. Among the key questions for which Dr. Squire and his colleagues are providing critical answers are: What is memory? Where is it stored in the brain and how does it work? What happens to memory during normal aging and in disease or brain injury?

The research team's studies established that memory is made up of many systems, each supporting a different type of memory. This revolutionary concept has changed the direction of research in this field. Through a series of animal experiments, VA researchers discovered the medial temporal lobe system that controls one form of memory. Their research also provided the first proof that the human hippocampus is a critical component of the medial temporal lobe memory system and is essential for human memory.

In another recent study, Dr. Squire and his colleagues focused on how the human brain files information. Using functional magnetic resonance imaging, a scanning technique that measures activity in different parts of the brain, they found that the brain structures associated with categorization are different from those necessary for simple rote memory. *Medical Research Service*

Knowlton BJ, Mangels JA, Squire LR. A neostriatal habit learning system in humans. Science, 273(5280):1399–402, September 6, 1996.

Reber PJ, Stark CE, Squire LR. Cortical areas supporting category learning identified using functional MR1. Proceedings of the National Academy of Sciences, USA;95 (2):747–50, 1998.

Clark RE, Squire LR. Classical conditioning and brain systems: the role of awareness. Science, 280(5360):77–81, 1998.

Larry R. Squire, Ph.D., VA San Diego Health Care System VA Merit Review, Medical Research Service

Robot-assisted arm movement helps stroke patients

Rehabilitation researchers are investigating the use of robot-assisted arm movement to promote neurologic recovery in persons weak on one side following a stroke. The new robotic system can assist shoulder and elbow movements in 3-dimensional patterns encompassing a large portion of the person's range of motion. The user can guide movement of his/her weak arm by moving the opposite arm in the mirror-image pattern. A clinical trial with chronic stroke subjects compared an eight-week intervention of robot-assisted movement with a control intervention of equal intensity consisting of conventional therapy.

The results indicate that robot therapy is as effective as conventional therapy, and may even have advantages over conventional therapy. Persons who trained with the robot had greater strength gains than persons who received conventional therapy. Robots can potentially implement highly repetitive, labor-intensive exercises more efficiently than currently possible. This is especially relevant given recent evidence that highly repetitive exercises may promote neurologic recovery. Robots can also potentially provide new exercise modes not currently possible. The advanced sensor technology on the mirror-image motion enabler allow precise measurement of interaction forces and movement patterns during therapy. This data will lead to a better understanding of the role of therapy in promoting neurologic recovery following stroke. *Rehabilitation Research and Development*

Burgar CG, Lum PS, Shor P, Van der Loos HFM: Development of robots for rehabilitation therapy: the Palo Alto VA/Stanford experience. Journal of Rehabilitation Research and Development, 37(6):663–73, November/December 2000.

Electromyographic imaging of muscle architecture

Understanding the way in which particular muscles produce force requires accurate knowledge of muscle architecture. Investigators in Palo Alto have developed a technique to study motor-unit architecture by analyzing electromyographic signals. Signals recorded, using a needle electrode during a moderate voluntary contraction, are processed to identify the action potential of each active motor unit in the vicinity of the electrode. Action-potential landmarks are then used to estimate the relative locations of each motor unit's neuromuscular and musculotendinous junctions.

The analysis of different muscles reveals a variety of architectural organizations, including different muscle-fiber lengths, single and multiple innvervation zones, pennation, and intramuscular aponeuroses. This type of analysis promises to be useful for studying muscle structure in normal subjects and structural changes in aging and disease. *Rehabilitation Research and Development*

Lateva ZC, McGill KC. Estimating motor-unit architectural properties by analyzing motor-unit action potential morphology. Clinical Neurophysiology, 112(1):127–35, January 2001.

Narcolepsy may be due to loss of brain cells

A loss of brain cells that make a chemical called "hypocretin' may be responsible for narcolepsy, a debilitating, lifelong disease that causes patients to fall asleep uncontrollably during the day. Researchers at the Sepulveda VAMC found that human brains from narcoleptics had up to 95 percent fewer hypocretin neurons compared with normal brains. Although hypocretin has been linked by scientists to narcolepsy in animals, the causes of human narcolepsy remains unclear. Researchers believe the loss of hypocretin neurons may stem from an autoimmune attack by the body, or a sensitivity of the cells to certain environmental or biological toxins.

Current treatments focus on the use of amphetamines and other stimulant drugs to keep narcoleptics awake during the day. These treatments to not completely reverse symptoms and produce unwanted side effects. This research confirms the potential for new therapies aimed at restoring the hypocretin messaging system in the brain. *Medical Research Service*

Thannickal TC, Moore RY, Nienhuis R, Ramanathan L, Gulyani S, Aldrich M, Cornford M, Siegel JM. Reduced number of hypocretin neurons in human narcolepsy. Neuron, 27(3):469–74, September 2000.

Sodium channels in multiple sclerosis and pain

Rehabilitations researchers have identified a previously unknown dysfunction in neurons involved in multiple sclerosis (MS). They found that a specific sodium channel, the molecular "battery" that produces electrical impulses in nerve cells, occurs in cells of brains affected by MS but not in those without neurological disease. Their work could revolutionize the treatment of MS.

In related work, the researchers recently discovered that two molecules control the expression of sodium channels involved in the hyperexcitability of pain-signaling neurons that occurs following nerve and spinal cord injury. The researchers have found that particular sodium channels are prevalent in spinal sensory neurons and not present in significant levels in other types of nerve cells. Increased understanding of the roles of these channels may lead to improved treatments for chronic pain disorders of the nervous system. *Rehabilitation Research and Development*

Black JA, Dib-Hajj S, Baker D, Newcombe J, Cuzner ML, Waxman SG. Sensory neuron-specific sodium channel SNS is abnormally expressed in the brains of mice with experimental allergic encephalomyelitis and humans with multiple sclerosis. Proceedings of the National Academy of Science, USA; 97(21):11598–602, October 10, 2000.

Fjell J, Cummins TR, Fried K, Black JA, Waxman, SG. In vivo NGF deprivation reduces SNS express and TTSX–R currents in IB4-negative DRG neurons. Journal of Neurophysiology, 81:803–11, February 1999.

Fjell J, Cummins TR, Davis BM, Albers KM, Fried K, Waxman SG, Black JA. Sodium channel expression in NGF-overexpressing transgenic mice. Journal of Neuroscience Research, 57:39–47, July 1, 1999.

FES and gait function after stroke

Investigators at the Cleveland Functional Electrical Stimulation (FES) Center are studying functional neuromuscular stimulation (FNS) to improve gait following stroke. Investigators found that stroke patients with sensation tolerate implanted FNS treatment with no discomfort. Preliminary findings show that acute stroke patients treated with implanted FNS have improvements in muscle function, coordination, and gait function. In a companion study, stroke patients who had completed conventional rehabilitation and had reached a functional plateau were treated with FNS twice weekly for nine months, achieving significant improvement in muscle function and gait deficits over their pre-FNS status. *Rehabilitation Research and Development*

Daly JJ, Ruff RL, Haycook K, Strasshofer B, Marsolais EB, Dobos L. Feasibility of gait training for acute stroke patients using FNS with implanted electrodes. Journal of Neurological Sciences, 179(1–2):102–7, October 1, 2000.

Daly JJ, Ruff RL. Electrically induced recovery of gait components for older patients with chronic stroke. American Journal of Physical and Medical Rehabilitation, 79(4):349–60, July–August 2000.

Daly JJ, Debogorski A, Strasshofer B, Scheiner A, Kollar K, Marsolais EB, Ruff RL, Snyder S. Percutaneous electrode performance and use for restoration of gait in patients with stroke. Journal of Rehabilitation Research and Development, in press.

Seeking better treatments for Parkinson's disease

A landmark VA Cooperative Study clinical trial will assess the effectiveness of surgical implantation of deep brain stimulation (DBS) to reduce the symptoms of Parkinson's disease. DBS is a new promising alternative therapy for Parkinson's disease. It will be compared to the current standard surgical treatment, pallidotomy, where a small lesion is made in a portion of the brain called the globus pallidus. The goal of this project is to compare these two treatments and determine the most effective brain site for DBS surgical intervention.

This study will be conducted at VA's six new Parkinson's Disease Research, Education, and Clinical Centers (PADRECCs) in Houston, Philadelphia, Portland, Richmond, San Francisco, and West Los Angeles. These centers will enable top VA researchers, clinicians, and educators to better understand Parkinson's disease, develop more effective treatments and clinical care strategies for patients, and improve education for caregivers. The study will begin in 2001 and will be a prospective, randomized, multi-center trial. While treatments exist, there is no cure for this debilitating disease that is becoming a serious health problem in the United States. VA medical centers treat at least 20,000 Parkinson's disease patients each year. *Cooperative Studies Program*

VA researchers discover genes involved in aging and Alzheimer's disease

VA is at the cutting edge of genetic research in human aging and Alzheimer's disease, the devastating brain disorder that afflicts some 4 million elderly Americans. VA researchers were part of an international team that discovered the first human gene associated with aging, a major advance in efforts to understand aging and age-related diseases. In addition, VA researchers identified the gene that causes Werner's Syndrome, a rare inherited disorder marked by premature aging. They also found that this gene normally directs the production of enzymes called helicases, which cells need to uncoil and reproduce DNA and perform other cell functions. The team's findings indicate that mutations affecting DNA are key to the aging process.

VA researchers have also identified a gene that plays a key role in development of Alzheimer's disease. This discovery may allow them to better understand how the disorder develops in people who carry this gene. More recently, a multi-center team of VA researchers found that a gene associated with the body's regulation of immune response may trigger earlier onset of Alzheimer's symptoms.

VA investigators also identified a gene that causes a form of dementia characterized by tangles of long, string-like filaments identical to those found in the brains of Alzheimer's patients. Previously, these filaments were thought to be a consequence of Alzheimer's rather than a factor in the disease's progress. The investigators found that a mutated form of the so-called "tau" gene produces these long filaments and causes nerve cell death in patients with frontotemporal dementia. These findings point to the tau gene as a potential target for new Alzheimer's disease treatments. *Medical Research Service*

Yu CE, Oshima J, Fu YH, Wijsman EM, Hisama F, Alisch R, Matthews S, Nakura J, Miki T, Ouais S, Martin GM, Mulligan J, Schellenberg GD. Positional cloning of the Werner's syndrome gene. Science, 272(5259):258–62, April 12, 1996.

Payami H, Schellenberg GD, Zareparsi S, Kaye J, Sexton GJ, Head MA, Matsuyama SS, Jarvik LF Miller B, McManus DQ, Bird TD, Katzman R, Heston

L, Norman A, Small GW. Evidence for association of HLA–A2 allele with onset age of Alzheimer's disease. Neurology, 49(2):512–8, August 1997.

Osteoporosis/Osteoarthritis

Working to understand and prevent osteoporosis

Researchers at the Little Rock VA Medical Center, supported under the Research Enhancement Awards Program (REAP), are advancing understanding of osteoporosis, a bone disease affecting more than 28 million Americans. Specifically, the multidisciplinary effort focuses on identifying the mechanisms of bone loss in patients with metabolic, orthopedic, and cancer-related diseases, and the development of novel therapies for their management. Six VA investigators, led by Stavros C. Manolagas, M.D., Ph.D., are combining expertise in geriatrics, orthopedics, surgery, biochemistry and pharmacology. The REAP funds will also be used to create new training opportunities and to launch novel research initiatives that will translate basic research findings into clinical applications. *Medical Research Service*

Jilka PL, Weinstein RS, Bellido T, Roberson P, Parfuitt AM, Manolagas SC. Increased bone formation by prevention of osteoblast apoptosis with parathyroid hormone. Journal of Clinical Investigations, 104(4):439–46, August 1999.

Defective cartilage cells linked to osteoarthritis

Researchers have found that nitric oxide, a potentially harmful free-radical gas found in the body, can significantly disturb the ability of mitochondria to breathe and produce energy. Their data suggests that a cartilage cell's mitochondria (structures within cells that produce most of the energy necessary for general health and well-being) go through a type of power failure where they no longer produce energy to generate healthy cartilage. Therefore, calcium deposits are formed and the joints deteriorate. Little is known about the biological causes of the disease. Since osteoarthritic cartilage is chemically different from normal aged cartilage, the disease does not appear to be a result of aging itself.

Current VA research suggests the potential for new drugs aimed at preserving mitochondrial function in cartilage cells, thereby stemming joint deterioration. Osteoarthritis, also known as degenerative joint disease, is the most common form of arthritis. Symptoms include pain, stiffness, and inflammation in the joints. Treatment typically involves pain-relieving and anti-inflammatory drugs along with heat-therapy and exercise. This treatment alleviates symptoms but does not address the cause of the disease. *Medical Research Service*

Johnson K, Jung A, Murphy A, Andreyev A, Dykens J, Terkeltaub R. Mitochondrial oxidative phosphorylation is a downstream regulator of nitric oxide effects on chondrocyte matrix synthesis and mineralization. Arthritis and Rheumatism, 43(7):1560–70, July 2000.

Mechanical stimulation gives human arthritic cartilage cells a boost toward health

Research at the VA Palo Alto Rehabilitation Research and Development Center has yielded new insights into the response of human osteoarthritic cartilage cells to physical force or pressure. As a joint surface is damaged by disease, a specialized form of the structural protein, collagen, is lost from the cartilage, exposing the bone surface, causing pain and reducing freedom of movement. Researchers at the Palo Alto Rehabilitation Research Center showed that a short daily application of hydrostatic pressure, followed by a period with no pressure, increased expression of molecules essential to formation of collagen. Future studies will try to determine which loading conditions produce the best responsiveness and to assess whether mechanical stimulation will provide a viable way to regenerate health cartilage in diseased joints. *Rehabilitation Research and Development*

Smith RL, Lin J, Kajiyama G, Shida J, Trindade MCD, Yerby S, van der Meulen MCH, Vu T, Hoffman AR, Schurman DJ, Beaupre GS, Carter DR. Hydrostatic pressure and cartilage repair—analysis of chondrocyte collagen gene expression. Transactions of the 18th Annual Meeting of the Society for Physical Regulation in Biology and Medicine, 1998.

New methods for analyzing densitometry results can improve osteoporosis diagnosis

Dual-energy X-ray Absorptiometry (DXA) is currently the method of choice for measuring bone density and identifying individuals with low bone mass and osteoporosis. Results can be misleading, however, because different-sized bones of the same density can produce different readings. Researchers at the VA Palo Alto Rehabilitation R&D Center have developed a simple method for adjusting DXA scans of the heel bone for bone size.

This new method provides an accurate determination of volumetric bone density. In addition, this group of researchers has developed a new DXA-based index for estimating fracture risk in normal and osteoporotic patients. These new methods have immediate clinical applicability in helping to identify individuals at risk for osteoporotic fractures. *Rehabilitation Research and Development*

Wren TAL, Yerby SA, Beaupre GS, Carter DR. Interpretation of calcaneus dual-energy X-ray absorptiometry measurements in the assessment of osteopenia and fracture risk. Journal of Bone and Mineral Research, 15(8):1573–8, August 2000.

Liver/Kidney Disease

Study launched for severe diabetes complications

A large-scale clinical trial may determine whether intensified blood-sugar control can prevent the major vascular complications that lead to most deaths, illnesses, and treatment costs for patients with type II diabetes. This is a seven-year VA study in collaboration with the American Diabetes Association and several pharmaceutical companies, including SmithKline Beecham, Novo-Nordisk, Aventis, KOS, and Roche Diagnostics. The study will be conducted at 20 VA medical centers and will enroll 1,700 patients with type II diabetes for whom standard drug therapy is no longer adequate. Patients will be followed for five years to assess rates of major macrovascular events, including heart attack, heart failure, stroke, amputations due to ischemia, surgery for coronary artery or peripheral vascular disease, and cardiovascular death.

Participants will receive either standard therapy or an intensive therapy that would involve higher doses of the same drugs. Standard therapy for type II diabetes includes sulfonylurea and insulin-sensitizing medications designed to lower blood-sugar levels and sensitize the body to naturally produced insulin. The intensive therapy will include medications, along with other antihyperglycemic drugs and insulin that will be added in steps. The risk for type II diabetes increases with age, with most cases developing after age 40. More than 18 percent of Americans over age 65 and more than one-fourth of the VA patient population have type II diabetes. *Cooperative Studies Program*

Cellular on-off switch provides new tactics against liver disease

VA researchers in San Diego have discovered a cellular pathway that may offer a way to encourage liver cell growth in people with liver damage or to block the growth of liver tumors. They found that a gene cloned in the laboratory was a powerful regulator of development when they stimulated mouse liver cells with a hormone known to trigger cell growth. The key step was a single change in the protein product of that gene.

This finding may also point the way to better artificial livers for people needing a transplant and may even suggest ways to restore lost cells in the brain and other tissues. The researchers now hope to learn more about the mechanics of the protein change so they can use it as an "on-off" switch for cell growth, possibly developing drugs or other techniques to flip that switch. *Medical Research Service*

Buck M, Poli V, van der Geer P, Chojkier M, Hunter T. Phosphorylation of rate serine 105 or mouse threonine 217 in C/EBP beta is required for hepatocyte proliferation induced by TGF alpha. Molecular Cell, 4(6):1087–92, December 1999.

VA researchers identify potential new kidney cancer treatment

VA researchers have identified a promising new treatment for kidney cancer. Using a laboratory-developed analog of somatostatin, a hypothalamic hormone that inhibits the release of growth hormone, scientists were able to target specific receptors on tumor sites and reverse cancer growth. Nobel Prize winner Andrew V. Schally, Ph.D., M.D.H.C, of the New Orleans VA Medical Center, leader of the research group, described the compound as "a magic bullet" that scientists have been seeking for 100 years.

Researchers implanted two types of human renal cell carcinoma (RCC) tumors in mice, and injected them with an analog, AN-238, previously shown to be effective in the treatment of prostate cancer, breast cancer, and brain tumors. After five weeks of treatment, the volume of the two types of tumors had decreased 67.2 percent and 78.3 percent. The analog works by targeting receptors on the surface of RCC tumors, inhibiting and even reversing tumor growth.

This is the first application of the cytotoxic (cell-destroying) compound in RCC, the most common form of kidney cancer. RCC is diagnosed in an estimated 28,000 Americans each year and nearly 12,000 people died from the disease in 1999. These latest findings represent a great stride toward treatment of a cancer that has been resistant to both chemotherapy and radiation and has a very low survival rate. *Medical Research Service*

Plonowski A, Schally AV, Nagy A, Kiaris H, Hebert F, Halmos G. Inhibition of metastatic renal cell carcinomas expressing somatostatin receptors by a targeted cytotoxic analogue of somatostatin AN-238. Cancer Research, 1;60(11):2996–3001, June 2000.

Anti-anemia drug for dialysis patients may be administered subcutaneously

More than 90 percent of hemodialysis patients experience severe anemia. A new drug, recombinant human erythropoietin, is very effective at combating this anemia, but its cost is $5,000 to $10,000 per patient annually when administered intravenously. However, a randomized, multi-center trial by VA found that recombinant human erythropoietin can be administered just as effectively subcutaneously (under the skin), with a dosage reduction of 32 percent and no substantial increase in patient pain or discomfort. The Cooperative Studies Program is working with the Health Care Finance Administration to estimate potential savings to Medicare from this subcutaneous administration. *Cooperative Studies Program* Collaborator: AMGEN Pharmaceuticals

Kaufman JS, Reda DJ, Fye CL, Goldfarb DS, Henderson WG, Kleinman JG, Vaamonde CA. Subcutaneous compared with intravenous epoetin in patients receiving hemodialysis. Department of Veterans Affairs Cooperative Study Group on Erythropoietin in Hemodialysis Patients. New England Journal of Medicine; 339(9):578–83, August 27, 1998. CSP#392, Hines.

Transgene treatment for diabetes

Type I diabetes mellitus is usually followed by autoimmune destruction of cells in the pancreas, leading to insufficient insulin production. Diabetes is a natural candidate for treatment by gene therapy since clinical symptoms are caused by a decreased production of a single protein. Numerous studies have demonstrated that functional gene transfer is successful both in animals and in cell cultures. Attempts to regulate transgenic insulin production, however, have proven inadequate as the insulin secretion has been insufficient to normalize blood glucose or it has produced lethal hypoglycemia. This study has resulted in the design of a system where insulin gene therapy utilizes transcription to regulate hepatic production of transgenic insulin.

Effective and safe insulin gene therapy will require regulation of transgenic insulin secretion. Researchers at the Atlanta VA Medical Center have created a liver-targeted insulin transgene by engineering glucose responsive elements into a hepatic promotor containing an inhibitory insulin response sequence. They demonstrated the applications of this transgene for the treatment of diabetes mellitus in mice by administering a genetically recombined virus. Blood sugar levels were reduced and maintained after a substantial glucose load. *Medical Research Service*

Thule PM, Liu JM. Regulated hepatic insulin gene therapy of STZ-diabetic rats. Gene Therapy, 7:1744–52, October 2000.

SENSORY DISORDERS

Humans rely on sensory perceptions to interact with and interpret their surrounding environment. Loss or impairment of a sense, such as sight or hearing, can be a traumatic event, causing mental and emotional anguish. VA researchers are working toward understanding the biological causes of sensory loss, restoring or improving lost function for affected individuals, and improving the health services and rehabilitation aids that are available. Below are examples of our research in vision, hearing, and neurologic recoveries.

Outcome measurement system for blind rehabilitation services

The measures developed in two VA Merit Review projects form the basis of the national database implemented by VA Blind Rehabilitation Service and Information Technology Service on Jan. 1, 2001. Items from the Satisfaction Survey and the Functional Outcomes instruments are being used by VA headquarters to evaluate rehabilitation outcomes for Blind Rehabilitation Service. Reports on these measures are provided on a quarterly basis to all VA Blind Rehabilitation Centers and VA headquarters for purposes of program evaluation. *Rehabilitation Research and Development*

De l'Aune W, Welsh RL, Williams MD. Outcome assessment of the rehabilitation of people with visual impairment: a national project in the United States. Journal of Visual Impairment and Blindness, 95(5):281–91, 2000.

Improvement of visual function evaluations

The procedures developed in two VA projects using the scanning laser ophthalmoscope have challenged the prevailing clinical lore about preferred retinal locus

(PRLs) characteristics (exact location of the retina) and scotoma characteristics (a blind spot or blind area within the normal bounds of vision). The results from these projects have been incorporated into practice plans for vision rehabilitation.

The scanning laser ophthalmoscope has improved evaluation of visual function in people with impaired vision. In particular, it has enhanced the assessments including the relationship between basic eye movements and the ability to carry out complex tasks, the ability to find information in a visual field, and face recognition ability. Defining the relationship between visual function as assessed by the scanning laser ophthalmoscope and activities of daily living is refining diagnostic and training methods used in vision rehabilitation services. *Rehabilitation Research and Development*

Schuchard RA, Fletcher D. Preferred retinal loci and the scanning laser ophthalmoscope, in "principles and practice of ophthalmology, Section: optics and low vision rehab", Kraut J, Azar D, section ed. Albert D, Jakobiec F ed. Saunders, Philadelphia, 2000.

Schuchard RA. Evaluation of visual function, in "Self study series: adult low vision rehabilitation," M. Warren ed., American Occupational Therapy Association Publications, Washington DC, 2000.

Popular hearing aids undergo scientific evaluation

Although they have been in use for decades, three popular types of hearing aids—accounting for 70 percent of the market—underwent their first rigorous scientific testing in a clinical trial by VA's Cooperative Studies Program and the National Institute on Deafness and Other Communication Disorders (NIDCD). Results of the study, conducted at eight VA medical centers, may enable doctors to help millions of Americans deal more effectively with hearing loss. The report shows that hearing aids substantially help users in both quiet and noisy situations.

Hearing loss is particularly prevalent among veterans, in part due to increased occupational exposure to loud noise on military bases. In 1999, 85,000 veterans were fitted for hearing aids at VA medical centers. Due to its expertise in audiology, the VA healthcare system was chosen as a partner in hearing-aid research by NIDCD, part of the National Institutes of Health (NIH).

Up to 28 million Americans—including about a third of those age 65 or older—have nerve-related hearing loss, which can often be helped by hearing aids. But only about 20 percent of those who can benefit from hearing aids wear them. One reason is that many primary-care doctors may not be fully informed on the benefits of hearing aids. Primary-care doctors will benefit from knowing that hearing aids are an effective treatment for many patients, especially those with mild to moderate hearing loss. *Cooperative Studies Program*

Larson VD, Williams DW, Henderson WG, Luethke LE, Beck LB, et al. Efficacy of 3 commonly used hearing aid circuits: A crossover trial. Journal of the American Medical Association, 284(14):1806–13, October 11, 2000.

MENTAL ILLNESS

VA research in mental illness focuses on cognitive conditions, from anxiety disorders and depression to advanced schizophrenia. Investigators have made great strides toward identifying the underlying causes of these disorders and are currently working to identify improved treatment methods and better health service systems to care for those with mental illness. Following are brief descriptions of important studies that illustrate VA's research in this important area.

Team management improves depression care

Depression is the second most prevalent medical condition in the VA and has an impact on function and quality of life that is worse than many other chronic physical conditions. Most depression treatment takes place in primary care where it continues to be under-detected and under-treated. This study of depression treatment adapted the collaborative care model for managing chronic illness to the VA primary care setting and compared the team care approach with traditional consult-liaison treatment. In the team model, psychiatrists, psychologists and social workers were assigned to a team that developed a treatment plan based on the initial assessment and provided the plan to the primary care provider. Primary care provider efforts were reinforced by patient education materials and brief social work phone calls to support patient adherence, address treatment barriers and monitor symptomatology.

Team care resulted in significantly greater improvement in depressive symptomatology and psychosocial function than the more traditional consult-liaison treatment without increasing outpatient visits. As more chronic conditions are treated in the primary care setting, using this model may improve patient outcomes at a reasonable cost. Its potential impact on care and outcomes for depression and other chronic conditions could be great. *Health Services Research and Development*

Hedrick SC, Chaney EF, Liu CF, Felker BL, Bagala R, Paden GR. Process of care in innovative and traditional treatments for depression in VA primary care: reallocating resources. Presented at VA Health Services Research and Development Service Annual Meeting, Washington, DC, February 15, 2001.

Chaney EF, Hedrick SC, Felker BL, Liu CF, Paden GR, Hasenberg NM. Improving treatment for depression in primary care: alternate strategies. Presented at Society of Behavioral Medicine Annual Scientific Sessions, Seattle, WA. March 23, 2001.

Screening tool helps to identify depression

Major depression can have serious consequences, yet it often goes undiagnosed and untreated. VA physicians now have an effective two-question screening tool they can use in outpatient settings to help identify veterans with major depression. They also have a new awareness of the scope of the problem. Recent research shows that depression is prevalent among 14 percent of VA outpatients (excluding those with substance abuse problems, mania and/or psychosis). These findings have been widely disseminated to increase screening. *Health Services Research and Development*

Whooley MA, Avins Al, Miranda J, et al. Case-finding instruments for depression: two questions are as good as many. Journal of General Internal Medicine, 12(7):439–45, July 1997.

Award winning sleep studies may help mentally ill

Eminent sleep researcher Robert McCarley, M.D., Deputy Chief of Staff for Mental Health Services at the Brockton/West Roxbury VA Medical Center, won the 1998 William S. Middleton Award, one of VA's highest scientific honors. Recognized as an authority on REM (rapid eye movement) sleep, Dr. McCarley was honored for his important contributions to our understanding of sleep and dreaming. For example, he was the first to systematically develop quantitative methods for testing hypotheses on cellular control of sleep states. He and his colleagues have identified control mechanisms for non-REM sleep and demonstrated that certain brain stem cells that use the neurotransmitter (chemical messenger between nerve cells) acetylcholine are critical for promoting REM sleep. In contrast, they found that other brain cells using the neurotransmitters serotonin and norepinephrine act to inhibit REM sleep. McCarley's work has helped set the stage for new approaches to sleep abnormalities, including sleep disruptions in psychiatric disorders. *Medical Research Service*

Porkka-Heiskanen T, Strecker RE, Thakkar M, Bjorkumm AA, Greene RW, McCarley RW. Adenosine: a mediator of the sleep-inducing effects of prolonged wakefulness. Science, 276(5316):1265–8, May 23, 1997.

Discovery of schizophrenia-associated gene

In a major breakthrough for understanding and treating schizophrenia, VA researchers have discovered a gene that plays a major role in schizophrenia and is linked to two physiological defects found in schizophrenics and their family members. In studies of nine families with multiple cases of schizophrenia, scientists learned that an inability to screen out irrelevant background noise, a common defect in schizophrenics, is linked to a specific gene that codes for a brain receptor activated by nicotine. This discovery may help explain why schizophrenics tend to be heavy smokers. Although well documented, the high incidence of smoking among schizophrenics had been overlooked as a possible link to the root of schizophrenia.

VA researchers tested subjects for the defect by subjecting them to repeated sounds while recording brain waves. Results showed that the defect is hereditary and is present in non-schizophrenic as well as schizophrenic family members. Using a variety of genetic techniques, the researchers traced the chromosomal location of the defective gene to the site of a specific nicotine receptor.

More recently, these investigators found that a defect in eye movement tracking is linked to the same receptor. These findings of sensory defects linked to a specific neurotransmitter receptor could have major ramifications for schizophrenia treatment. Although inhaling nicotine activates the receptor and provides short-term relief for schizophrenics, the effect is too short-lived to be of treatment value. Researchers are now investigating the cause of the genetic malfunction and are collaborating with drug companies to identify potential drugs to bind the receptors. *Medical Research Service*

Freedman R, Coon H, Myles-Worsley M, Orr-Urtreger A, Olincy A, Davis A, Polymeropoulos M, Holik J, Hopkins J, Hoff M, Rosenthal J, Waldo MC, Reimherr F Wender P, Yaw J, Young DA, Breese CR, Adams C, Patterson D, Adler LE, Kruglyak L, Leonard S, Byerley W. Linkage of a neurophysiological deficit in schizo-

phrenia to a chromosome 15 locus. Proceedings of the National Academy of Sciences, USA, 94(2):587–92, 1997.

Study contributes to medication guidelines for schizophrenia management

Antipsychotic medication is an essential component of treatment for schizophrenia, the second most common discharge diagnosis in VA. Researchers studied the relationship between patient outcomes and the management of medication for schizophrenia. Results showed that 49 percent of patients receiving care through a VAMC or state psychiatric hospital were prescribed doses outside the range recommended by practice guidelines for schizophrenia. This study also showed that patients who were prescribed medication within practice guidelines had significantly less severe symptoms. Findings from this study have contributed to the selection of national performance measures for the VA that will improve the quality of medication management and better patient outcomes. *Health Services Research and Development*

Kirchner JE, Owen RR, Nordquist C, Fischer EP. Diagnosis and management of substance use disorders among inpatients with schizophrenia. Psychiatric Services, 49(1):82–5, January 1998.

SUBSTANCE ABUSE

Research on substance abuse encompasses all types of addiction, including alcohol, nicotine, and other drugs. VA scientists are working to identify the underlying causes of abuse and addiction, and the subsequent treatment and rehabilitation methods that prove most effective. Research also includes efforts to understand the ramifications of substance abuse throughout the body, such as the liver disease resulting from alcohol abuse. Below are two examples of progress in this critical area.

Probing the genetics of alcoholism

VA researchers are among leaders in research devoted to teasing out the complex interplay between heredity and alcoholism. For example, one VA team recently reported that genetically engineered mice without a certain cell receptor consumed less alcohol than unaltered mice. Mice without the dopamine D2 receptor, a cellular docking site for the brain chemical dopamine, consumed half as much alcohol as "wild type" mice. The study illustrates a technique in which particular genes influence substance abuse. Researchers use molecular methods to delete, or "knock out", a suspect gene and then study the effect in the "knock out" mice. In an earlier study, the VA researchers discovered that mice without a gene containing the receptor for serotonin, consumed twice as much alcohol as unaltered mice.

Although they are just beginning to understand the role played by receptor subtypes in alcohol consumption, VA researchers indicate these studies may ultimately lead to new pharmacological treatments or gene therapies. The researchers caution scientists who study how genes affect behavior that genetically identical mice behave differently in seemingly identical tests at three separate laboratories. They emphasize that genetic manipulation and effects should be replicated cautiously before drawing conclusions, especially when there are slight results in behavioral differences. *Medical Research Service*

Crabbe JC, Wahlsten D, Dudek BC. Genetics of mouse behavior: interactions with laboratory environment. Science, 284(5420):1670–2,1999, June 4, 1999.

Phillips TJ, Brown KJ, Burkhart-Kasch S, Wenger CD, Kelly MA, Rubinstein M, Grandy DK, Low MJ. Alcohol preference and sensitivity are markedly reduced in mice lacking dopamine D2 receptors. Nature Neuroscience, 1(7):610–5, November 1998.

Youthful drinking linked to alcoholism in later years

Marc A. Schuckit, M.D., a world leader in the study of alcoholism, won the 1997 Middleton Award for more than 20 years of pioneering research on the importance of genetic influence in alcohol dependence. His innovative population studies have set the stage for exciting progress in efforts to identify genes that play a role in alcoholism.

In a landmark investigation, Dr. Schuckit and his colleagues tracked 453 men, starting when they were college students, for 10 years to determine the relationship between the initial effect of alcohol on a person and later alcoholism. The research team found that men who showed little reaction to alcohol as students were far more likely to become alcoholics 10 years later. Thus, being able to "hold one's liquor" at age 20 was a warning sign for risk and clearly raising the possibility that genes controlling a person's initial reaction to alcohol may contribute to later alcoholism.

These findings were instrumental in a decision by the National Institute on Alcohol Abuse and Alcoholism to invest almost $5 million a year over 10 years in the six-center Collaborative Study on the Genetics of Alcoholism. Dr. Schuckit is among the principal investigators for this project, which is yielding important advances in the search for genes related to alcohol dependence. *Medical Research Service*

Schuckit MA, Smith TL. An 8-year follow-up of 450 sons of alcoholic and control subjects. Archives of General Psychiatry, 53(3):202–10, March 1996. Marc A. Schuckit, M.D., VA San Diego Health Care System and the National Institute on Alcohol Abuse and Alcoholism.

Combination treatment helps smokers kick the habit

Smoking is a major problem among veterans, contributing to a variety of health problems, including arterial disease, heart disease, chronic lung disease, lung cancer, and other disorders. VA researchers have found that smokers who took mecamylamine orally and used a nicotine patch were more successful at quitting than smokers who used only a patch. In one study, participants who used the combination approach had a 40 percent smoking-abstinence rate after six months, compared with 15 percent among those who used a patch alone. In another study, 40 percent of subjects who used the combination before trying to quit were successful, compared with success rates of 10 to 20 percent among those who used a patch only, mecamylamine only, or a placebo.

When used with a nicotine patch, mecamylamine destroys the taste of tobacco and blocks brain receptors that help nicotine produce its pleasurable and addictive effects. The approach offers a new strategy against smoking addiction and its related health impacts. *Medical Research Service*

Rose JE, Behm FM, Westman EC. Nicotine-mecamylamine treatment for smoking cessation: the role of pre-cessation therapy. Experimental and Clinical Psychopharmacology, 6(3):331–43, August 1998.

Jed E. Rose, Ph.D., VAMC Durham, NC American Cancer Society

New pharmaceuticals to treat addictive disorders

The VA Cooperative Studies Program and the National Institute on Drug Abuse (NIDA) are working together to clinically test medications for substance abuse, alcohol abuse, and mental illness. The goal of this program is to support the development and subsequent marketing of new pharmaceutical entities to treat addictive disorders and certain mental illnesses. These are areas of research that have been under-represented in the pharmaceutical development and for which a high national priority has been set by the Congress.

This collaboration will consist of several projects, including seven recent, completed, or current studies. Three of the seven studies involve the drug buprenorphine for the treatment of opiate-dependent patients. One of these studies tested the efficacy of a liquid formulation, while another studies the safety and efficacy of the combination drug buprenorphine/naloxone. Successful results of these studies are now being reviewed by the FDA. If the buprenorphine/naloxone combination is approved, it would allow a formulation that could be given in a take-home dosing form by physicians experienced in the treatment of opiate dependence, thus resulting in a third study in this area. There are currently 583 patients in their last year of follow-up at 38 test sites in six states, including New York, Florida, Illinois, Texas, California, and Washington. *Cooperative Studies Program*

SPECIAL POPULATIONS

Demographic, socioeconomic, and health risk factors distinguish some groups of veterans from the general population. The VA Office of Research and Development is ensuring that these groups are fairly represented in the research program. Veteran populations identified for special attention include veterans with permanent disabilities, veteran cohorts defined by shared military experience, minority veterans, and homeless, institutionalized or homebound veterans. Examples of VA's research in this area follow.

Teledermatology benefits veterans with limited access to health-care delivery

Digital images of visual information can be transmitted within telemedicine networks. This study compared the reliability for the diagnoses and management plans given by clinic-based examiners to those of consultants using digital imagery. Preliminary results show that dermatologists agree on their diagnoses of skin lesions equally well whether evaluating the patient in person or reviewing the digital image. In addition, investigators found diagnostic accuracy to be comparable among clinic-based and digital image examiners. This study suggests that the clinical use of digital imaging is an appropriate alternative for patients with limited access to adequate clinical care. *Health Services Research and Development*

Whited JD, Hall RP, Simel DL, Foy ME, Stechuchak KM, Drugge RJ, et al. Reliability and accuracy of dermatologists' clinic-based and digital image consultations. Journal of the American Academy of Dermatology, 41(5 Pt 1):693–702, November 1999.

Services needed for women veterans differ from those of men

Findings from an HSR&D study on the health status of women veterans who use VA ambulatory care services is helping VA plan more comprehensive and appropriate services for this growing service population. Study results strongly suggest that resources needed to care for women veterans differ greatly from those needed to care for male veterans. As the number of women veterans seeking VA care continues to increase, this information is critically important for providing high quality care for this special population of VA users. *Health Services Research and Development*

Skinner KM, Furey J. The focus on women veterans who use Veterans Administration health care: the Veterans Administration women's health project. Military Medicine, 163(11):761–6, November 1998.

Case management expands access to services for homeless veterans

Case managed residential care for homeless veterans with substance abuse tended to shift service delivery from inpatient settings to less expensive outpatient settings, this HSR&D study found. This approach improved patients' access to care. It also improved short-term outcomes that were measured in terms of health care, employment, and housing, although these gains tended to diminish during the year following treatment. This information will inform VA administrators and clinicians about the need for ongoing community care to maintain gains achieved in the residential setting. *Health Services Research and Development*

Conrad KJ, Hultman CI, Pope AR, et al. Case managed residential care for homeless addicted veterans: results of a true experiment. Medical Care, 36:40–53, January 1998.

Functional electrical stimulation may assist patients with paraplegia

Functional Electrical Stimulation (FES) uses surgically implanted electrodes to activate paralyzed muscles. A consortium including the Cleveland VA Medical Center, Case Western Reserve University and MetroHealth Medical Center is producing promising results that have led to new applications and many advances in restoring function to paralyzed individuals. Advances by VA in the implantation and control of functional electrical stimulation (FES) walking systems hold great promise for patients with paraplegia. A research participant with paraplegia is now testing a new 16-channel system that allows him to exercise and walk in a limited area around his wheelchair. An implanted neuroprosthesis is helping individuals with high chest or low neck injuries to exercise their legs, stand, and perform standing transfers. Another FES device offers promise for improved bladder and bowel control for individuals with spinal cord injuries, giving them greater freedom and reducing the costs and inconvenience of bladder and bowel care.

FES is also helping patients with tetraplegia due to spinal cord injury to grasp and release objects with paralyzed hands. Researchers are developing and testing new hand-grasp systems that offer finer control and extend function to the elbow and forearm. Another type of implant stimulates the triceps muscle so that individuals with tetraplegia can reach overhead and grasp objects. These and other advances in FES may allow persons with paraplegia and tetraplegia to expand employment opportunities and work more independently. *Rehabilitation Research and Development*

Kobeti R, Triolo RJ, Uhlir J, Bier C, Wibowo M, Polando G, Marsolais EB, Davis JA, Ferguson Y, Sharma M. Implanted functional electrical stimulation system for mobility in paraplegia: a follow-up case report. IEEE Transactions on Rehabilitation Engineering (in press).

Triolo RJ, Bogie K. Lower extremity applications of functional neuromuscular stimulation after spinal cord injury. Topics in SCI Rehabilitation 5(1):44–65, 1999.

Wuolle KS, Van Doren CL, Bryden AM, Peckham PH, Keith MW, Kilgore KL. Satisfaction and usage of a hand neuroprosthesis. Archives of Physical Medicine and Rehabilitation, 80:206–13, 1999.

Peckham PH, Keith MW, Kilgore KL. Restoration of upper extremity function in tetraplegia. Topics in SCI Rehabilitation, 5(1):33–43, 1999.

Early treatment with corticosteroids reduces damage from SCI

More than 1 million Americans live with disabilities resulting from spinal cord injury. Crushing injuries of the spinal cord trigger a cascade of biochemical events that may cause more damage than the initial trauma. To counter this destructive cascade, VA investigators tested two corticosteroids, methylprenisolone and trilizad, in animals with spinal cord injuries. The results: animals that received either drug within eight hours following injury could regain up to 25 percent of their lost neurological function. Subsequent clinical trials in patients with acute spinal cord injury established that this early intervention can help reduce permanent damage, setting the standard for treatment of acute compression spinal cord injury. Further research by VA is underway on newer compounds that may further reduce the disability and medical care costs of these injuries. *Medical Research Service*

Giovanini MA, Reier PJ, Eskin TA, Wirth E, Anderson DK. Characteristics of human fetal spinal cord grafts in the adult rat spinal cord: influences of lesion and grafting conditions. Experimental Neurology, 148(2):523–43, 1997.

Tissue engineering to replace lost nerves

Tissue engineering, combining living cells with synthetic materials, holds promise for repair and regeneration of skin, bone, cartilage, nerve and essential organs. Researchers at the VA Palo Alto Rehabilitation R&D Center are recruiting patients who require grafting of nerves in the hand, arm or leg. Rather than performing a whole-nerve autograft, the investigators will repair the damage with an artificial graft seeded with the patient's own cells from the sheath surrounding the nerve fibers. New biomaterials and techniques now being tested for reconstructing peripheral nerves may be applied to the more difficult problem of regeneration of the central nervous system after stroke or spinal cord injury. *Rehabilitation Research and Development*

Sabelman EE, Hu M. 3-Dimensional collagen strands promote Schwann cell proliferation & orientation. Proceedings of the Biomedical Engineering Society 1998 Annual Fall Meeting, Cleveland, OH, Oct 10–1 3, 1998, paper no. TE. 14, Annals of Biomedical Engineering v. 26 suppl 1, p. S–137, Sept/Oct, 1998.

Transplantation of myelin-forming cells to the injured CNS

Researchers in West Haven are studying the transplantation of Schwann cells as a treatment for injury to the central nervous system (CNS). Using magnetic resonance imaging, the investigators hope to establish whether cells transplanted into the primate CNS can produce myelin, the complex protein that makes up the sheath. Myelinated nerves conduct impulses more rapidly than those without myelin.

These studies serve as a necessary prelude to human studies that may lead to successful use of cell transplantation. Investigators have also successfully developed cell harvesting and preservation techniques that will further research on transplantation of myelin-forming cells. *Rehabilitation Research and Development*

Kato T, Honmou 0, Uede T, Hashi Y, Kocsis JD. Transplantation of human olfactory ensheathing cells elicits remyelination of demyelinated rat spinal cord. GLIA (in press).

Imaizumi T, Lankford AL, Kocsis JD. Transplantation of olfactory ensheathing cells or Schwann cells restores rapid and secure conduction across the transected spinal cord. Brain Research, 854(1–2):70–8, January 31, 2000.

Waxman SG, Kocsis JD. Experimental approaches to restoration of function of ascending and descending axons in spinal cord injury. The Neurobiology of spinal cord injury. Kalb RG, Strittmatter SM, ed. Humana Press, 2000.

HEALTH SERVICES AND SYSTEMS

Health Services and Systems is a research effort focused on improving the health care provided to our nation's veterans, whether it be for a specific disease or a broad category of care, such as primary or mental health care. Research in Health Services and Systems addresses supply and organization of resources and services, evaluation of treatment methods, health and safety of research participants, application of research findings to standard practice, and outcomes of care. The studies described below are part of our effort to ensure that our veterans receive the best possible care.

VA home health care increases satisfaction for patients and caregivers

An innovative model of home health care used by Department of Veterans Affairs (VA) hospitals—featuring a greater hands-on role for doctors and close cooperation among nurses, social workers and other team members—was found to yield more satisfaction for patients and family caregivers than private-sector home care.

In a study of nearly 2,000 home-care patients, most of them severely disabled or terminally ill, researchers from VA, the University of Illinois at Chicago, and Northwestern University tested VA's "Team-Managed Home-Based Primary Care" model against non-VA home-care at 16 sites. While death rate and physical functioning did not differ between the two groups of patients, VA patients and their caregivers overall expressed more satisfaction with their care. Terminally ill patients in the VA sample gave higher marks to their care in six of eight quality-of-life measures, including emotional functioning, bodily pain and mental health. Caregivers in the VA group reported less "burden," translating into reduced caregiver stress and burnout.

The study is among the first large-scale evaluations of home care to consider the burden on family members and their emotional well-being. Previous research has shown that informal home-based family caregiving costs the nation nearly $200 billion per year, compared to around $30 billion for formal home health care. *Cooperative Studies Program*

Hughes SL, Weaver FM, Giobbie-Hurder A, Manheim L, Henderson W, Kubal JD, Ulasevich A, Cummings J. Effectiveness of team-managed home-based primary care. Journal of the American Medical Association, 284(22):2877–85, December 13, 2000.

Enhancing the quality of informed consent (EQUIC)

Informed consent is the keystone of the protection of human rights in medical research, along with careful review of proposed projects. EQUIC is a Cooperative Studies program-wide project aimed at systematically improving the quality of informed consent, by testing and measuring the results of innovative approaches to informed consent. Practitioners of clinical trials must ensure that patients' participation in research is informed and voluntary. This responsibility suggests that researchers should strive continuously to improve the effectiveness of methods for informing prospective research volunteers about experimental studies, thereby enhancing the protection of their interests.

EQUIC will test a method to assess the capacity of a research volunteer to understand and consent to a study; a method for "tailoring" an informed consent encounter to the vulnerabilities uncovered by that assessment; and a direct assessment of the success of an informed consent process at producing a good result, defined in terms of the successful protection of the patient's rights. Once these are fielded and tested, it will be possible to study a wide range of innovations in informed consent in the full variety of patients studied in the Cooperative Studies Program. An important side benefit will be the ability to assess the true results of current practice in the VA CSP, and, potentially, other systems. *Cooperative Studies Program*

Enhancing the Quality of Informed Consent (EQUIC)CSP# 476, Palo Alto.

VA utilization and survival rates

An observational study focusing on nine medical conditions examined patient utilization and survival rates during a three-year period that included a major VA organizational shift from inpatient care to ambulatory care. Results of the study indicate improved access to outpatient services. While inpatient care dramatically declined and utilization of outpatient care increased (except urgent care), survival rates improved or remained the same. Thus, the major reorganization of the VA health care system during the 1990s does not appear to be associated with any deterioration in patient survival rates. Study findings also showed an unexplained geographic variation in both utilization and outcome rates across all 22 VA health care networks that warrants further research to ensure equal care and accessibility for veteran patients across the country. *Health Services Research and Development*

Ashton C, Petersen N, Souchek J, Menke T, Collins T, Wray N. Changes in mortality, utilization, and quality in the Veterans Health Administration 1995–97, HCQCUS Technical Report 00–01. January 2000.

Community-based outpatient clinics provide equal care

Between 1995 and 2000 VA opened 242 new Community Based Outpatient Clinics (CBOCs) to allow more convenient access to care for veteran patients. A CBOC may be a VA operated clinic or VA-funded/reimbursed health care facility that is separate from the main VA medical facility. A study evaluated the performance of CBOCs including the provision of preventive and other health care, as well as patient access to care, utilization, cost and satisfaction.

Findings showed that on most measures CBOCs' performance was equivalent to their affiliated VA medical center, while on average, the total cost of health care was considerably lower for CBOC patients. Study results also indicate a few areas that warrant attention, such as CBOCs having fewer eye examinations for patients with diabetes and higher cost per primary visit, fewer specialty visits, and fewer hospitalizations on average for all patients. This study will help VA continue to develop more effective, inclusive and accessible health care at the many CBOCs located across the country. *Health Services Research and Development*

Chapko MK, Hedeen A, Maciejewski M, Fortney J, Borowsky SJ (Management Decision and Research Center, HSR&D, Dept. of Veterans Affairs). CBOC Performance Evaluation: Program Implications and Future Performance Measures. Report No.1. March 1, 2000.

Maciejewski M, Hedeen A, Chapko MK, Fortney J, Borowsky SJ. (Management Decision and Research Center, HSR&D, Dept. of Veterans Affairs). CBOC Performance Evaluation: Performance Report 2: Cost and Access Measures. Report No.2. March 1, 2000.

Clinical guidelines reduce pressure ulcer rates in nursing homes

Pressure ulcers are a common medical problem associated with considerable morbidity, particularly for patients with long-term care needs such as those in nursing homes. Practice guidelines on the prevention of pressure ulcers have been widely disseminated, and these guidelines have been successfully implemented in some VA nursing homes. Investigators studied 36 VA nursing homes to identify how these facilities accomplished successful implementation so that pressure ulcer care may be improved system-wide. Findings show that organizational features that promote the implementation of clinical guidelines include a culture that promotes innovation and teamwork. A trend toward lower rates of pressure ulcer development was associated with quality improvement implementation. Information from this report assists VA in taking the appropriate actions to increase the adoption of clinical guidelines that result in improved patient care. *Health Services Research and Development*

Berlowitz DR, Bezerra HQ, Brandeis GH, Kader B, Anderson JJ. Are we improving the quality of nursing home care? the case of pressure ulcers. Journal of the American Geriatrics Society, 48(1):59–62, January 2000.

Berlowitz DR, Hickey EC, Young G, et al. Improving nursing home care: importance of organizational culture and continuous quality improvement implementation. Abstract presented at the HSR&D Service 18th Annual Meeting, March, 2000. Washington, D.C.

Computerized reminders improve physicians compliance with care standards

VA researchers have found that computer prompts improve physician compliance with outpatient care standards. This large-scale study examined the effects to prompt physicians to follow a specified standard of care. Records were examined from 275 resident physicians at 12 VA Medical Centers with a total of 12,989 patients. Overall, doctors who received computerized reminders (CRs) had higher rates of compliance for all standards of care.

Researchers selected 13 standards of care that would be widely accepted and could be implemented using the existing hospital database. Standards of care focused on patient conditions, such as coronary artery disease, hypertension, diabetes, atrial fibrillation, myocardial infarction, and gastrointestinal bleeding. A computerized software program was developed to download the information obtained from patients' visits during this study and compared it to the hospitals' prescribed treatments and prescriptions. The program then determined whether the participants received proper care.

Although the study indicates the computer reminders improve compliance with multiple standards of care, enthusiasm and use of the CRs declined during the study. The authors noted that one possible explanation for this decrease may be that competing demands on the residents' time in busy clinics lead to neglect of CRs over time. Further research is needed to study causes of the physicians' decrease in use of the computerized reminders and ways to keep compliance at a high level. *Health Services Research and Development*

Demakis JG, Beauchamp C, Cull WL, Denwood R, Eisen SA, Lofgren R, Nichol K, Woolliscroft J, Henderson WG. Improving residents' compliance with standards of ambulatory care: results from the VA Cooperative Study on computerized reminders. Journal of the American Medical Association, 283(11):1411–6, September 20, 2000.

Surgical quality at VA improves since implementation of NSQIP

The quality of surgical care at VA hospitals has improved significantly since the inception of the National VA Surgical Quality Improvement Program (NSQIP), a collaborative effort of HSR&D and VA's Office of Quality Management. The 30-day mortality rate after major surgery was found to decline by nearly 10 percent. The rate of postoperative complications decreased by 30 percent.

Better surgical and anesthesia techniques, improved supervision of residents in surgical training, and improvements in technology and equipment have contributed to VA's progress in surgical care. The NSQIP has been instrumental in identifying ways to improve surgical care. The project researchers gathered data from 123 VA medical centers on patient-specific factors that affected post-surgical mortality and morbidity. These data enable the researchers to differentiate high-quality from low-quality facilities and to identify best practices to improve care. NSQIP researchers also studied functional outcomes of veterans who undergo major surgery in urology and orthopedics in 14 VA medical centers. They also collaborated with four affiliated academic health centers to implement the NSQIP at non-VA hospitals. *Health Services Research and Development*

Daley J, Forbes M, Young G. et al. Validating risk-adjusted surgical outcomes: site visit assessments of process and structure. Journal of the American College of Surgeons, 185(4):341–51, October 1997.

Khuri SF, Daley J, Henderson W, et al. The National Veterans Surgical Risk Study: a risk adjustment for the comparative assessment of the quality of surgical care. Journal of the American College of Surgeons, 180(5):519–31, May 1995.

Study shows black patients admitted to VA hospitals have lower mortality rates

Study results indicate that black patients admitted to VA hospitals with common medical diagnoses have lower mortality rates than white patients. This study, using data provided by VA's Health Services Research and Development Service Center for Quality of Care and Utilization Studies in Houston, examined racial differences in mortality among more than 35,000 patients admitted to 147 VA hospitals. Thirty-day mortality rates for patients who were admitted with one of six common medical diagnoses (pneumonia, angina, congestive heart failure, chronic obstructive pulmonary disease, diabetes, and chronic renal failure) were compared. Study findings show that 30-day mortality was lower among blacks than whites for each of the six medical diagnoses, and that black patients also had lower in-hospital and 6-month mortality rates. This survival advantage is not readily explained, however it may reflect the benefits of equal access to health care and the quality of inpatient treatment at VA medical centers. *Health Services Research and Development*

Jha AK, Shlipak MG, Hosmer W, Frances CD, Browner MS. Racial differences in mortality among men hospitalized in the Veterans Affairs Health Care System. Journal of the American Medical Association, 285(3):297–303, January 17, 2001.

Question. What is the success rate of VA research applications? How does the VA success rate compare to other federally supported biomedical research programs?

Answer. In fiscal year 2000, VA approved for funding 25.8 percent of all research proposals. The overall approval rate for research grants at the 27 institutes and centers of the National Institutes of Health was 32 percent in fiscal year 2000. The National Science Foundation approved for funding 29 percent of all research proposals for biological sciences.

VA CONSTRUCTION

Question. The Independent Budget (IB) has made a major issue this year of the steep decline in Major and Minor Construction budgets. The IB notes that despite the ongoing efforts to realign VA facilities through the CARES process, the need for maintenance and renovation has steadily grown. The IB states, "The poor condition of many VA properties limits the options available for constructive realignment and devalues assets that might otherwise be converted to more effective uses." If you could set your own level of construction dollars, where would you begin to make your investments in the infrastructure of the system?

Answer. The VA health care system will require larger construction budget requests in the future to not only implement CARES decisions, but to correct seismic safety concerns, and provide for an orderly reinvestment in the system's infrastructure. These investment decisions will come after careful consideration of the options available to meet VHA's several missions. A system as large as VHA's cannot maintain quality and productivity over time without appropriate recognition of the need for infrastructure improvements. While the pace of change has slowed somewhat as an impediment to supporting major construction, VHA is now beginning the CARES process. CARES studies will bring another set of changes but will also provide a more settled picture of the future need for VHA facilities. The CARES studies are underway and are expected to identify options for reengineering VHA's physical infrastructure. Implementing these options will require major construction funding in many instances. However, VA has ongoing infrastructure needs that cannot be ignored, such as major seismic corrections and safety issues (e.g., Miami, Florida—electrical and hurricane deficiencies). The absence of a completed CARES study should not prohibit funding of a major project, but certainly careful analysis must be accomplished before making such a proposal. VA has significant seismic and life safety deficiencies that must be addressed. Many of those projects are at facilities that will not be affected by CARES studies.

Question. What are your most immediate needs? What would be your long-term goals?

Answer. The attached report is submitted in accordance with Title 38 USC, Section 8107 (d)(1), (2), and (3). The report identifies the major medical construction projects that have the highest priority within the Department of Veterans Affairs (VA). The report was sent on April 26, 2001 to the following: Honorable C.W. Bill Young, Honorable David Obey, Honorable Arlen Specter, Honorable Barbara A. Mikulski, Honorable Alan B. Mollohan, Honorable John D. Rockefeller, IV, Honorable James T. Walsh, Honorable Robert C. Byrd, Honorable Christopher S. (Kit) Bond, Honorable Lane Evans, Honorable Christopher H. Smith, Honorable Bob Filner, Honorable Jerry Moran, Honorable Ted Stevens.

DEPARTMENT OF VETERANS AFFAIRS PRIORITY MAJOR MEDICAL CONSTRUCTION PROJECTS—FISCAL YEAR 2001 PRIORITIES

Medical Center	Project Title	Project Category	Score	Construction Costs	Non-Recurring Costs	Recurring Annual Costs
Miami, FL [1]	Hurricane and Flood Addition	General	.270	$28,000,000	$7,100,000	$177,250,000
Palo Alto, CA	Seismic Improvements (NHCU)	Seismic	628	26,600,000	1,200,000	14,500,000
San Diego, CA	Seismic Corrections, Building 1	Seismic	504	35,600,000	N/A	238,000,000
West LA, CA	Seismic Correction	Seismic	503	27,600,000	1,300,000	89,310,000
San Francisco, CA	Seismic Correction	Seismic	497	29,400,000	1,900,000	77,500,000
VISN 6 [2]	Special Emphasis Beds	Patient Environment	455	28,900,000	1,800,000	46,300,000
Palo Alto, CA	Seismic Correction, Bldg. 2	Seismic	437	11,100,000	N/A	17,400,000
Cleveland, OH	Brecksville—Renovate Buildings for Special Emphasis Programs	Patient Environment	419	43,000,000	7,400,000	19,900,000
Dallas, TX	Mental Health Enhancement	Ambulatory Care	395	27,600,000	3,200,000	16,000,000
Lebanon, PA	Patient Care Renovation	Patient Environment	286	10,600,000	N/A	2,600,000
Pittsburgh, PA	Ambulatory Care/Research/Parking	Ambulatory Care/Research	280	52,600,000	N/A	N/A
Butler, PA	Extended Care & Rehabilitation	Ambulatory Care	268	36,900,000	1,500,000	12,100,000
Atlanta, GA	Modernize Patient Wards	Patient Environment	264	12,800,000	12,275,000	50,000,000
Long Beach, CA	Seismic Correction/Clinical	Seismic	255	51,700,000	3,700,000	4,000,000
Syracuse, NY	Clinical Expansion & MRI	Ambulatory Care	232	4,700,000	5,600,000	N/A
St. Louis, MO	Raised Parking Structure	Parking	208	6,844,000	N/A	220,000
Tampa, FL	Parking Structure	Parking	205	13,900,000	30,000	610,000
Charlotte, NC	Satellite Outpatient Clinic	Ambulatory Care	193	17,449,000	1,500,000	5,100,000
Tampa, FL	Ambulatory Care Expansion	Ambulatory Care	189	12,000,000	3,300,000	N/A
Washington, DC	Clinic Expansion	Ambulatory Care	181	20,800,000	3,415,000	21,913,000

[1] The Miami project is an emergency, caused by an accident that destroyed major switchgear and is considered VHA's top priority.

[2] The VISN 6 project represents a new approach to accomplish environmental improvements on special emphasis program wards within the Network. The Department supports this Network-wide strategy and the project follows the General Accounting Office's (GAO) recommendation on market-based planning. Addressing the work as minor and non-recurring maintenance category projects would require ten minor and twenty NRM projects, would cost approximately $45 million, and would encumber the Network's minor/NRM budget for 17 years. The consolidated approach saves approximately $16 million and obviates a long period of disruption for the Network and VAMCs. The improvements are based on Network-wide assessment and on systematic distribution of workload.

VETERANS CLAIMS

Question. Do you have sufficient resources and funding to contend with the enormous claims backlog and the additional claims processing burden resulting from the "duty to assist" legislation and the recent decision on diabetes?

Answer. Recent legislation, especially the expanded duty-to-assist threshold resulting from the Veterans Claims Assistance Act of 2000 (VCAA), has had a significant impact on our work processes. The impact reaches far beyond the 98,000 claims previously denied under the provisions established in the *Morton* v. *West* case. All 250,000 claims for disability benefits that were pending as of the date of VCAA enactment (November 9, 2000), as well as any new claims for disability benefits, must be developed and evaluated under the expanded procedures required under the law. We estimate that the time to develop and evaluate a case has increased by 25 percent as a result of this legislation. The expanded presumptive provisions for Agent Orange related disabilities to include service connection for diabetes is also having a significant impact on VBA workloads. Approximately 35,000 of these claims were pending at the time of the regulatory change, which became effective July 9th. VBA projected 125,000 additional claims during fiscal year 2001 and fiscal year 2002 as a result of this regulatory change.

VBA is addressing these workload challenges by authorizing field stations to hire significantly above their fiscal year 2001 funding levels. VBA hired 800 additional employees this fiscal year in response to these challenges. VBA will use the $19 million transfer from the Medical Care account to support this hiring and training initiative by restoring funding to initiatives that had previously been suspended to support the hiring.

While the impact of these legislative and regulatory changes continues to affect VBA inventories, the supplemental funding has allowed VBA to hire resources earlier than previously would have been possible. The fiscal year 2002 funding level will support these increased staffing levels and allow VBA to continue the progress it has started. It is currently projected that inventories will continue to climb until the newly hired employees complete training and begin to attain minimal levels of productivity.

SUBCOMMITTEE RECESS

Senator BOND. The hearing is recessed.

[Whereupon, at 11:40 a.m., Wednesday, May 2, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, MAY 9, 2001

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:05 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Christopher S. Bond (chairman) presiding.

Present: Senators Bond, Burns, Shelby, DeWine, Mikulski, and Johnson.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

STATEMENT OF DANIEL S. GOLDIN, ADMINISTRATOR

ACCOMPANIED BY:

MALCOLM L. PETERSON, COMPTROLLER

SAM VENNERI, ASSOCIATE ADMINISTRATOR FOR AEROSPACE TECHNOLOGY

OPENING STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Ladies and gentlemen the hearing of the Senate VA, HUD, and Independent Agencies Appropriations Subcommittee will come to order.

My colleague and essential partner in this effort, Senator Mikulski, is on the floor working a vote on her amendment. She has asked that we go ahead. She did give me a promise she will read my statement, and I promised I would read hers. But we will proceed because of the time constraints.

The subcommittee meets today to review the fiscal year 2002 budget request of the National Aeronautics and Space Administration. It is a pleasure to welcome Daniel Goldin, NASA's Administrator, and his staff.

Normally I would talk about how much I look forward to the annual NASA budget hearing because I am struck by the wonder of the universe for which NASA is our gatekeeper and guide and by the heroic astronauts who are leading us in the exploration of the last true frontier—the universe. I am excited about NASA, its mission, its people, and the wonders of the universe.

Unfortunately, I am also very disturbed by the massive cost overruns that have characterized the International Space Station, as well as a number of other NASA missions and activities. I am discouraged particularly by the Space Station which has grown in cost from an initial cost estimate of some $17.4 billion to a current assembly cost of more than $26 billion and growing. The overall cost, when you include operational costs and associated shuttle costs, could approach $100 billion.

These funding overruns are a decision making problem which could be characterized as a matter of substantial mismanagement. However, I believe the problem can be more accurately described as management by optimism. I believe and I know that NASA means well and wants and believes it can deliver its missions and activities both on time and on budget. Unfortunately, management by optimism is founded on flawed assumptions.

Nevertheless, even management by optimism is no excuse for the sudden disclosure by NASA in February of another $4 billion in cost growth and cost overruns for the International Space Station. NASA needs to get control of this program and be in a position to advise and warn the Congress of both problems in the program and any costs associated with these problems. Not only has the ISS grown astronomically to a current cost of some $26 billion plus, but these additional costs of $4 billion have resulted in the suspension of certain key elements that must be considered critical to the success of the station as a world-class on-orbit science platform.

At a minimum, the decision by the administration to suspend the Habitation Module and the Crew Return Vehicle because of these costs overruns means that no science research can be effectively conducted on the International Space Station. The lack of either the Habitation Module or the Crew Return Vehicle will mean that only three crew members can be housed on the station at any one time. Even NASA admits it takes two-and-one-half crew members to operate the station. Moreover, each of the suspended ISS elements have left the United States and the other partner nations at the mercy of Russia, which now controls the availability of emergency escape vehicles through the Soyuz escape vehicle.

Russia has already demonstrated its willingness to act unilaterally without the support of the other partner nations in making decisions with regard to the ISS by demanding, just in the last few weeks, that the United States and the other partner nations accept the presence of a paying tourist to the station. Russia made this demand despite the inherent risk that this tourist poses to the current crew who are even now assembling the station while living in a very hostile and deadly environment.

I want to be clear that I support the decision of the administration to suspend these ISS elements until we gain control of the costs associated with the International Space Station and NASA is able to provide a real budget by which it can live. We cannot afford to let NASA programs grow unchecked. Now is the time for NASA to get control of the budget for all its missions and research projects. NASA needs to move beyond management by optimism. I know that NASA wants to do the right thing. It believes that it can succeed in making the ISS and its many other missions and activities a success.

Unfortunately, management by optimism has not worked and I urge you to look to management through credibility and realistic cost projections. If the United States ever wants to go to the moon again, to Mars, and to the stars, NASA needs to provide us with a road map that makes sense and is one that we know we can afford. This is, after all, rocket science and NASA needs to find a way to inform Congress of the real costs of a mission, including a realistic reserve. Again, that cannot be done through management by optimism.

I have a number of questions on the ISS and the nature of the station overruns, as well as the options for completing the station as a working science lab. I also have questions about the reports about computer programming glitches, loud noise levels, vibrations aboard the station, and I am also concerned about the status of the Space Launch Initiative which I believe is critical to the development of new space launch technologies for cheaper access to space.

With that, let me turn to my colleagues for their opening statement, on this side of the podium, Senator Johnson.

STATEMENT OF SENATOR TIM JOHNSON

Senator JOHNSON. Well, thank you, Mr. Chairman. I know that our ranking member was tied up on the floor with a vote on ESEA this morning.

I would simply welcome Mr. Goldin and thank him for his some 9 years of service to NASA. I appreciate his testimony today. I look forward to his testimony and the questions from the committee.

PREPARED STATEMENT

I will simply submit my opening statement for the record, Mr. Chairman.

Senator BOND. Without objection, it will be so accepted.

[The statement follows:]

PREPARED STATEMENT OF SENATOR TIM JOHNSON

Chairman Bond, Ranking Member Mikulski, and other members of the subcommittee, I want to thank Daniel Goldin for his outstanding service throughout his nine years as director of the National Aeronautics and Space Administration (NASA). When you think of NASA activities, South Dakota does not necessarily jump off the map, as does Florida, California, or Texas. We do however have a few NASA projects and aerospace related programs in South Dakota that I would like to briefly touch upon this morning.

I was pleased to note in Mr. Goldin's testimony that there is an effort to improve space related education and training programs. These programs will encourage today's youth in pursuing opportunities in the ever changing space fields. South Dakota for one has been changing to meet the demands of tomorrow's science and technology agenda.

SKILL—SCIENTIFIC KNOWLEDGE FOR INDIAN LEADERSHIP AND LEARNING

The South Dakota School of Mines and Technology in Rapid City houses the Scientific Knowledge for Indian Leadership and Learning (SKILL) Program. Rapid City is home to the largest Native American population per capita, then any other city in the United States with a population of over 30,000. This program is vitally important to the shape of tomorrow's Native American Leaders.

In a time when it is extremely difficult to retain and recruit Native American students to mainstream institutions of higher learning, South Dakota School of Mines and Technology is quite successful. Of the 29 Native students currently enrolled in this program, 18 students are pursuing degrees in Science, Mathematics or Engineering. These are fields where there is an enormous dearth of Native American leadership. Additionally, of the 74 students who have participated in the SKILL program the average grade point average was an extraordinary 3.75, and ACT scores were more then double the national average of 9 for American Indians at an estimated 18.7.

This program has demonstrated year after year that they are providing Native American students the access to the sciences and space related academics they would have ordinarily not have the means to study in great depth.

EPSCOR

South Dakota's major research institutions, technology firms, and governmental agencies have collectively been working on ways in which to make South Dakota a more attractive and competitive area for space research and technology development. Over the past two years, scientists and researchers have been working on approaches to promote the space science research and made technology improvements to ensure that South Dakota is a viable candidate for space science research and development.

EROS DATA CENTER

Rapid City is not only connected to Sioux Falls by Interstate 90, but it is also connected by the stream of technology shared by both cities. Sioux Falls, South Dakota is home to the Earth Resources Observation Systems (EROS) Data Center. The Data Center has been directly involved with the NASA-EPSCoR Program. This Data Center is a part of the U.S. Geological Survey within the Department of the Interior. However, I feel that it is worth mentioning in this forum, as it is intimately involved in the planning and development of South Dakota as a haven for space science research.

The EROS Data Center houses most of the mapping data that exists in the United States. Additionally, the United Nations Environmental Programme is looking to use this world-wide data as a source of land use survey data in developing nations or less reliable in data collection and dissemination. This is vitally important to many of the endangered species, as well as, the overall health of the world.

When the general public thinks of NASA and its functions, it generally thinks of the Human Flight Program, or the Mars Mission. This is an important part of NASA's mission, however, it is not NASA's only function. I would hope that you would continue to support all of the functions NASA has, especially the research, training, education, and data collection programs.

I look forward to receiving Mr. Goldin's testimony, and especially look forward a productive relationship in the future. Thank you Mr. Chairman, and members of this committee.

STATEMENT OF SENATOR CONRAD BURNS

Senator BOND. Senator Burns.

Senator BURNS. Thank you, Mr. Chairman. I am going to put my statement in the record also.

Senator BOND. Without objection, it will be accepted.

Senator BURNS. I just want to make a couple of points.

We hear the clamor and the din on overruns and this type thing, but I think when you compare what NASA has done, the impact that it has had on this country, I would probably say that the overruns percentage-wise are not any more in NASA than they are in any other sector of Government that has less risk or deals with more of the unknown. After all, we are talking about a frontier and we are talking about a lot of unknowns out there. Of course, it lends itself naturally to cost more in some places and less in others.

So, I am still very hopeful that we can continue the reusables of our X–33, the shuttle fleet. I think the reusables are necessary because we have got to lighten our expense in that area. But I sometimes think we fall under a lot of criticism because this is a science and we are dealing with unknowns, and so the costs sometimes is hard to understand and to justify.

But nonetheless, from what I have seen in NASA, since I have been in the Congress, has been forward-looking. Sure, they have made some mistakes along the way, but anytime that you deal with an unknown, I want to see somebody that has got a perfect record.

Thank you.

Senator BOND. Thank you very much, Senator Burns.

We will now turn to Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Mr. Chairman, I ask that my entire written statement be made part of the record.

Senator BOND. Without objection, it will be.

Senator SHELBY. I just want to welcome Mr. Goldin and look forward to his testimony. I will have a number of questions.

Thank you.

Senator BOND. Senator DeWine.

STATEMENT OF SENATOR MIKE DEWINE

Senator DEWINE. Mr. Chairman, thank you very much. Let me thank you for holding this hearing.

As one of the newest members of the subcommittee, Mr. Goldin, I welcome you here. Good to be here with you.

Over the past 60 years, the Glenn Research Center, along with its industry partners, have taken small investments by NASA and turned them into huge developments, yielding billions of dollars in benefits for our U.S. economy. This work is really getting to be recognized. In fact, last September, the R&D Magazine named three research teams based at Glenn as winners of its R&D 100 Award. According to an article published in the March 2001 edition of Continental magazine, the R&D 100 Award is "known with in the industry as the 'Nobel Prize' of applied research." Moreover, since the early 1960's, Glenn researchers have claimed nearly 80 of the 110 R&D 100 Awards given to NASA projects.

Federal involvement has been key to getting things done at NASA Glenn. Their activities are high-risk, high-reward, long-term research projects that private industry simply does not have the wherewithal nor the funding in which to engage. The fact is that the investments that our Federal Government makes in this research yield billions of dollars to the economy through new employment opportunities and spin-offs.

Mr. Chairman, let me just make this a part of the record. I know we want to get to the questions of Mr. Goldin. I just want to say that we appreciate his being here. I look forward to having the opportunity to ask questions. I would ask unanimous consent, Mr. Chairman, that my full statement be made a part of the record.

Senator BOND. I would be happy to do so.

[The statement follows:]

PREPARED STATEMENT OF SENATOR MIKE DEWINE

Thank you Chairman Bond and Ranking Member Mikulski for holding this important hearing today. And, thank you, Administrator Goldin, for joining us to discuss NASA's fiscal year 2002 budget proposal. As one of the newest members of this Subcommittee, I welcome you to this hearing and look forward to discussing the important issues facing the NASA budget, and in particular, the vital work being done in my home state of Ohio at the Glenn Research Center (GRC) at Lewis Field in Cleveland.

Over the past 60 years, the Glenn Research Center, along with its industry partners, have taken small investments by NASA and turned them into huge developments, yielding billions of dollars in benefits for our U.S. economy. GRC's work is getting recognized.

In fact, last September, R&D Magazine named three research teams based at Glenn as winners of its "R&D 100 Award." According to an article published in the March 2001 edition of Continental magazine, the R&D 100 Award is "known within the industry as the 'Nobel Prize' of applied research." Moreover, since the early 1960's, "Glenn researchers have claimed nearly 80 of the 110 R&D 100 Awards given to NASA projects."

Federal involvement has been key to getting things done at NASA Glenn. Their activities are high-risk, high-reward, long-term research projects that private industry simply does not have the wherewithal nor the funding in which to engage. The fact is that the investments our federal government makes in this research yield billions of dollars to the economy through new employment opportunities and spin offs. But, despite the considerable payoffs, over the past decade, NASA seems to have lost sight of its role in this regard.

Part of the problem are the overruns in the cost of construction on the International Space Station (ISS). As a result, the ISS now threatens to erode the U.S. technological edge in the aerospace industry. What is happening is that vital, long-term research done at NASA centers, such as the Glenn Center, is being ignored because of short-term funding problems with the ISS. If I may use a euphemism from my agricultural background, NASA is essentially "eating its seed corn."

Mr. Chairman, I want to focus my opening statement on the ISS example, though candidly, there are many other examples I could cite. In 1984, when the Space Station program was initiated, it was supposed to be built within ten years, at a cost of $8 billion. By 1993, however, the United States had spent a total of $10 billion on the Space Station. Eventually, the first hardware for ISS was launched, and we are beginning to see some progress. This progress has not come without increased costs. In 1996, NASA estimated that the Space Station's total cost would rise to $17.4 billion with a completion date in 2002. Last year, the total cost estimate increased to $24 billion with a completion date in 2005. This year, the cost increased to $28 billion.

Over the years, Mr. Chairman, I have consistently supported the Space Station because I recognize the importance of research in the microgravity environment. I believed in and shared Administrator Goldin's vision for performing break-through research in basic fundamental sciences, such as combustion science, fluid physics, materials, and others. But, this year's budget threatens to end the combustion program and cripple the fluids research program. This could have a very real and a very devastating impact on NASA Glenn.

According to the International Space Station Research Plan, the combustion research program is critical to understanding basic fundamental aspects of combustion. This research has tremendous potential benefits to fire safety, transportation, energy production, and a variety of other industrial processes. Given the current energy situation in the United States, it would seem prudent that we place a greater emphasis on combustion research—not eliminate it.

My point is this—after 18 years of building the Space Station—something we were promised would provide breakthrough research—we are finally ready to realize the promise. The ISS Destiny Lab Module, which was to accept the Fluids and Combustion facility as one of its first payloads, sits empty, waiting for research hardware. The irony is that the facility, itself, is now being threatened by budget cuts so that construction can continue on the Space Station.

What makes matters even worse is that the Fluids and Combustion facility has great promise for our nation. The fluid and combustion research programs are very far along in the design of their hardware. The facility has won numerous prestigious awards from NASA, including the NASA Software of the Year Award in 1998, the R&D 100 Award in 1999, the Award for Excellence in Technology Transfer in 2000, and NASA's Continuous Improvement Award in 2000.

I understand that NASA must prioritize its budget. However, it is absolutely incomprehensible to me that NASA would even consider eliminating the Fluids and Combustion facility—a facility that is performing research vital to our nation—a facility whose research has broad-based applications to many areas of science and our economy—a facility that is performing the type of research that NASA promised when the Space Station was sold to Congress and the American people—and finally, a facility that has an award-winning design that is, and this is rare for NASA and particularly the Space Station, on-budget and on-schedule. This just doesn't make sense to me.

I look forward to hearing from Administrator Goldin about this. And, I am hopeful that he can explain to me the reasoning behind its proposed budget cuts affecting NASA Glenn.

Again, thank you for holding this hearing and being here today.

INTRODUCTORY OF SENN HIGH SCHOOL STUDENTS

Senator BOND. I have been advised by staff that we should welcome students from the Senn High School in Chicago, Illinois. The students are accompanied by Ms. Kathy Khoshaba, their instructor and the sister of Mary D. Kerwin, who is our primary legislative liaison with NASA and who always goes the extra mile to do a good job. Like the partners of the International Space Station, these students represent the international community, having come from Mexico, Morocco, Vietnam, Kosovo, Ecuador, and Romania. Would you all please hold up your hands in the back?

We are delighted to welcome you here and hope that you find this of interest and of use.

With that, I will now turn to the opening statement of Mr. Goldin. Welcome, Dan.

STATEMENT OF ADMINISTRATOR DANIEL GOLDIN

Mr. GOLDIN. Thank you, Mr. Chairman. I am pleased to appear before the subcommittee to outline NASA's 2002 budget request.

With your permission, I would like to share with you a brief video that depicts NASA's recent achievements and a look at where we believe technology will take us in the not too distant future.

Senator BOND. I would be happy to do so.

[Video shown.]

Mr. GOLDIN. Mr. Chairman, I would like to say what a privilege it is to lead NASA. Our work is filled with challenges and opportunities to achieve truly remarkable goals. Although problems make headlines, NASA can point with pride to improving shuttle safety while routinely meeting 5-minute shuttle launch windows and reducing shuttle operating costs 30 to 40 percent. Since 1992, NASA has launched 59 spacecraft, 58 payloads, and 51 shuttles, for a total of 168 missions. Of that, 158 were successes, 10 were failures. It represents a $22 billion investment in spacecraft and payloads with only a half billion dollar loss due to failures. Not bad. We have shorter cycle times, spacecraft that cost a fraction of previous missions, a bright future with Space Station as a new star in the sky, and an amazing array of at least 60 spacecraft to be launched in the upcoming years.

The NASA team has turned budget pressures to an advantage, and to them I say, job well done. They are one of the few agencies in Government who have lived with a flat budget for almost a decade. And we intend to apply that same can-do attitude to resolving your concerns about the Space Station budget challenge.

The administration's fiscal year 2002 request for NASA is a solid and business-like budget. The request of $14.5 billion equates to an increase of 2 percent, or $258 million, over the fiscal year 2001 enacted level. It represents a deliberate prioritization of efforts within each of our five strategic enterprises so as to live within our means.

It provides a disciplined budget plan for station development and operations, consistent with a strategy of offsetting cost growth through budget reductions in station hardware and other human space flight programs. I will expand upon significant management reforms and budget restructuring underway to bring station costs under control in a moment. The budget also provides ongoing support to fly the shuttle safely, while calling for a prioritization of safety upgrades and infrastructure improvements and further privatization of Space Shuttle activities.

It is noteworthy that the budget reflects a NASA investment in science and technology that is 42 percent of the total budget, up from 31 percent in 1991, and targeted to reach 51 percent by 2006. This investment in the future not only allows us to open up the space frontier, but also helps fuel our economy and maintain U.S. leadership and competitiveness in the global economy.

In space science the budget contains additional funds for a more robust Mars robotic exploration program and advanced in-space transportation technologies. It continues the "Living With a Star" Program and solves development funding problems in SIRTF and Gravity Probe-B through elimination of several lower priority programs.

In earth science, the budget provides for the completion of the first series of 12 Earth Observing Systems and Earth Probe missions and 8 next-generation missions. The development of EOSDIS is nearly complete and it performed spectacularly. After 1 year of operation, the EOS satellites launched thus far have doubled our holdings on earth science data. Saying it another way, we have collected more data in the past year than in the whole history of the space program due to the outstanding performance of EOSDIS.

In aerospace technology, we are designing programs that address public needs and revolutionary leap-frog technologies. The public needs include improvements in aviation safety, noise reduction, emission reduction, mobility of people and goods, increased capacity of our airspace, and greatly improved reliability and safety for earth-to-orbit launch vehicles, coupled with improved mission effectiveness, which will yield dramatically reduced costs for space launch systems. The revolutionary leap-frog technologies we are focusing on include information systems, nanoscale materials, and biologically-inspired systems, all vital to our future, as you saw in that video.

This budget fully funds the Space Launch Initiative. Our challenge is clear: by developing technologies to be realized in new launch vehicles, the improved safety and lower cost of access to space could enable new civil and defense applications and commercial markets for space, hopefully justifying U.S. commercial investment in developing future launch systems.

Finally, let me bring you up-to-date on our process of rebaselining the Space Station. We are moving methodically to address the budget and configuration issues and to ensure the criteria of the President's budget blueprint are met. The program level review of management and budget actions will come to closure near the end of this month. We will soon issue an ISS program management action plan that will describe management actions already implemented, including the temporary assignment of program management responsibility from the Johnson Space Center to NASA headquarters, and actions to be implemented in the near term to improve cost projection and management. We anticipate that the agency assessment will be complete by mid-summer. Then we will be positioned to initiate an external review of our budget reassessment. Our research reassessment is ongoing, the results of which will be vetted with external bodies by late summer.

Consistent with the committee's recent guidance, the agency has processes in place and is planning near-term changes that, even after the program management is returned to Johnson, will permanently enhance the visibility of NASA headquarters into the station costs such as: approval of all significant additions to the program content and significant upgrades will be retained at NASA headquarters; and decisions to commit reserves will be made at NASA headquarters, by a joint headquarters/JSC review board.

NASA, in compliance with your request, will modify its quarterly Space Station reports to the committee to include greater cost detail and is prepared to update the committee on a monthly basis as the rebaselining proceeds.

The President's fiscal year 2002 budget fully supports requirements for U.S. Core Complete. It allows for the possibility of enhancements beyond U.S. Core Complete, but lays out conditions before any option is considered. The Space Station partnership has time to carefully consider decisions on any option for enhancement over the next several months or even years. We will continue to work with the administration and the Congress to determine the course that can be afforded within the budgetary guidance the administration has firmly articulated.

And let me say I fully support the tough approach that President Bush has asked us to undertake here and we are going to do exactly what he asked us to do.

PREPARED STATEMENT

Let me conclude by emphasizing that NASA remains committed to enabling the commercial development of space and the ISS. I have asked NASA's Chief of Staff, Courtney Stadd, to coordinate an agency-wide evaluation of commercial activities for the purpose of creating an enhanced commercialization strategy for the agency and America.

Thank you. I will be pleased to take your questions.

[The statement follows:]

PREPARED STATEMENT OF DANIEL S. GOLDIN

Mr. Chairman and Members of the Subcommittee: I am pleased to be here today to present to you NASA's budget request for fiscal year 2002.

As I look back at the year that has just concluded, I am filled with pride at what the NASA team has accomplished and with excitement for the many challenges that still lay ahead. What a year we have had! NASA flew the Shuttle Radar Topography Mission, the data from which is now being used to produce the most accurate digital elevation model ever of the Earth's land surface. The Hubble Space Telescope continued to provide the world with breathtaking images as it unlocks the secrets of the universe and rewrite astronomy textbooks. The Mars Global Surveyor brought us detailed pictures of the surface of Mars, providing more clues and compelling evidence that suggests water once flowed freely on the planet's surface. Back on Earth, NASA researchers brought a pulse of light to a complete stop, held it in place, and then were able to activate the light pulse again; this achievement has significant ramifications for new technologies in computing and communications. Space Station assembly and outfitting continued on schedule with 4 Shuttle flights, including the delivery of the Expedition One crew, which established continuous human presence in space, and the deployment of the U.S. laboratory. The NASA team also coordinated the successful launch of 6 ELV missions, including the Geostationary Operational Environmental Satellite-L, the Tracking and Data Relay Satellite-H, the Imager for Magnetopause-to-Aurora Global Exploration mission, the NOAA–L weather satellite, the Earth Observing-1 satellite, and the Satellite de Applicaciones Cientificas-C mission.

The Administration's fiscal year 2002 request for NASA is a solid and businesslike budget plan. The proposed funding level of $14.5 billion reflects an increase of 2 percent, or $258 million over the fiscal year 2001 enacted level, and a 7 percent increase over fiscal year 2000. The budget plan represents a deliberate prioritization of efforts within each Enterprise, to ensure that we live within our means. It provides a disciplined budget plan for International Space Station development and operations, consistent with a strategy of constraining Space Station cost growth, by offsetting growth through budget reductions in Station hardware and other Human Space Flight programs. NASA will undertake significant management reforms and budget restructuring to bring Space Station costs under control. The President's fiscal year 2002 budget provides ongoing support to fly the Space Shuttle safely while calling for a prioritization of Shuttle safety upgrades and infrastructure improvements within the proposed budget runout. The President's budget also calls for advancing the privatization of Space Shuttle activities. It reflects a strong commitment to continued execution of the Space Launch Initiative, reflecting NASA's commitment to provide commercial industry the opportunity to meet NASA's future launch needs and to dramatically reduce space transportation costs while improving space transportation safety and reliability. It funds a more robust Mars Exploration Program by redirecting funding from lower priority Space Science efforts. It provides increased funding for science-driven, prioritized, follow-on missions for second-generation Earth Observing System measurements that will provide greater understanding of how the Earth and its climate are changing; this increase is accomplished by identifying offsets within lower priority elements of the Earth Science program.

The President's budget also recognizes that the difficult decisions lie ahead. NASA is developing an integrated, long-term Agency plan that ensures a national capability to support NASA's mission. We will accomplish this by: (1) identifying NASA's critical capabilities and, through the use of external reviews, determining which capabilities must be retained by NASA and which can be discontinued or led outside the Agency; (2) expanding collaboration with industry, universities and other agencies and outsourcing appropriate activities to fully leverage outside expertise; and (3) pursuing civil service reforms for capabilities that NASA must retain, to ensure recruitment and retention of top science, engineering and management talent at NASA. NASA will also address the Agency backlog of facilities revitalization and deferred maintenance by repairing necessary and affordable facilities and by carefully phasing down the remainder. All of these tough decisions on the relevance of programs and facilities will require realistic, responsible decisions on priorities and financial supportability.

It is noteworthy that the President's budget reflects a NASA investment in science and technology that is 42 percent of the total Agency budget, up from 31 percent in fiscal year 1991, and targeted to reach 51 percent by fiscal year 2006. Funding for NASA science and technology is an investment in the future and an important factor that helps fuel the U.S. economy and maintain U.S. leadership and competitiveness in the global economy. The science priorities that support the objectives behind the near- and long-term missions being pursued by our 5 Enterprises are fully consistent with NASA's Strategic Plan. Those priorities are identified by working with the National Research Council (NRC) and the NASA Advisory Committees, which make recommendations to NASA in critical areas of science research and technology development. These recommendations represent the highest priorities of the science community. NASA continues to coordinate its science programs with other Federal agencies through multiple mechanisms, both formal and informal.

OVERVIEW OF THE FISCAL YEAR 2002 BUDGET

The fiscal year 2002 budget takes actions to address cost growth in the Space Station. To ensure that the Station program remains within the 5-year budget plan, the President's fiscal year 2002 budget redirects funding for certain elements of the program while preserving the highest priority goals of a permanent human presence in space, world-class research in space, and accommodation of international partner elements. The U.S. core will be complete once the Space Station is ready to accept major international hardware elements. The cost growth is offset in part by redirecting funding from remaining U.S. elements, particularly high-risk elements including the Habitation Module, Crew Return Vehicle and Propulsion Module, avoiding more than $2 billion in costs. In addition, funding for U.S. research equipment and associated support will be realigned with the on-orbit capabilities of the Space Station.

The President's fiscal year 2002 budget takes action to ensure that the Space Station program will be within the $25 billion statutory cost cap when U.S. Core Complete is achieved in fiscal year 2004. How the cap language should apply to elements that are considered enhancements is an issue that we must work with the Congress. The President's budget also proposes a total authorization for the Space Station over a 5-year period as a further means to cap Station spending; this amount may be adjusted upward if efficiencies and offsets are found in other Human Space Flight programs and institutions. NASA has initiated management reforms for the ISS program, including transferring program reporting from the Johnson Space Center to NASA Headquarters until a management plan has been developed.

The scope of the 104 Space Shuttle missions flown to date has demonstrated that the Shuttle is the most versatile launch vehicle ever built. This budget includes funding for safety investments, including additional safety upgrades and infrastructure needs that will improve reliability and ensure continued safe operations of the system. The Space Flight Operations Contract performed by Shuttle prime contractor continues to comprise almost one-half of the Space Shuttle budget and will increase in size as more contracts are consolidated.

The fiscal year 2002 budget includes a significant increase in funding for the Space Launch Initiative. The Space Launch Initiative is a focused investment of $4.9 billion dollars between fiscal year 2001 and fiscal year 2006 for risk reduction and technology development efforts for at least two competing architectures with dramatically lower costs and improved reliability and safety. Through this initiative, NASA will reduce technical and programmatic risks to acceptable levels to enable a competition for full scale development of one or more 2nd Generation Reusable Launch Vehicles around the middle of this decade.

This budget also includes funding to begin to develop the technologies needed to realize our vision for a 21st century aerospace vehicle. This vision is one in which aerospace vehicles can smoothly change shape, or morph, in flight like birds to optimize performance during complex maneuvers in complete safety, and be capable of self-repair when damaged. These vehicles will employ intelligent systems made of smart sensors, micro processors, and adaptive control systems to enable the vehicles to monitor their own performance, their environment, and their human operators in order to avoid crashes, mishaps, and incidents. They will also serve as the means for sensing any damage or impending failure long before it becomes a problem. The research into the technology to make this vision a reality—nanotechnology, biotechnology and information technology—will result in leapfrog capabilities compared to today's state-of-the-art vehicles.

Also included in the Aerospace Technology fiscal year 2002 budget is funding to establish 5 university-based Research, Education, and Training Institutes (RETIs). This effort will strengthen NASA's ties to the academic community through long-term sustained investment in areas of innovative, new technology critical to NASA's future and to broaden the capabilities of the Nation's universities to meet the goals and objectives of NASA's future science missions and technology programs. These RETI's will be openly competed at regular intervals and will inched a mandatory sunset date.

The fiscal year 2002 budget integrates NASA's investments in bio-nanotechnology computing and electronics which can provide capabilities orders of magnitude better than the best of today's electronics. Developed as detectors and sensors, they could enable spacecraft systems to be much smaller, with higher performance and lower power-consumption than possible with today's technology. Biologically inspired materials will have multi-functional capability and overall performance far greater than current materials. Key capabilities of these systems will be the ability to adapt to changing conditions and Agency mission needs and to detect damage or degradation before it becomes serious and reconfigure or repair themselves.

This budget funds the newly restructured Mars Exploration Program (MEP) and sets in place basic technology investments for the next decade of robotic Mars exploration. The MEP strategy is linked to NASA's experience in exploring Earth, and uses Mars as a natural laboratory for understanding life and climate on Earth-like planets. The 2001 Mars Odyssey orbiter was launched on April 7, and two Mars Exploration Rovers are being prepared for launch in 2003. Following that, NASA is planning for a Mars Reconnaissance Orbiter mission in 2005, and a competitively selected Mars Scout mission. In addition, science definition and technology development for a next-generation, mobile surface laboratory in 2007 is underway that will pave the way for a potential sample return mission early in the next decade. Also funded in the Space Science budget is the Living With a Star program, which address aspects of the Sun-Earth system that affect life and society. Its program elements include a space-weather research network; a theory, modeling and data analysis program; and space environment test-beds. The fiscal year 2002 budget includes funding to support the launch of 9 space science missions by the end of fiscal year 2002.

In NASA's Earth Science Enterprise, the fiscal year 2002 budget enables both the present and the future of scientific discovery leading to improved climate, weather and natural hazard prediction. In the present, it funds the continued deployment of the Earth Observing System (EOS) and related research to achieve the world's first integrated, detailed look at the interactions of land, atmosphere, oceans, ice and life. It is these interactions that drive variability and change in the Earth system, including regional weather, El Niño, large-scale floods, and volcanic activity. For the future, this budget initiates the next generation of observing satellites beyond EOS, as well as funds the advanced technology development that will make those missions less expensive and more capable. It also funds a program of applications research that will demonstrate the practical use of Earth science data.

Also included in the fiscal year 2002 budget is an increase of $10 million to provide a significant number of scholarships in science and engineering to enhance our student and faculty programs, including the development of a scholarship program in disciplines critical to NASA's future workforce needs. NASA will be seeking legislative authority to make these investments in our future scientists and engineers through a scholarship for service program. We will link these scholarship students to our current summer student and faculty programs, so that the students can work at our field Centers, side-by-side with our scientists and engineers.

The President has challenged NASA to ensure that we fully tap the R&D capabilities of academia and industry so our workforce and institutions are most effectively focused and to ensure a national capability to support NASA's mission. We face some difficult decisions and will take a close look at program priorities, capabilities outside NASA and the capabilities at our NASA field installations. We will continue to review the need for certain NASA facilities where the continuing cost of maintaining an aging infrastructure should yield to other priorities more closely tied to advancing technology.

Beginning with this fiscal year 2002 budget request, and consistent with statutory direction provided in the fiscal year 2001 VA–HUD-Independent Agencies Appropriations Act (Public Law 106–377), NASA is implementing a two-appropriation budget (excluding the Inspector General account)—Human Space Flight (HSF) and Science, Aeronautics and Technology (SAT). This is NASA's first step in transitioning to a full-cost budget. While full cost will ultimately integrate institutional and programmatic funds into a single budget, that integration is done in a step-wise manner, by providing for an Institutional Support budget line under each Enterprise and eliminating the present Mission Support appropriation. This initial step will begin to recognize, budget, and track direct full time equivalent (FTE) employees associated at the Enterprise level and then use this FTE data to distribute institutional costs (Research and Program Management and non-programmatic Construction of Facilities) using the relative percentages of direct FTE's by Enterprise. Taking this step will help managers and decision makers begin to understand the potential magnitude of institutional funds that are associated with each Enterprise in preparation for the day when full cost budgeting will distribute these funds to the project level via the appropriate cost/service pools.

NASA is an Agency about the future, and it is critical that we, as a Nation, invest in the future of science and engineering—as represented by the President's fiscal year 2002 budget request—if we are to continue to press the boundaries of the future.

The following information provides detail, with funding delineated under the new budget structure presented in the fiscal year 2002 budget request, concerning plans for NASA's Strategic Enterprises and major program areas. Appended to this statement are several charts depicting the funding proposals reflected in the President's fiscal year 2002 budget request.

NASA ENTERPRISE DETAIL

Human Exploration and Development of Space (HEDS) Enterprise

International Space Station

ISS is funded at $2.087.4 billion. This budget represents continued support for the ISS program, enabling the high priority goals of permanent human presence in space, world-class research in space, and accommodation of international partner elements. In response to the recent estimated ISS budget cost growth projections of $4 billion between fiscal year 2002–2006, NASA is undertaking reforms to curtail cost growth and identify savings. Because the cost to operate and utilize existing ISS elements and to continue the integration and launch of the 3-year inventory of hardware already at KSC is essentially committed, NASA's strategy is to redirect funding from projects with significant development activity remaining. Redirecting funding for the Propulsion Module, the Habitation Module and the Crew Return Vehicle avoids over $2 billion in costs. Restoration of these projects will be contingent on the quality of NASA's future cost estimates, the resolution of technical issues, the success of management reforms and other cost-control actions underway, and the ability to fund enhancements within the 5-year runout for Human Space Flight. Funding for U.S. research equipment and associated support will be realigned in accordance with the resulting on-orbit capabilities, but will maintain support for research considered most promising and crucial. While providing a clear call to NASA for fiscal restraint, this budget nonetheless maintains a commitment to launch the hardware that NASA has already built and maintains the current assembly schedule until at least 2004.

In addition to the redirected funds, NASA is preparing an action plan for management reform, and several management initiatives at NASA's space flight Centers to reduce costs by improving our cost-estimating ability, improving management efficiencies, refocusing civil servants, developing a plan for competition, and seeking greater participation from international partners.

With regard to Space Station research, we are fully committed to deliver to orbit all of the research equipment planned for the next 2 years. It goes without saying that there are many in the research communities who have very legitimate concerns about the impacts of the research funding reductions and crew resource limitations necessary to address cost growth. We are developing a post-2004 research utilization strategy that will be reviewed by our research community.

This budget continues our commitment to ISS commercialization. We will continue to seek commercial investment in infrastructure and ISS operations that may reduce Government costs, and we are continuing to assess Non-Government Organization (NGO) concepts for ISS utilization.

Space Shuttle

The President's fiscal year 2002 budget includes $3.284 billion for the Space Shuttle Program. In April, the Space Shuttle celebrated the 20th Anniversary of the launch of STS–1. Over the past two decades, the Space Shuttle has proven itself to be the safest and most versatile launch vehicle ever built. During the past year, the Space Shuttle has continued to perform the critical function of providing access to support the assembly and resupply of the ISS. The Space Shuttle also provides a space-based laboratory for conducting human supported Earth science missions, and will continue to maintain the Hubble Space Telescope and fly biological and physical research missions.

To sustain safety and support the Shuttle manifest, the Space Shuttle program will continue to invest in the Space Shuttle system to lessen the impacts of obsolescence and maintainability issues and to achieve lower operating risk by making safety investments, including upgrading the system. The Space Shuttle will need to be capable of supporting the critical human space transportation requirements for Space Station assembly and operations through at least this decade. NASA has determined that investing in upgrades provides not only a safer vehicle, but also one that is more reliable and one that is easier to maintain. NASA is continuing to assess the Space Shuttle programs aging infrastructure to determine how these needs—particularly safety-related needs—can be addressed within the Agency's budget priorities. For fiscal year 2001, 7 scheduled missions will support the assembly and resupply of the ISS. In fiscal year 2002, NASA is planning to launch 7 missions—5 ISS assembly and resupply flights, the Hubble Space Telescope's 3A servicing mission, and a research utilization flight (STS–107).

NASA plans to aggressively pursue Space Shuttle privatization opportunities that improve the Shuttle's safety and operational efficiency. This reform will include continued implementation of planned and new privatization efforts through the Space Shuttle prime contractor and further efforts to safely and effectively transfer civil service positions and responsibilities to the Space Shuttle prime contractor.

Space Access

Recent market stagnation threatens the viability of new, commercially-developed launch systems. NASA continues to work with this industry segment to seek ways to enable an opportunity for them to compete with the major launch companies, to ensure reliable cost effective U.S. launch services to meet Agency requirements.

Space Operations

On-orbit checkout of the TDRS–H spacecraft was conducted in July-September 2000, at which time the Multiple Access Return (MAR) service exhibited out of specification problems. An investigation of the MAR anomaly began in September 2000. The root cause of the anomaly has been determined, and changes to the TDRS–I and –J spacecraft flight hardware will be implemented prior to their launch. NASA is evaluating its contract options relative to accepting or rejecting the TDRS–H spacecraft. Additionally, in attaining the separate goals of responsive services at the lowest possible cost and of transitioning to commercial service providers, the Space Operations and Maintenance Organization (SOMO) faces several challenges, namely, evolving to a fee-for-service approach to operations, and meeting an aggressive cost reduction target while assuring mission safety.

Advanced Programs

In order to better align with current Agency budget priorities, in fiscal year 2002 the Human Exploration and Development of Space (HEDS) Technology Commercialization Initiative (HTCI) is focused largely on nearer-term goals within the overall strategic framework that has been defined for HEDS. The HTCI is considering commercialization in a broader context than the more focused efforts to date involving commercialization of the ISS or the Space Shuttle. Through HTCI, NASA intends to examine architectures that take advantage of a potentially robust future commercial infrastructures that could dramatically lower the cost of future space activities.

Space Science Enterprise

NASA's Space Science Enterprise (SSE) is focused on exploring the near and far reaches of our Universe the planets, stars, galaxies and other phenomena in an attempt to answer these fundamental questions: How did the Universe begin and evolve? How did we get here? Are we alone?

Through its various research programs and diverse missions, the Space Science Enterprise has already made great strides to begin to answer these questions. The scientific discoveries and insights gained through the Space Science Enterprise programs and missions have literally changed the way we view the Universe and our place in it. NASA's Space Science fiscal year 2002 budget request is $2.786 billion.

Space Science had many important successes over the past year, several of which were related to our closest neighboring planet, Mars. On April 7, NASA began a return to Mars with the successful launch of the Mars Odyssey spacecraft, which will arrive at Mars in October 2001. Once there, the spacecraft will use its suite of scientific instruments to map the chemical elements and minerals that make up the Martian surface, look for signs of water, and analyze the Martian radiation environment. The Mars Global Surveyor is continuing its in-depth imaging mission and has revealed features suggesting the possibility of current sources of liquid water at or near the Martian surface. Surveyor has also imaged layers of sedimentary rock, which suggest that long ago Mars may have had numerous lakes and shallow seas. Since most scientists consider water to be one of the key ingredients for life, these findings are particularly compelling. NASA is anxious to continue exploring the Red Planet, and the new Mars Exploration Program unveiled last October will ensure that we do exactly that. Through a series of orbiters, landers, rovers, and sample return missions that will take us through the next decade and beyond, NASA is committed to unraveling the secrets of Mars' past environment and geology and to discovering the role that water played. Once we begin understanding some of these parameters, we will be better able to determine whether life ever arose, or is still present, on Mars.

Further out in the solar system, NASA landed a spacecraft on an asteroid for the first time. Though never intended to be a lander, the Near Earth Asteroid Rendezvous (NEAR) spacecraft touched down on asteroid 433 Eros in February 2001. NEAR completed a very successful prime mission of orbiting Eros at different altitudes and sending back dramatic images of the asteroid's surface. With "nothing to lose," project scientists decided to attempt a "controlled crash" onto the surface in hopes of getting close-up images during the descent phase. Not only did we obtain spectacular images, but also NEAR actually continued to send signals after it landed. The spacecraft returned readings from its magnetometer and gamma-ray spectrometer from the surface of Eros before it was shut off at the end of February.

NASA has long supported the scientific study of the phenomena and fundamental physical processes involved in solar-terrestrial physics and has launched numerous spacecraft to study the dynamics of our Sun. A suite of NASA spacecraft continues to study the Sun now, in the maximum phase of its 11-year solar cycle. The volatility of the Sun during this phase was at one time only of concern to solar physicists; however, with humankind's increasing dependence on satellite systems, energy grids, and air travel, learning more about the Sun and its effects on the Earth has become an important area for scientific research. Just recently Solar and Heliospheric Observatory (SOHO) scientists were able to image a solar storm on the far side of the Sun (not facing Earth) for the first time. This allowed them to provide a week's advance warning about the bad weather in space, which enabled commercial and government entities to take measures against system damage.

After more than a decade in space, the Hubble Space Telescope (HST) is still delivering cutting-edge science and amazing images. A HST census found that the mass of a supermassive black hole is directly related to the size of the galaxy's nuclear bulge of stars. This suggests that the evolution of galaxies and their host black holes is intimately linked.

Using the Chandra X-Ray Observatory's superior resolution, astronomers have also discovered a new type of black hole in the galaxy M82. This black hole may represent the missing link between smaller stellar black holes and the supermassive variety found at the centers of most galaxies. Just recently, scientists captured the deepest exposure yet made by any telescope using Chandra. This image, comparable to the famous Hubble Deep Field, found black holes dominating the Universe at the faintest and farthest distances. The fact that black holes were such a dominant feature of the early Universe came, as somewhat of a surprise, since they are not nearly as common today.

NASA's Space Science Enterprise has made major contributions to the scientific world over the years. By making hard decisions to cancel lower-priority missions with significant cost growth or schedule slippage, including the Pluto-Kuiper Express and Solar Probe missions, the President's fiscal year 2002 budget request paves the way for more capable missions and increasing scientific discoveries and revelations in the years ahead. In addition to a robust Mars Exploration Program for the next decade, the proposed budget also focuses on new technology development in space propulsion systems that could support faster, more capable planetary missions, such as a potential Pluto "sprint" mission, and supports critical technology investments for future decisions on high-energy astrophysics missions.

Space Science continues to develop integrated programs of missions that have delivered and will deliver a hearty and diverse abundance of new scientific understanding about the universe and our place within it to the American people.

Earth Science Enterprise

The President's budget for fiscal year 2002 is $1.515 billion. It reflects the net change in funding for Earth Observing Systems (EOS) as peak funding for the first series of EOS declines and funding for formulation of next decade missions ramps up. NASA's Earth Science Enterprise is our Nation's investment in improving climate, weather and natural hazard prediction using the vantage point of space. Our ability to view the Earth from space is what enables today's weather forecasts, and what will help enable tomorrow's capability to predict El Niño, decadal climate change, and even volcanic eruptions. Earth science is cutting edge science, exploring changes taking place on our home planet that are little understood today. And Earth science is also science in the national interest, providing new tools for decision-making by businesses, state & local governments, and other Federal agencies.

Fiscal year 2000 was the best year yet for NASA's Earth Science program, as measured by our contribution to the list top science discoveries worldwide, published by Science News. We mapped the pattern of thinning and thickening of the Greenland ice sheet, published a 20 year record of North and South polar sea ice extent, and observed a Connecticut-size iceberg break off from the Antarctic ice sheet. We demonstrated the capability for 2-day prediction of storm formation, and showed that air pollutants inhibit rainfall. We discovered that the mysterious "Chandler wobble" of the Earth on its axis is caused by changes in deep ocean circulation, and created a consistent global land cover data set for use as a baseline for measurement of future changes.

Much of this work was made possible by NASA-sponsored scientific research and the first elements of the EOS series of satellites now being deployed. Landsat 7, QuikSCAT, Terra, and ACRIMsat were all successfully launched in 1999, and are delivering science data to millions of users today. In February 2000, we flew the Shuttle Radar Topography Mission, and are using the data to produce the most accurate digital elevation model of the Earth's land surface between 60°N and 56°S. This will be of great use not only to scientists but also to civil engineers who are working to improve aviation safety in mountainous areas and to manage potential flood hazards. Late in 2000, we successfully launched the New Millennium Program Earth Observer-1 to test several new remote sensing instruments. One instrument is demonstrating the capability to make Landsat-type measurements at one-fifth the size and one-fourth the cost. Another instrument is demonstrating the first hyperspectral imager flown in space, paving the way for the next big advance in commercial remote sensing.

Over the next 3 years, we will complete the deployment of the EOS System. Later this year, we will launch the Aqua spacecraft to make the most accurate measurements yet of atmospheric temperature and humidity—the kind of data that will enable scientific discoveries leading to weather prediction to be extended from 3 to 5 days out to 7 days. ICEsat will make the first detailed topographic maps of the world's great ice sheets. Other missions will extend key data records of ocean topography and solar irradiance that are essential to seasonal and decadal climate prediction. Smaller, complementary missions will study Earth system phenomena never before studied globally from space, such as the Gravity Recovery and Climate Experiment (GRACE) which will provide a precise map of the Earth's mass distribution and changes in the Earth's gravity field, including changes in large underground fresh water reserves (aquifers). The development of the EOS Data and Information System (EOSDIS) is nearly complete, and is already doing the job of operating EOS satellites now in orbit and processing their data. In fiscal year 2000, EOSDIS provided over 8 million data products in response to 1.5 million requests. We have already begun to plan how data and information system services should evolve to meet the needs of Earth science and applications over the next decade.

Planning for the next decade of Earth science has been in full swing over the past year. NASA's Earth Science Enterprise has a new Research Strategy for 2000–2010 that has been positively reviewed by the National Research Council and endorsed by the NASA Advisory Council committee advising the Office of Earth Science.

Five EOS successor missions are planned as part of the fiscal year 2002 budget. A Global Precipitation Mission will build on the success of TRMM, and provide the first global observations of rainfall. This will provide data essential to future assessments of fresh water availability, and to answering some of the highest priority questions in the Research Strategy. Ocean topography and ocean surface winds missions will succeed the EOS-era Jason and SeaWinds, respectively, providing continuity of measurements that are proving essential to forecasting and monitoring El Niño and hurricanes. Atmospheric ozone/aerosol and solar irradiance missions will extend EOS-era measurements of two key factors (atmospheric chemistry and incoming solar energy) that help distinguish natural from human influences on climate change.

In addition, this budget provides essential funding for future Earth exploratory missions to probe least understood Earth system processes, which will be awarded competitively.

This budget request also adequately funds research to use these observations to begin to answer the questions in the Research Strategy, to demonstrate practical applications of these data to society described in the Applications Strategy, and to develop advanced technology to make such observations better and cheaper in the future, as described in the Technology Strategy. It is this investment in Earth science from space that will enable the future of climate, weather, and natural hazard forecasting to serve national needs and maintain U.S. global leadership in space-based Earth observations in the decades

Biological and Physical Research Enterprise

NASA's Office of Biological and Physical Research (OBPR) Enterprise was established this past year to affirm NASA's commitment to the essential role biology will play in the 21st century and establish the core of biological and physical sciences research needed to support Agency strategic objectives. OBPR was established under the premise that revolutionary solutions to science and technology problems are likely to emerge from scientists, clinicians, and engineers who are working at the frontiers of their respective disciplines and are also engaged in dynamic interdisciplinary interactions.

Funded at $360.9 million in fiscal year 2002, OBPR uses the space environment as a laboratory to test the fundamental principles of physics, chemistry and biology; conducts research to enable the safe and productive human habitation of space; and enables commercial research in space. OBPR includes programs in Physical Sciences Research, Fundamental Space Biology research, and Biomedical and Human Support research. OBPR conducts research activities in conjunction with four other major Federal agencies through approximately 30 partner agreements. OBPR also manages 12 Commercial Space Centers across the country.

OBPR is preparing for the transition to a new era in human space flight. The ISS will provide a growing capability as a research platform. OBPR will work to extract the maximum scientific and commercial return from this premier research facility while conducting research to ensure the health and safety of space travelers in the near term and into the future.

NASA is on track to deliver the first 10 research equipment racks to ISS as planned. In addition, we have already selected more than 100 specific experiments planned for the first 6 ISS increments. During Expedition 1, from October 2000 through February 2001, the crew conducted several research activities in the areas of educational seed growth experiments, crystal growth of biological macromolecules, motion and vibration technology and human research. Eighteen NASA experiments are scheduled to become operational during Expedition 2 (March through July of 2001), including important biomedical experiments in the areas of radiation dosimetry, psychosocial factors, sleep physiology, drug absorption, and sensorimotor coordination. Those experiments will continue into Expedition 3 (July through October of 2001), and additional OBPR experiments will be added to study renal stone prevention, spatial orientation, and pulmonary function. Consistent with the current baseline assembly sequence, the permanent Space Station crew size will be limited to 3 crew due to cost growth. Crew size will be a major limiting factor for research activities and reduced funding support for completing state-of-the-art research facilities will have an impact on the planned research program.

NASA is restructuring the ISS research budget to align it with the on-orbit capabilities and fiscal resources available. This restructuring activity is taking place over the next few months. OBPR is prioritizing and time-phasing research plans for internal lab-based research as well as external truss and exposed platform Fundamental Physics, Earth and Space Sciences research. OBPR is engaging the scientific community as part of this process. We have proposed a framework of priorities to ensure a world-class research program, consistent with NASA's commitment to safety, to serve as the basis of discussion with the scientific community.

During Space Station construction, OBPR is aggressively pursuing opportunities to maximize research within the availability of the Space Shuttle missions, through the use of mid-deck lockers on planned ISS assembly flights, and ISS utilization flights.

Aerospace Technology

The budget request for the Office of Aerospace Technology Enterprise is $2,375.7 million. We are funding the highest priority aeronautical and space technologies while maintaining an active base research program that will enable revolutionary advances in the way we design and operate the aerospace vehicles of the 21st Century. We have terminated projects that have either delivered on most of their promised technology or do not offer a leap in technology commensurate with their funding. Included in those terminated are Intelligent Synthesis Environment (ISE), High Performance Computing and Communication (HPCC), Rotorcraft and other aircraft activities focused on near-term military applications. We are placing additional emphasis, and dollars, on 21st Century Aerospace Vehicles, Computing, Information & Communication Technology (CICT), Virtual Airspace Modeling and nanotechnology. These increased investments reflect where we need to focus our efforts to expand knowledge and to advance the state of the art in revolutionary new aircraft and air traffic management technology.

Aerospace Technology Programs

To reflect our new emphasis on innovation, as well as reflect the technical progress gained in recent years, we have reformulated our Enterprise goals—Revolutionize Aviation, Advance Space Transportation, Pioneer Technology Innovation, and Commercialize Technology.

Goal One, Revolutionize Aviation.—Without a revolution in the aviation system, it will be impossible to accommodate the projected tripling of air travel within two decades in a safe and environmentally friendly manner. Revolutionizing the aviation system to meet the demands for growth means we must provide a distributed flexible and adaptable network of airways—within the physical and environmental constraints of today's system. We must and will address the civil aviation system's fundamental, systemic issues to ensure its continued growth and development, thereby giving backbone to the global transportation system and assuring global economic and cultural success and vitality.

We have restructured our Base Research and Technology investments to focus on revolutionary 21st Century Vehicle technologies. The design and fabrication of 21st Century aerospace vehicles will not be accomplished by the traditional methods of multiple mechanically connected parts and systems. It will employ fully integrated embedded "smart" materials that will endow the vehicle with unprecedented levels of aerodynamic efficiency and control. Proposed 21st Century Aerospace Vehicles will be able to monitor their own performance, environment, and even their operators in order to improve safety and fuel efficiency, and minimize airframe noise.

Goal Two, Advance Space Transportation.—I am very excited about the Agency's vision to revolutionize the Nation's space transportation systems. I believe this is the most important initiative of this Enterprise and one of the most important to our Nation. NASA's vision for space transportation is being pursued through a phased approach embodied within the Integrated Space Transportation Plan and the Space Launch Initiative. We recognize that privately owned and operated launch vehicles lofting NASA payloads on a regular basis is the right strategy to free up the agency's resources for scientific pursuit on the new frontier.

Last month we reached a major milestone in the 2nd Generation Reusable Launch Vehicle program when we selected a number of companies to enter into negotiations to participate in the Space Launch Initiative. Following an exhaustive series of evaluations, we concluded that the X–33 and X–34 projects would not receive Space Launch Initiative funds. This difficult decision was based upon the determination that the benefits to be derived from continuing these programs did not justify the cost. We plan to announce the results of the ongoing Space Launch initiative negotiations in May.

Goal Three, Pioneer Technology Innovation.—We aim to revolutionize the developmental processes, tools, and capabilities of the aerospace industry. To create the aerospace transportation systems of the future, we need to develop a new approach to engineering that puts safety, reliability and mission assurance first. Collaborative tools and human-like intuitive environments are critical to allowing us to "virtually" build and test vehicles and systems before we spend money on expensive hardware. System characteristics such as intelligence, rapid self-repair, and adaptability will come about through innovation and integration of leading-edge technologies, such as biotechnology, nanotechnology, and intelligent systems. The unique goal to Pioneer Technology Innovation focuses on both the specific technology innovations and the processes, which drive them.

To strengthen our ties with the academic community we are implementing five University-based Research, Education and Training Institutes (RETIs). The role of the RETIs will be to research and utilize innovative, cutting-edge opportunities for science and technology that can have a revolutionary impact on NASA's future missions. These RETI's will be openly competed at regular intervals and will include a mandatory sunset date.

We have combined existing programs with new activities to create the Computing, Information & Communications Technology (CICT) research program to concentrate our core expertise in critical technologies

Goal Four, Commercialize Technology.—Since its inception in 1958, NASA has been charged with ensuring that the technology it develops is transferred to the U.S. industrial community, thereby improving the Nation's competitive position in the world market. The fiscal year 2002 budget request of $146.9 million continues this important aspect of our mission. The Agency's commercialization effort encompasses all technologies created at NASA centers by civil servants, as well as innovations produced by NASA contractors. About 75 percent of the amount requested for NASA's Commercial Technology Program effort is for NASA's Small Business Innovation Research (SBIR) Program. The NASA SBIR program has clearly contributed to the U.S. economy, fostering the establishment and growth of over 1,100 small, high technology businesses.

In addition to NASA's Commercial Technology Program, we are also working to transfer commercial technology across the entire aerospace program. For example, the need for data dissemination within a high-integrity wireless broadband network has been identified as one of the major technical barriers to providing an order of magnitude increase in aviation system capacity and safety. NASA's work in wireless broadband networking illustrates a huge commercial success. We have demonstrated real-time data link technology to move and distribute unique and distinct flight data to multiple sites in real-time while addressing multi-level priorities in a secure, high integrity data sharing environment serving safety and capacity needs of the National Airspace System. This broadband technology demonstrated a phased array antenna technology that achieves data rates 100x greater than what is operational in today's National Airspace System, greatly increasing the capacity of the NAS, reducing aviation system delays and saving billions of dollars in air travel operations cost. In April 2000, Boeing unveiled a high-speed global communications service offering live in-flight Internet, e-mail, and TV to be available next year. While anticipated revenues have not been announced, analysts project the addressable market to be about $70 billion over the next 10 years.

OTHER KEY INITIATIVES

Institutional Support

NASA has conducted a review of its facilities infrastructure, finding that the deteriorating plant condition warrants an increased revitalization rate to avoid safety hazards to personnel, facilities, equipment and mission. Some facilities have deteriorated to the point that they need to be replaced. The President's fiscal year 2002 budget request includes facilities funding to address some of these needs, but the backlog of revitalization requirements continues to grow and will be addressed as part of NASA's Critical Capabilities Review.

NASA plans to address the considerable Agency backlog of facilities revitalization and deferred maintenance, by repairing those facilities necessary to take us into the future and that are affordable to keep, and by carefully phasing down the remainder. This requires tough decisions on the relevance of each facility as well as realistic, responsible determinations on the financial supportability of them. These decisions will be made as part of the Strategic Resources Planning activity that NASA will undertake as part of its Critical Capabilities Review over the next several months. This effort will fully integrate facilities planning with program planning, consistent with NASA's Strategic Plan and Center implementation plans. In fact, this Strategic Resources Planning effort will become an integral and ongoing part of NASA's facilities planning and management processes.

Performance Plans

NASA is fully committed to the Government Performance Results Act (GPRA). Each year, we believe we make further progress in portraying our goals and commitments towards performance in terms that are relevant to the American people. We appreciate the heightened level of accountability GPRA affords. The NASA Performance Plan has been significantly improved for fiscal year 2002 in several key areas:

—Public Benefit Statements will be included to more effectively communicate the relevance of targeted performance.

—Each Enterprise/Crosscut Process will provide a description of the means that will be used to verify and validate measured performance.

—A Multi-year Performance Chart (fiscal year 1999–2002) will be included for each Enterprise/crosscut process to demonstrate cumulative progress towards the achievement of strategic goals and objectives.

—Comments from the NASA Advisory Council regarding the development of metrics will be incorporated in the Plan.

NASA is in the process of modifying how we measure NASA R&D so as to better recognize the achievements of our long-term research missions to benefit the American public. Measuring multi-year, incremental efforts on an annual basis; quantifying and predicting the timing of research results; and adjusting metrics to reflect gains in knowledge and experience are new approaches that we believe would be useful in assessing NASA's program performance and measuring R&D efforts in general under GPRA.

CONCLUSION

Mr. Chairman, I am proud of the budget I am presenting to the Committee. It is essential that the Congress fully fund this budget. It will enable NASA to continue to fly the Shuttle safely, continue development of the Space Launch Initiative that will revolutionize our launch capability, continue construction of the ISS, and accomplish cutting-edge science research and technology. While the difficulties of cost growth on the ISS program present challenges, we are committed to completing the ISS with our International partners so that we will have a world-class research laboratory in space that will provide unprecedented opportunity for a host of science discoveries not yet imagined.

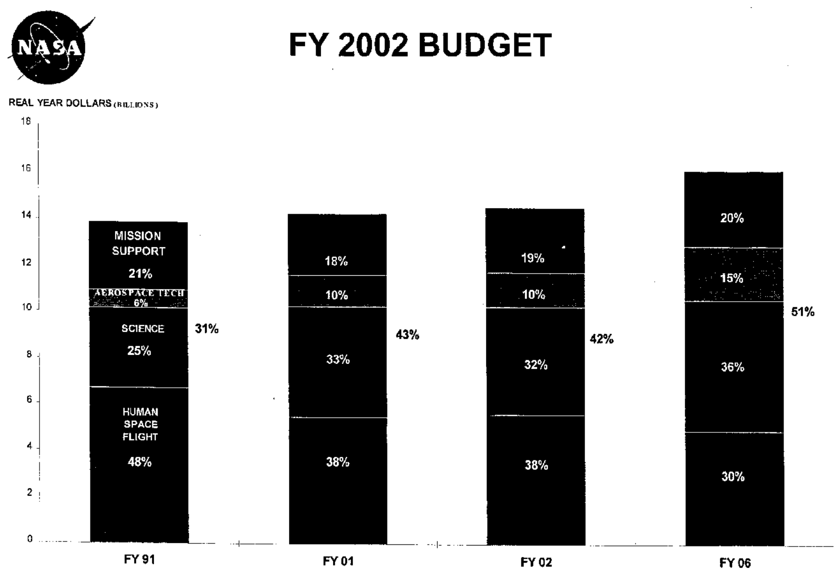
I look forward to working with the Subcommittee to make this budget a reality.

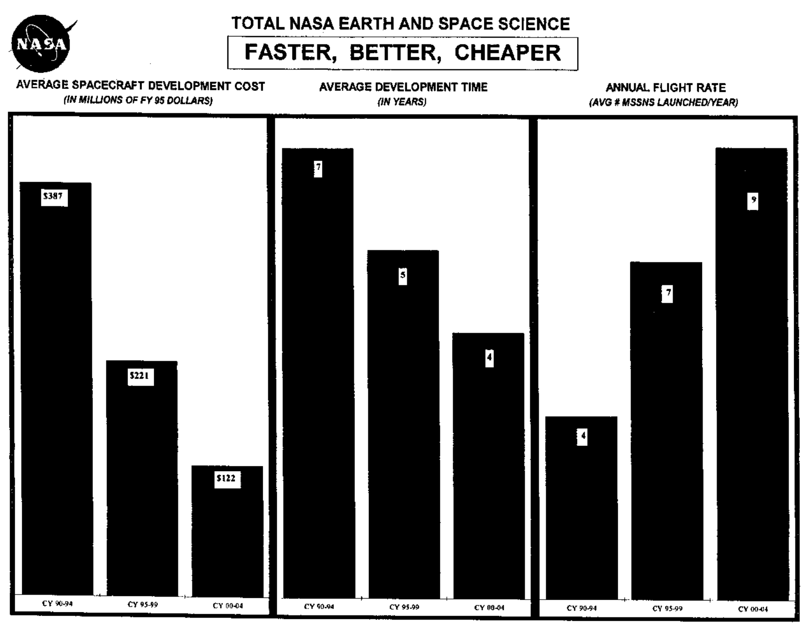
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION FISCAL YEAR 2002 ESTIMATES

[In millions of real year dollars]

Full Cost Structure	2000 [1]	2001 [1]	2002 Pres Budget	2003	2004	2005	2006
INTERNATIONAL SPACE STATION	2,323.1	2,112.9	2,087.4	1,817.5	1,509.1	1,394.3	1,389.0
SPACE SHUTTLE	2,999.7	3,118.8	3,283.8	3,218.9	3,253.3	3,213.5	3,228.0
PAYLOAD AND ELV SUPPORT	79.9	90.0	91.3	92.5	100.0	104.7	111.6
INVESTMENTS & SUPPORT	1,112.2	1,272.5	1,303.5	1,333.5	1,348.1	1,381.7	1,420.6
SPACE OPERATIONS	496.0	521.8	482.2	370.8	286.5	296.8	296.8
SAFETY, MISSION ASSURANCE, & ENGINEERING	43.0	47.4	47.8	47.8	48.0	48.0	48.0
HUMAN SPACE FLIGHT	7,053.9	7,163.4	7,296.0	6,881.0	6,545.0	6,439.0	6,494.0
SPACE SCIENCE	2,524.1	2,624.7	2,786.4	3,144.2	3,560.5	3,897.5	4,008.1
BIOLOGICAL & PHYSICAL RESEARCH	340.3	378.8	360.9	380.7	402.6	405.6	419.4
EARTH SCIENCE	1,690.3	1,716.2	1,515.0	1,587.4	1,571.0	1,572.9	1,578.7
AEROSPACE TECHNOLOGY	1,834.4	2,214.5	2,375.7	2,823.8	3,135.1	3,174.2	3,402.1
ACADEMIC PROGRAMS	138.8	132.7	153.7	143.7	143.7	143.7	143.7
SCIENCE, AERONAUTICS AND TECHNOLOGY	6,527.9	7,066.9	7,191.7	8,079.8	8,812.9	9,193.9	9,552.0
INSPECTOR GENERAL	20.0	22.9	23.7	24.6	25.5	26.5	27.4
Total	13,601.8	14,253.2	14,511.4	14,985.4	15,383.4	15,659.4	16,073.4

[1] Fiscal year 2000 and fiscal year 2001 restructured to reflect new fiscal year 2002 Full Cost Structure.





Senator BOND. Thank you very much, Mr. Goldin.

Let me turn to my ranking member, Senator Mikulski, for her opening statement and then for questions she may wish to ask.

STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Thank you very much, Mr. Chairman. As you know, I had an amendment on the floor to establish 1,000 community tech centers. And it passed 50–49.

I know that my colleagues are waiting and we want to move quickly into the questions.

Mr. Goldin, first of all, I want to welcome you. I know this is your ninth appearance before this subcommittee, and you are also now serving your third President. So, first of all, I want to start out by thanking you for your service to the Nation in navigating NASA through some very tough budget times while still pushing the envelope of science and technology. So, I want to say thank you. I think you're also trying to change the culture of NASA, particularly in science programs, to do it faster, quicker, better, as well as cheaper.

But as we move into this hearing, I am very troubled about what is happening to the Space Station. I want to make sure that the problems with the Space Station do not threaten NASA's science programs. The Space Station cannot impact on the NASA science programs, nor do I want, having to deal with these cost overruns, to end up where NASA has to forage for funds and rob other very important programs. I think we are at a very critical junction.

Senator Bond and I have led continuous battles on the floor to ensure the continuity and the continuation of the Space Station. But I am concerned that my colleagues, who are not involved in this as deeply as we are, are going to lose faith in this program, and I think we could end up maybe even losing the program. That is not a threat, but this is really pretty serious. And it does not get better. It just does not get better.

In your testimony, I must confess I did not understand what you said in your last paragraph about "I fully support the enhancement of Core Complete," et cetera. I hope in the questions that we can go into it.

Despite the problems, though, with the Space Station, I know it has also been a good year for NASA, and that is why I am so excited about these science programs. Thanks to the John Hopkins Applied Physics Lab, look at how the NEAR probe landed on the asteroid Eros and sent back these incredible photographs and, more importantly, scientific data. The Hubble Space Telescope continues to rewrite science textbooks every year, most recently discovering a mass of a supermassive black hole. So, I think the science is moving along.

We are concerned, of course, in Maryland about the Wallops Island with the decline of the commercial space launch business. There is an impact on Wallops. I, again, will go into that in my questions. I am concerned about their viability. I hope that we can come up with a new approach for Wallops.

In the area of earth science, we are seeing the benefits of Mission to Planet Earth, a program that we have fought for for almost a decade. What I like about Mission to Planet Earth is that we are now really getting back the kind of information we hoped would help the people on this planet with weather and storm predictions, urban and suburban planning, agricultural and precision farming advice. In my own State, where we would have an outbreak of pfisteria, we could be able to pinpoint solutions rather than fingerpoint at each other.

So, we could go on about it, but I must say the $4 billion in cost growth, which I guess means cost overruns, associated with the International Space Station has negative impacts. This tourist in space, courtesy of the Russians, was outrageous—was outrageous. And the American people do not pay our astronauts to babysit tourists. Our astronauts are skilled, trained, and willing to put their lives on the line, and they are not paid to babysit tourists. It is not Disney World. If Disney wants to have a Space Station, let them build it and pay for it. Let them try. But I think this was outrageous.

The Russians have continually reneged on the deals with us. They do not pay their own people. They are still selling their technology and know-how to Iran. I mean, I am very cranky with the Russians. And then this is like being pimps. I just think it is outrageous, and I think it is demeaning to the professionals at NASA and I think certainly for our astronauts to have to spend 1 week so this guy could have the flight of his life is outrageous.

I know you spoke sharply about it, but let me tell you, it really cast in doubt the ability to have scientific collaboration with the Russians. They do not deliver, and what they then deliver is some guy for $20 million who is having a mid-life crisis.

Senator MIKULSKI. With that, I think I will just conclude. I ask that my full statement be in the record.

Senator BOND. Well, I tell you, that was a good start, Senator Mikulski. I am looking forward to reading the rest of your statement. We will accept that for the record.

Senator MIKULSKI. I am just warmed up now.

Senator BOND. Would you like to ask some questions while you are on a roll?

Senator MIKULSKI. No. You go right ahead.

SPACE STATION COST OVERRUNS

Senator BOND. Following up on the Space Station cost overruns, the initial cost estimate of $17.4 billion, then to $26 billion, and then the February revelation, another $4 billion in cost overruns. It seems to me there should have been a decision making review process to track the costs and the problems.

What I found even more troubling is we were advised by staff that the cost review and planning process in Houston that said, hey, we are $4 billion short, actually was comprised of contractors and ISS staff meeting, developing a wish list of their needs and the desired payments to cover those. They just sent it in and said, this is what we would like to have. How did this $4 billion figure come about? Did you not hear about it in Washington until December? How can we avoid having this kind of unpleasant surprise in the future?

Mr. GOLDIN. I believe that the issue had to do with a process we call threats and liens, and for a number of years, we had discounted them because they were out in the future. After we launched this Zvezda module, we had slipped, slipped, slipped, so we had a couple years where we could not get traction and get it baselined.

After we launched this Zvezda module, the program manager, Tommy Holloway, who I do have faith in, took a look at the monthly charges, and they were not coming down. He then took a look at the threats and liens, and there were a number of additions put in. They started doing a bottoms-up cost estimate sometime in late summer, September, October, the results of which we had in January.

I was briefed, I think December 12, and I was told of this. I advised them to just openly talk about it. Do not go back and beat people up and get them to be quiet, but let all the data come out so we understand it.

The basic issue is there are a lot of things we did not understand about space operations. Optimism. I will accept that criticism. The dilemma was it is the continual operation in space that we had never undertaken. The operational tempo, the number of missions we had. We underestimated the logistics. We underestimated the operating costs. We had a lot of software integration problems, which is not uncommon with the rest of the industry, and the software/hardware integration probably is a place where we need to be able to develop better cost estimating tools. That is how it happened. Saying that, when we presented it to the administration, they were very clear, and they said, we will not have a $4 billion cost overrun. The guidance we got was to define a core vehicle that we could deliver that will meet three principal needs: world-class research, permanent presence of humans in space, and satisfy our international partners in terms of the hardware they have to deliver to orbit. We put together such a program. We went back and we scrubbed a number of elements.

They also went on to say that what they wanted us to do is to see where we could have reforms and efficiencies, be more crisp in our cost definition, and then as we get better cost confidence, retire the technical risks, and through these efficiencies, have money available, to start reinstituting the Habitation and the Crew Return Vehicle.

In essence, what we have done is we have put on temporary hold the remaining high-risk, high-cost consuming elements until we get that station up, and then we can bring on other approaches. In addition, they gave us permission to go out and talk to some of our international partners and seek more international involvement in building some of this equipment. This is all ongoing now.

And finally, I believe I outlined some of the cost approaches we have taken in getting better visibility, and we will be briefing your staff on a monthly basis based upon these meetings that Mr. Rothenberg will be holding here in Washington.

Senator BOND. I appreciate that. I trust you will be looking elsewhere than Moscow for those additional elements.

Mr. GOLDIN. I think those additional elements might come west of Moscow.

HABITATION MODULE/CREW RETURN VEHICLE

Senator BOND. You mentioned the basic mission of the station. As I said, I understand that you had to get certain things under control and cut back. But the decision by the administration to suspend the Habitation Module and Crew Return Vehicle because of the cost overruns concerns me that it will preclude, for a long time, the effective utilization of the station for science research. The lack of either the Habitation Module or Crew Return Vehicle, as I understand it, means that only three crew members can be on the station at any one time, and with two-and-a-half members to operate it, you have got a half a crew member doing all the science.

How are we going to get back to the place where we can be a world-class in-orbit science platform with the ISS?

Mr. GOLDIN. First let me say we made a commitment through 2002 to deliver 10 of our 27 research racks to orbit. They will be there. We plan through 2004 to have only three crew on board to do world-class research, so we have time to go work the problem. That is the important point I think you ought to note. So, we are on track through 2004 to being able to do what we said we are going to do on research.

Senator BOND. So, that one-half a crew member can do the research that is needed in this time frame?

Mr. GOLDIN. In this time frame. That was planned.

We are now looking at other approaches. We are developing the X–38 to try and retire the technical risk and see how much it is going to cost, do we understand it? Are the Europeans willing to put significant money into the X–38 and perhaps take a leadership role? We are going to be doing this over the next 2 years. Within about 2 weeks, we are going to announce an award of a contractor that we will be asking to start making cost estimates on the CRV based on the X–38 work. It will be a low-level contract. So, we believe within a year or 2, we may have a solution to the CRV, and we have time to work on it.

Now, the one thing that would be beneficial, but at the present time inappropriate, to get extra crew on board that vehicle because we can do temporary habitation with what we have, would be to use the Soyuz vehicle. But at the present time, in good conscience, I could not recommend to this committee or to the President of the United States until I see a change in the Russian behavior that we should even consider that Soyuz vehicle.

Senator BOND. I will have a CRV question. Let me turn now to Senator Mikulski.

CREW RETURN VEHICLE

Senator MIKULSKI. Well, I think many of Senator Bond's questions were my own.

I am going to pick up on the CRV. As you indicated, deferring the Crew Return Vehicle is going to limit the number to three of the astronauts who are going be on the station. I thought it took, again, two-and-a-half people to do the operations of the station. That leaves a half a person to do research. I do not understand how a half a person can keep us on our research line. Does this not have a tremendous reduction in biological and physical science research that is done? The University Space Research Association has a lot of raised eyebrows about this.

Mr. GOLDIN. Again, let me say we only planned on having three people through at least 2004. That has not changed, and we have selected the experiments in that time frame, prioritizing biomedical research as our first priority. That was in the basic plan. The 10 racks we had talked about taking up are on schedule to get up there. What we are trying to do now with the time we have available is see what alternate possibilities we have. We are looking at a variety of things such as perhaps an extended duration orbiter (EDO) that will have crew up there.

But the real problem we have is we need to see how we could reconnect with the Russians because, under some conditions, being able to have an additional Soyuz or two could give us that additional three people. But right now that is the only other vehicle to get up there, and I could not recommend to this committee that we should do that.

Senator MIKULSKI. Well, we always, of course, have to be concerned about the safety of our astronauts and their ability to leave quickly. I know the CRV was meant to be like a large-scale lifeboat.

Am I right in thinking that Mr. Tito returned in a Soyuz? Is that what he came back in?

Mr. GOLDIN. The space tourist came back in a Soyuz vehicle.

Senator MIKULSKI. Because there is another Tito that died and created a lot of problems. At one time it was called Yugoslavia.

But he came back in a Soyuz.

You know how frustrated I have been with the Russians for many years in this. But I think we really do have to explore what they could offer and in some ways begin to make it up to us. I think the way they work their way back home is to start doing very specific things to make it up to us.

The other thing I have been concerned about is if we only have one vehicle to return—I am thinking of a ship. You always have more than one lifeboat in a ship. You do not have one lifeboat to get everybody off. You have several lifeboats. My question would be, during this time while you are working on the CRV—and I do not know this and we can talk about it in another forum—but where you would have more than one Soyuz there.

Mr. GOLDIN. The answer is before this stress built up, that was the direction we were looking at. We had an issue that we had to undertake and we needed to explore the possibilities with the administration and the Congress because of H.R. 1883, the Iran Non-Proliferation Act of 2000. However, we did not expect the CRV, under the best conditions, until 2005–2006 anyhow and we were exploring that possibility.

But let me provide a little context to this so you understand what has happened with the space tourist going up on a schedule that he demanded, not what we recommended from a safety standpoint.

Senator MIKULSKI. No, not on my time. The Russians have already ruined a lot of things for me.

Mr. GOLDIN. No, but I wanted to say there is a stress, and we are now in the process of trying to reconnect with the Russians, reestablish credibility and explore possibilities like you are suggesting. But until we do some team-building and get confidence, we cannot talk about buying a Soyuz.

Senator MIKULSKI. No, I understand it. I am just throwing out a conceptual idea. Oh, no. I do not think they understand the consequences of this.

However, let me ask about the Space Station before I move on to earth science. We have had so many redesigns, replans, and reconfigurations. Can we truly say to our colleagues, as we take our appropriations bill to the floor, is this really it, or is it going to be a series of continuous surprises under every rock? Really. I do not know how many redesigns and so on I have been through.

This is not a woodshed conversation, Mr. Goldin, but I think you can understand how troubled we are. Really, it is Bond and Mikulski who have to explain this to our colleagues.

Mr. GOLDIN. Let me present a few pieces of information to you. Since 1994, if you take a look at the budget, we have had a 12-percent increase while we built 90 percent of the hardware for the station. The way we calculate the cost of the station is we take a look at the schedule. So, because the schedule has slipped out, it has driven a lot of costs up. We have gone through it and we have taken some very tough steps saying we are going to stop the remaining high-risk development tasks and will not restart them until we have confidence in those numbers.

Senator MIKULSKI. So, you do not know if this is it.

Mr. GOLDIN. I think we have a good idea this is it, but we will not start those tasks unless we know we really have the costs under control. There are estimates on the CRV that say they could save us an enormous amount of money, but we are reluctant to say that until we understand what those costs are.

EARTH SCIENCE

Senator MIKULSKI. I think the station is an ongoing conversation. I am just looking at my yellow light here.

Let us go to earth science. As I understand the 2002 budget, it proposes to cut NASA's earth science by $200 million, or 12 percent. Could you go into that in more detail and what this would mean for EOS activities and what impact this would have on Goddard?

Mr. GOLDIN. Well, to the first order, this budget now contains, in a 5-year run-out, the second phase of EOS. So, if you take a look at the run-out, we have added $1.4 billion of a whole new set of starts. Seven new spacecraft are in that budget.

The drop in this year's budget was a combination of effects. One is EOS phase 1 is beginning to come down, and we are starting the EOS phase 2, starting to come up. I think that is the biggest impact.

In terms of the impact on Goddard, I think it has an unbelievable future because of the commitment to start the second phase of EOS. So, I think there is a rosy future, not just for your constituents at Goddard, but researchers around the country.

Senator MIKULSKI. Yes. Well, that is what we are also interested in.

I note that my time is up, and I know Senator DeWine has been waiting patiently.

Senator BOND. Thank you, Senator Mikulski.

Senator DeWine.

COMBUSTION AND FLUID PHYSICS RESEARCH PROGRAM

Senator DEWINE. Mr. Chairman, thank you very much.

Administrator Goldin, I want to talk a little bit about combustion and fluid physics research programs. This is, frankly, the type of research that has caused me to support the Space Station program in the past. It is cutting edge. It has such promise for benefits here on earth at a time when gasoline prices are soaring, the public is increasingly concerned about air pollution, global warming.

Beyond that, it is my understanding it is on time, on budget, has won awards and recognition, both NASA and outside experts, and the Destiny module is simply waiting for these payloads.

Yet, because of problems, the combustion program is being eliminated, the fluid research program is being crippled. I am concerned, frankly, that if NASA is doing this to these programs, it does not have its priorities correct. I wonder if you could comment on that and tell us a little bit about how you set priorities and maybe comment about my criticism of what you all are doing. Or else, tell me you are not doing it.

Mr. GOLDIN. What I could say to you is you have every right to be concerned, and I do not take it as a negative comment. The dilemma we have is we have over the years had to live with a fixed budget. I want to show you one chart for the big context. Then I will come back and answer your specific question. Could we put up that budget chart?

We constantly have to work on priorities. NASA does wonderful things, but here is what I would like you to consider is the dilemma that NASA has that I do not think any other high-risk agency has had to face. If you look at the blue line at the bottom, that is the NASA budget normalized to fiscal year 1993. So, fiscal year 1993 is 1.0. So, after about a decade, we are just about where we started.

Senator DEWINE. I get it. I understand what you are saying.

Mr. GOLDIN. What I want you to understand, we have learned to prioritize. Our priorities in Space Station research are biomedical, biotechnical, and physical research.

Now, saying that, those are the priorities we set up. We are having the Academy look at those priorities. It is not just going to be NASA. We are bringing outside review.

Senator DEWINE. And I appreciate that. Just for the record I have this concern. I wanted you to understand that.

Mr. GOLDIN. But I also want to say we have not made the final decisions on the research, and we have about another 2 months of going through this process to see, given the budgets we have, what can we do.

Senator DEWINE. I appreciate that.

Mr. GOLDIN. By the way, the combustion research is important to us in space because if a fire breaks out, we have to know how to contain it in zero gravity.

So, we agree with what you are saying, but it comes down to priorities. I do not want to say it is dead; I do not want to say it is alive. I want to wait until we are done with the study.

GLENN RESEARCH CENTER (GRC)

Senator DEWINE. Here is one vote for alive.

Last fall, Director Venneri came to my office in Cleveland and promised to augment the Glenn Research Center's budget by $250 million over 5 years. This so-called "get well" package, as it was termed, was to include $31 million above and beyond Glenn's 2001 budget. According to my information, prior to my meeting with him, Glenn's overall aerospace technology code R budget was to have been $278 million. After September, Glenn's overall aerospace technology budget was $285 million. The funding that was promised at that meeting, $8 million for the RLV air-breathing propulsion design program, $10 million for the revolutionary aerotech concepts and $13 million for advanced energy systems, did certainly come about.

However, I am concerned that $8 million was taken from Glenn under the innovative third generation propulsion, $1.2 million was taken from other propulsion and power systems, another $13 million was taken from other space-based research.

I wonder if you can explain this. Frankly, it is important to me because you all represented to me and came to my office prior to the release of the administration's budget and indicated that, while Glenn would lose around $52 million from its, for lack of a better term, baseline budget, headquarters was planning to augment that by $40 million. What is the deal?

Mr. VENNERI. Yes, Senator, everything you said, the statements and facts are correct. So, I am not going to repeat your comments.

Senator DEWINE. But you agree with the facts, though. We have got our facts straight.

Mr. VENNERI. Yes. The work that we defined in the fall that added to the $250 million increase is still in the budget. That work is still there. Unfortunately, other reductions occurred in our 2002 budget that did not stop what we added, but other things were pulled out. The reduction in the overall Glenn budget is approximately $51 million from 2001 to 2002. About $34 million of that is associated with my enterprise. The other activity is projected to be the microgravity work you were referring to. We are in the process now of dealing with things in the aerospace technology that mitigate and minimize that impact. Some of those reductions, though, extend into other activities at universities. One, University of Maryland, in Alabama. These are things that have us troubled because——

Senator DEWINE. Excuse me. I am going to run out of time here, but I was talking about the 2001 budget. You are not talking about the 2001 budget.

Mr. VENNERI. No. In the 2001 budget, we did what we said we were going to do. It is the 2002 budget where the problems are coming up.

Senator DEWINE. So, you agree with the facts that I recited.

Mr. VENNERI. Yes.

POLYMER ENERGY RECHARGEABLE SYSTEM/GLENN MICROSYSTEMS INITIATIVE

Senator DEWINE. I will follow up with you. Let me move on because I am going to run out of time.

Let me say I was dismayed at two of the programs that were terminated by NASA that involved collaboration between Wright-Patterson Air Force Base and NASA Glenn. The polymer energy rechargeable systems and the Glenn microsystems initiative are providing benefits to NASA, DOD, and have great promise, frankly, for the public at large.

In an era of tight budgets, these programs allow NASA to leverage other agency dollars, other facilities and research areas, and yet NASA is not supporting these programs to their planned completion. Again, I wonder if you could comment on that.

Mr. GOLDIN. That was carrying straight out administration policy of not extending from fiscal year 2001 to fiscal year 2002 any earmarks that were in the program or space mandates. That was mandated policy and we did exactly what the administration asked us to do. And it is not just NASA; it was across the whole administration. That was not done with prejudice. We believe those programs are good programs, but we are carrying out administration policy.

Senator DEWINE. I see my time is up. Thank you, Mr. Chairman.

CREW RETURN VEHICLE

Senator BOND. Thank you very much, Senator DeWine.

Going back to the Crew Return Vehicle, before the cost overruns, I understand NASA was looking to spend upwards of $1 billion for a Crew Return Vehicle using the X–38 technology test bed. That seems awfully expensive to me. The Soyuz has some problems but it seems to be a lot cheaper.

Can NASA not develop a CRV, a plain vanilla escape vehicle, based on current technologies and what we know about the Soyuz? You have done everything else. Why can we not get it for less than $1 billion?

Mr. GOLDIN. First, let me say the cost of the Soyuz is a recurring cost now, and they are not amortizing the development cost. That figure includes development plus building of four vehicles. So, I do not think we are comparing apples to apples. The second thing is the Soyuz has to be replaced every 6 months, and that is a huge logistics. Our vehicle is good for 3 years.

Third, to be able to buy the Soyuz is not the right thing to do right now. So, we felt we needed an independent vehicle. We think there is a chance of doing it for less, but it could be more. That is why we want to hold off and make sure we understand the costs before we commit.

Finally, the Soyuz does not meet the medical requirements that we set up. In case there is an astronaut that is hurt on orbit or very, very sick, we wanted a very low g when they land. The Soyuz has a very high shock. So, we collaborated with the medical community to develop a vehicle that had a much lower shock level. Again, every country does it differently, but we put a very high emphasis on safety of the crew members.

Senator BOND. I certainly was not implying that we needed to be putting more money in the Soyuz.

Mr. GOLDIN. I am just a little nervous about that subject right now.

SPACE TOURISM

Senator BOND. It would seem to me that if we are going to have to make sure that we can conduct our space missions and our science missions, that we are going to have to have a dependable vehicle that meets our standards.

Again, we are at the mercy of Russia because of the emergency escape vehicles, and I am very troubled that Russia has already indicated its willingness to act unilaterally. We have gone the extra mile to keep Russia in the ISS program, including providing $800 million to help support Russia for its Space Station cooperation. But then Russia's actions in demanding a space tourist and stating that they were going to launch when, I understood it, we did not feel it was appropriate to launch. They wanted Russia to take care of their tourist schedule. That certainly runs counter to the spirit and intent of the entire partnership agreement. In my mind, it undermines the whole rationale for the station as a world-class, international cooperation, on-orbit science platform.

I know there is supposed to be a new agreement process to review any requests for paying tourists, but what guarantees do we have that the Russians will not pull this kind of stunt again, either with a tourist or something else, or make any other unilateral demands? Is there a way we can get a handle on this partnership?

Mr. GOLDIN. We had some very frank and candid discussions over the last few months, and I saw a distinct change when the Russians agreed to go through the formal process that we set up almost 6–7 years ago on how to handle it. Then when the Russians wanted to launch the Soyuz and we had a safety concern, I spent the evening talking to my counterpart, Uri Kopchev, who was very gracious and resolved the issue so we would not have a potential safety problem.

I think both of us have to back off from rhetoric. We are going to be working together for a number of years, and we are beginning a number of team-building efforts to pull back from the stress that built up over this activity. But the Russians, over the last few weeks, have shown every indication they want to work with us in a calm, professional manner, and I think—I cannot guarantee it—we will be over it, and only the next 2–3 months will tell whether we are there.

Senator BOND. I understood that the Russians went ahead, despite our objections, in launching, without delaying the Tito trip for several days. Are you indicating that the questions you had about the safety, in terms of timing of the launch, had been resolved to NASA's satisfaction prior to the launch?

Mr. GOLDIN. Yes, sir. What I had talked to Mr. Kopchev about was the fact that they had a variety of reasons for launching, some of them technical, but not all. Mr. Kopchev agreed that the Soyuz vehicle would not dock with the Space Station until the shuttle pulled away. That I felt was an adequate and realistic safety compromise, and I congratulated him for his leadership. There was some communication problem and some of the operators were not aware of it, but we got back together and we resolved the issues. So, I think we are on the road to solving this problem.

COMPUTER SOFTWARE/LOUD NOISE/VIBRATION PROBLEMS

Senator BOND. Another area. I am disturbed by the anecdotal reports that the station has serious computer software problems, consistent loud noise, continuous vibrations. How serious are these problems? Do they pose a risk to the crew and the station? What are you doing to address these problems?

Mr. GOLDIN. First, we have mapped the noise in the station. The laboratory and the node are quiet, very quiet. The service module is noisy. The Russians are taking steps to put noise suppression into the service module.

There were vibration problems in some of the fans that the Russians provided, and they are taking steps to reduce the vibrations from the fans.

Finally, with regard to software, that I believe—I was asked a question about cost. That is one of the areas that we are on the cutting edge. When we went to Mars with Pathfinder, we had 160,000 lines of code. We have 3 million lines of code in the Space Station. This is probably the toughest problem not just for NASA, but for the whole industry. The overall high-tech industry could tolerate software failures. You know, your phone clicks off, you turn it back on. Your computer locks up, you turn it back on. NASA could allow zero failures.

We just had what I consider to be a very serious failure on board the station just when the crew was ready to pull away. We have three computers. It is called dual fault tolerance. What happened, we had one failure that cascaded, so all three computers shut off. There should not be a cross coupling and we do not understand it. We have a whole team of people going at it.

However, this is the kind of problem that we have to deal with, and towards that end, after the Mars failures, we recognized that we would have bigger and bigger software problems. So, at NASA Ames we set up a high dependability software consortium and we are working with the top software firms in America, Carnegie-Mellon University, University of California to try and get at these things. I have to tell you the software industry is just delighted to be working with us because these are problems common to all, and NASA is on the cutting edge. So, this is the approach we are taking, but I have got to tell you we are going to have more and more of these problems as we go to digital systems, and we will have to grin and bear it.

Senator BOND. Thank you, Mr. Goldin.

Senator Mikulski.

SPACE TOURIST

Senator MIKULSKI. Thank you, Mr. Chairman.

Chairman Bond really followed a line of commentary and questions on the space tourist, but I just want to say this. When this happened, I was pretty volcanic, but I held my fire because of two things. One, we have a new president, and he is establishing his foreign policy and his relationship with foreign leaders. Russia is very important in this geopolitical new world order, and it was not the time to be a unilateral Secretary of State for Space. If it happens again, I intend to go to the President of the United States about this because I think it is demeaning to our space program and I think it does place threats and stress. So, the Russians need to know this.

I think we were all caught by surprise. They acted unilaterally. We are creating a climate here, and I think our President has to do more than find his footing in foreign policy and I look forward to working with him on it. The Space Station was a concept of Ronald Reagan, and President Bush's dad pulled us together to find a revenue stream for the station. There would not have been a Space Station without President Bush I, if I might say.

So, I am a team player here, and I will never jeopardize America's foreign policy, but I am just not going to be silent or tepid about this should it happen again. I am speaking really to the Russians through you in this hearing.

So, that is where I am on this. So, let us hope it does not happen again.

Have you received assurances they are not going to do it again?

Mr. GOLDIN. I have had discussions with my colleague. The good news is after we got over this unilateral approach, due to a variety of stresses, some induced by the space tourist, the Russians sat down with our people and we went to the formal process through the——

Senator MIKULSKI. But, Mr. Goldin, did they or did they not give you assurances that they would never do this again, acting unilaterally?

Mr. GOLDIN. Yes, they did. Now, there is a difference between a desire to do something and the ability to make it happen. So, what we have to do is work to see how we go in the near term. I can tell you have been monitoring the press reports. I have been monitoring the meetings we have been having with our Russian partners, and there has been a very cooperative spirit in working with them lately. I cannot guarantee what is going to happen in the future.

EARTH SCIENCE BUDGET

Senator MIKULSKI. But they need to know this. I believe we would be really operating on a bipartisan basis on this.

But let me move on here. Let me go back to the earth science budget, Mr. Goldin. I note that it is being reduced this year while space science goes up. That is where the confusion was for a moment.

But why does the budget run-out over the next 5 years show flat funding for earth science? In other words, is that where we are going to be, flat funding for earth science?

Mr. GOLDIN. What it reflects is the phase-down of the EOS phase 1, the phase-up of EOS phase 2, which is at about the same level of funding, and it reflects administration policy as to the level that earth science ought to be funded at.

We have seven spacecraft in there, and there are four other measurements that we would like to make. Those measurements are not mature enough to be put into the program, and I believe we will be exploring those possibilities for other new starts in the phase 2 program in the fiscal year 2003–2004 budget.

SPACE LAUNCH INITIATIVES (SLI)

Senator MIKULSKI. I would like to turn now, if I could, to the Space Launch Initiative. I know that NASA spent about $1 billion on the X–33, and then it had to be canceled for obvious reasons. And I am not disputing the decision. But where do you see yourself going now in terms of the Space Launch Initiative in which we would be developing a next-generation reusable launch vehicle?

There are concerns that when the SLI program selects one or more candidate designs in 2005, the industry will not be able to raise sufficient money to develop the reusable launch. I think we all would agree this is a very important program. I wonder where are we going from here with the cancellation of X–33, and then there are concerns in the private sector about how we can again get ourselves underway.

Mr. GOLDIN. There has been an enormous change in the marketplace in launch. Just 3–4 years ago, there was the expectation of thousands of launches to low earth orbit, and at that time, the private sector was saying, Government, just kind of reduce the technical risk for us and we will go develop the systems. The commercial market fell out.

We now are taking a good, hard look at it, and in the Space Launch Initiative, which is almost $5 billion over the next 5 years we are saying we do not want the contractors to spend a nickel of their money. It needs to be Government funded. It is a modest program that is going to go at the 10 critical technical areas. It is not a vehicle. It is trying to retire the technical risks so that by the middle of this decade, the industry and the Government can make a calculated decision. If the commercial marketplace comes back, then they could go develop it. If it does not, mid-decade the United States Government to meet NASA's unique needs—we want to make the vehicles 100 percent safer for the astronauts at one-tenth the cost. I believe mid-decade, if the commercial market does not return, we are going to have to put in a significant addition to the money to pay for the full development of these systems. All we are doing now is saying, over the next 5 years, we are going to not have industry put in so we can share the data with everyone, small companies, big companies, and jointly make a decision mid-decade.

Senator MIKULSKI. So, you are laying the groundwork for a decision.

Mr. GOLDIN. We are laying the rails down now.

Senator MIKULSKI. Well, with the collapse—or let us say the downsizing of the commercial launch industry, even some would say the collapse, this brings me to a question about Wallops. You worked very hard with Senator Warner and myself to develop a vision for Wallops. It was to be a new partnership with private industry to promote commercial launch services.

Well, your assumptions and predictions did not materialize because the marketplace changed. What have you thought about for Wallops, and if you have not, will you do so so that we could talk about it, say, between now and the end of June?

Mr. GOLDIN. First, let me say your word “collapse” is absolutely correct. I do not think that Boeing and McDonnell-Douglas are going to be making money on their huge investments in the Atlas 5 and the Delta 4. It breaks my heart. I was out there with you at Wallops and we put together this Vision 2000, and we were going forward.

We have a plan, which I am going to submit for the record, talking about how we are going to now look at Vision 2005. Wallops has incredible skills. For example, we are going to see if we can have this ultra-long duration balloon technology applied to perhaps a balloon mission on Mars. So, we are talking about having them work with the Jet Propulsion Laboratory (JPL) on future missions.

Senator MIKULSKI. Well, I can assure you at Wallops they do know metric.

Mr. GOLDIN. Yes.

Senator MIKULSKI. Sorry. Well, no, I am not really sorry about that.

Mr. GOLDIN. There are some other tasks. Wallops is developing some incredible new advance range technology. They have a system that they proved on a sounding rocket that has the rocket call home through commercial communication satellites that may greatly reduce the cost of launch. So, we are looking at bringing them into the Space Launch Initiative not as an operating center, but as a technology development center.

Senator MIKULSKI. So, you do have a plan that you want me to look at?

Mr. GOLDIN. Yes, and we would like to submit that for the record.

Senator MIKULSKI. Submit it for the record.

Senator BOND. Without objection, it will be accepted.

[The information follows:]

AERONAUTICS VISION FOR THE 21ST CENTURY

AERONAUTICS IS VITAL TO THE NATION

Aeronautics is a key to National security, transportation mobility and freedom, and quality of life. Air superiority and the ability to globally deploy our forces are vital to National interest. The role of air power in winning the Gulf War is a clear reminder of the importance of aircraft in major conflicts. Aviation is a unique, indispensable part of our Nation’s transportation system, providing unequaled speed and distance, mobility and freedom of movement for our Nation. Air carriers enplane over 500 million passengers and fly over 500 billion passenger miles, accounting for 25 percent of all individual trips over 500 miles, 50 percent over 1,000 miles and 75 percent over 2,000 miles. Air freight carries 27 percent of the value of the Nation’s exports and imports and is growing at over 10 percent annually. Global communications, commerce and tourism have driven international growth in aviation to 5 to 6 percent annually, well beyond annual Gross Domestic Product (GDP) growth.

Aviation employs 800,000 Americans in high quality jobs, second only to trucking in the transportation sector. Driven by technology, annual growth in aviation labor productivity over the past 40 years has averaged 4.6 percent, compared to 2 percent for U.S. industry as a whole. For example, technological advances over the past 40 years, many of them first pioneered by NASA, have enabled a ten-fold improvement in aviation safety, a doubling of fuel efficiency with reductions in emissions per operation, a 50 percent reduction in cost and an order of magnitude reduction in noise.

Aviation manufacturing is a consistent net exporter, adding tens of billions of dollars annually to the Nation’s balance of trade. Aviation produces and uses a broad base of technologies—from computing and simulation to advanced materials—supporting the high technology industrial base of the country. Defense aviation provides fast, flexible force projection for the U.S. It is unparalleled globally because it employs the most advanced technology.

Aviation is central to personal freedom, security of the citizens and the global movement of people and goods in the new economy. Mobility is synonymous with freedom. The ability to move freely and efficiently from place to place is a right highly valued by U.S. citizens. Mobility requires transportation that is inherently safe, available on-demand, and affordable. National security and the economic health of the country are heavily dependent on aerospace systems.

The U.S. is the global leader in aviation. From every aspect—technology, products, services, aviation standards and procedures, and National defense—the U.S. sets the mark.

MAJOR CHALLENGES TO OVERCOME

A new revolution in air travel is far from assured. Unless we act decisively to overcome major barriers, the future can be one of disintegration and decline. Any plan for progress must be based on a sober realism about the current status of the aerospace system, as well as the Government and commercial stakeholders associated with it.

Both military aerospace research and development (R&D) and procurement have declined, reducing the "technology pull" from the military sector. In past decades, the motivation for advances in aerospace technologies was dominated by military needs. The partnership among NASA, DOD and industry rapidly advanced, matured and integrated aerospace technologies. These technologies were then appropriated for commercial use, with great success. Examples of this process abound. The turbine engine introduced on the B–707 was originally designed for military aircraft. The Pratt & Whitney J–57 and the General Electric J–79 engines were also originally developed for military use before leading to commercial derivatives. Beyond this, the B–707 airframe was developed jointly for a commercial transport and for a military tanker. The DC–10, L–1011, and B–747 were developed based on research into wide-body aircraft, while competing for what became the C–5A military transport contract. In an additional significant development, revolutionary fly-by-wire flight controls were developed and first adopted for U.S. military aircraft, and Boeing is now incorporating fly-by-wire into its newest commercial aircraft.

Although the increasingly competitive marketplace demands an accelerating pace of technological innovation, the opportunity for commercial industry to draw on defense-related R&D is decreasing. Military aerospace sector is a much smaller share of the overall aerospace market. Furthermore, military spending has been focused on sustaining the current fleet at the expense of research and technology. In 1971, the military accounted for 55 percent of the overall market and by 1997 it was down to 34 percent. For turbojet engines, the decline is even more dramatic. For example, General Electric Aircraft Engines shifted from 70 percent of their business being military to about 20 percent. And for Pratt & Whitney the situation is very similar.

Furthermore, during the 1950's there were 45 aircraft development programs—during the 1990's there were only six. Far fewer developments with protracted design and acquisition schedules—an 80 percent increase in the development time for major DOD systems from 5.2 years during 1965–69 to 9.3 years during 1990–94—are the result of increasing system complexity and inefficiencies in design, development and manufacturing. After the Joint Strike Fighter program, no major new military aircraft development programs are on the drawing board. With fewer aircraft developments, there are fewer opportunities for the declining engineering experience base to develop design and production skills, crucial in light of the increasing complexity of the systems. The decline in exciting aerospace developments has also contributed to the sharp decline in the enrollment in our universities' aerospace engineering departments, further exacerbating the loss of engineering talent.

The market shift from the military to the commercial sector as the major buyer of aerospace products dictates a corresponding shift in R&D strategy. Industry consolidation—from 25 aerospace corporations two decades ago to four today—has contributed to the substantial reduction in the infrastructure that supports aeronautics research and technology. Driven to the near term, industry has reduced research to three percent of sales, down from 5.5 percent just two years prior. Therefore, at NASA, we shifted our technology development toward revolutionary long-term, high-risk civil needs, while maintaining a strong partnership with DOD to ensure the sharing and application of technologies across military and commercial requirements.

Commercial markets are projected to be extremely large over the next decade. These projections are based on the assumption that the current aviation system can support unconstrained growth. But, just as the Nation (and the world) becomes more dependent on moving people and goods faster and more efficiently via air, important obstacles have emerged. The air traffic and airport systems in both the U.S.

and overseas are reaching full capacity. Delays are increasing. Each year, airlines must add more "padding" to their schedules to maintain on-time performance and the integrity of their scheduling systems, while facing more congestion in the system. At the same time, legitimate concerns over environmental issues (e.g., noise and emissions) are preventing additions to physical capacity. In 1998, airline delays in the U.S. cost industry and passengers $4.5 billion—the equivalent of a 7 percent tax on every dollar collected by all the domestic airlines combined. Several key airports are unable to gain approval for projects to expand infrastructure because they are in non-attainment areas, where National objectives to reduce emissions have not been met. Therefore, we are seeing constraints to growth that could threaten the commercial prospects of our aerospace industry as well as impact the integrity of our transportation system.

Today, these problems are even more acute than in the past. Shortfalls in capacity (i.e., airports, air traffic control and vehicle capability) and problems with the environment are not easily addressed in the private sector. The resulting delays, and noise and emissions pollution are not even priced in the market place. These problems are termed "externalities" since, unlike other costs, no market participant pays directly for them. As a result, the private sector has inadequate incentives to address the very real problems imposed by aviation on third parties.

As the long-haul jet transport has in effect become a commodity in the marketplace, commercial operating margins have become razor-thin. And, although the dollar value of the U.S. share of the world aerospace market has been increasing, the size of the U.S. share of that market has been markedly declining. From about 70 percent in the mid-1980's, it is about 50 percent today, in part because of the development of new programs overseas. Future market share could decline even further as European competition becomes more aggressive. In this environment, U.S. industry has developed an increasing number of international partnerships, both in technology and product development. And while there may be positive aspects of this trend, failure to manage it appropriately may in the long run place at risk a technology base critical to our National defense and quality of life.

America should not be lulled into the false security that the U.S. will continue to be the leader in aeronautics. The Europeans have reached parity in civil transports, and are on a path to forge ahead of the U.S. The Japanese have shown significant interest in supersonic transports, an area that the U.S. has stopped twice over the last four decades. If we lack the vision, not only will we lose the civil industry, but also we will be fighting battles with out-dated F–18s and joint strike fighters, and taking our vacations on foreign transports.

The confluence of challenges facing aviation is serious. Overcoming these challenges will require leadership and a long-term perspective to shift to a new paradigm that will enable renewed growth and benefit. The vehicle possibilities defined by the technology horizon are exciting, but will require intensive, long-term research programs to achieve.

A NEW VISION FOR CONTINUED VITALITY

All the improvements made over the last 40 years have given us the most modern aviation fleet operating in the safest aviation system in the world. NASA has been a major contributor to these improvements. The Federal Aviation Administration's National Airspace Modernization plan had its roots in the far thinkers of NASA's research centers. NASA demonstrated, despite many doubters, that wind shear could be detected with sufficient warning to safely avoid the weather phenomena that resulted in many aviation fatalities. Today, wind shear warning is a standard on all commercial transports. We have been a major participant in all military aircraft developments and provide technical expertise for resolution of in-service problems. The F–18 E/F was in jeopardy of being canceled due to the difficulty posed by severe uncommanded aircraft maneuvers caused by massive separated flow over the wing until our engineers devised a porous fairing that acted as an "air dam" and prevented the problem. The NASA-led Advanced General Aviation Technology Experiments (AGATE) consortium resulted in the development of many pre-competitive technologies and provided part of the impetus behind the revitalization of the general aviation industry.

However, the emergence of the revolution in biotechnology, nanotechnology, and information technology represents the dawning of a new era. This new era has the potential to enable revolutionary changes in aviation. We stand on the verge of a totally new paradigm for aeronautics—a new "golden age of aviation."

Today most passengers pass through only one percent of our Nation's airports on aircraft that weigh twice as much, use 75 percent more fuel, and create four times the noise than what is possible. For these aircraft, in which routine, scheduled maintenance is the current practice to "catch" problems that develop in service. Our vision is on-board "intelligence" to monitor their health and to predict when maintenance needs to be accomplished prior to problems occurring. In some cases, aircraft could even have the ability to conduct self-repair, providing orders of magnitude increases in safety and reliability while vastly lowering operating costs.

The aircraft of the future will not be built from multiple, mechanically connected parts. The aircraft will have "smart" materials with embedded sensors and actuators. Sensors—like the "nerves" of a bird—will measure the pressure over the entire surface of the wing and direct the response of the actuators—the "muscles." These actuators will smoothly change the shape of the wing for optimal flying conditions. The control surface will be integrated with, instead of an appendage of, the wing, as they are today. Intelligent systems made of these smart sensors, micro processors, and adaptive control systems will enable vehicles to monitor their own performance, their environment, and their human operators in order to avoid crashes, mishaps, and incidents. Distributed as a network throughout the structure they will provide the means for imbedding a "nervous system" in the structure and stimulating it to create physical response and even change shape. They will also serve as the means for sensing any damage or impending failure long before it becomes a problem.

These future structures rely on an emerging technology that builds the systems from the molecular, or nano-scale—known as nanotechnology. Revolutionary new nanotechnology composites have the promise to be 100 times stronger than steel and only ⅙ the weight. We are at the leading-edge of this technology, transitioning from fundamental physics to building actual macroscopic materials. Much work remains to be accomplished. If we are successful, an aircraft made from this material could weigh as little as half a conventional aircraft manufactured with today's materials and be extremely flexible allowing the wing to re-form to optimal shapes, remain extremely resistant to damage, and potentially "self-heal." The high strength-to-weight ratio of these nano-materials could enable new vehicle designs that can withstand crashes and protect the passengers against injury.

The application of high temperature nano-scale materials to aircraft engines may be equally dramatic. Through successful application of these advanced lightweight materials in combination with intelligent flow control and active cooling, thrust-to-weight ratio increases of up to 50 percent and fuel savings of 25 percent are possible for conventional engines. Further advances in integrating these technologies might result in novel engine concepts that simplify the highly, complex rotating turbomachinery. Other future concepts include alternative combustion approaches and the potential to move toward hybrid engines that employ innovations such as pulse-detonation engine core. Combined with intelligent engine control capability, such an approach could able integrated internal flow management and combustion control. It also has the potential to integrate both the airframe and engine systems for unprecedented efficiency and directional control capability.

To take full advantage of nano-materials, new computational tools using the advances in information technology are required. Tools that take advantage of high-speed computing will enable us to develop large-scale models and simulations for the next generation of vehicles. High-fidelity collaborative, engineering environments with human interfaces will enable industry to accurately simulate an entire product life cycle, dramatically cutting development costs and schedules. The increasing performance demands and system complexity require new tools to adequately predict the risk and life cycle costs of new aircraft. New computing techniques and capabilities can be exploited to develop robust designs by capturing knowledge and identifying trends to anticipate problems and develop solutions during design rather than after development. These simulations require tools that deal with the increasing complexity of future systems and could offset the diminishing design team experience base in this country. No longer will we design the engine and airframe independently, but rather the computational tools could allow fully integrated vehicle-engine design, integrated health management, and management of the total vehicle air flow both inside the engine and outside the aircraft. These new integrated propulsion and vehicle technology advancements could not only optimize subsonic flight regimes, with twice the thrust-to-weight ratios, but also enable sustained supersonic flight with minimal impact due to sonic booms or other environmental concerns for both civilian and military applications.

In the very long term, comparable advances in electrical energy storage and generation technology, such as fuel cells, could completely change the manner in which we propel aircraft. Future aircraft might be powered entirely electrically. In one concept, thrust may be produced by a fan driven by highly efficient, compact electric motors powered by advanced hydrogen-oxygen fuel cells. However, several significant technological issues must still be resolved to use hydrogen as a fuel, such as efficient generation and storage of hydrogen fuel and an adequate infrastructure necessary for delivering the fuel to vehicles. Success in this effort could end the Nation's dependence on foreign sources of energy for transportation. Revolutionary technologies such as these are prime areas for significant university involvement.

If we are successful, what will the vehicle of the 21st Century look like? It will be radically different from the commercial transport of today whose basic configuration has not changed since the introduction of the Boeing 707 and turbojet engines in the late 1950's. The design flexibility that the revolution in materials and computing technologies provides could enable aircraft whose shape could change to meet a range of performance requirements, for example, range, maneuverability and radar cross-section. With new fuel cell power systems, zero emissions may be possible, and the only noise would be that generated by the air flowing over the vehicle. The wing shape may be changed during flight to control the vehicle, eliminating the need for the weight and complexity of flaps and conventional control surfaces. These aircraft could be flown in an air transportation system that allows hassle-free, on-demand travel to any location. The beneficial variations are potentially limitless—truly revolutionizing air vehicles, not only commercial and military aircraft, but also personal air vehicles and the utilization of more of the 5,400 airports thus providing service to small communities and rural regions that today do not have easy access to air travel.

CRITICAL ISSUES

We must reverse the decline in expertise.—There is a looming crisis in U.S. expertise—from relatively inexperienced design teams to reductions in research and development to reduced enrollments at universities. Leadership is required to reverse this trend. We, in partnership with the academic community, must begin developing a new generation of scientists and engineers that blend traditional competencies, such as aerodynamics, material and structures, and guidance and controls, with the emerging competencies in nanotechnology, biotechnology and information technology. We must also develop the design tools and environments that will allow us to integrate fewer and more specialized scientists and engineers into effective teams capable of designing highly complex integrated aerospace systems.

A plan for our National facilities is required.—Over the past several years many reviews have been performed relative to our National aeronautical facilities. There have been some closures and changes. The real outcome of these studies has been the perpetuation of marginal facilities through small, evolutionary change. As a result, we have maintained the status quo instead of investing in the future. We must finally put in place a plan that defines the facilities and infrastructure that we need and deliver on this vision.

The high-risk, long-term vision requires reinvestment of government resources.—The government's role is not to subsidize industry. However, it is unreasonable to expect the private sector to make all the necessary high-risk, long-term investments to achieve the vision. Government will need to reinvest existing aeronautics research and development resources in the basic research necessary to enable a 21st Century aeronautics vision. Government aeronautics research should not have a vista of less than 10 years. At the same time we must restructure the public-private partnership to ensure the appropriate cooperation and technology transfer.

BLUEPRINT FOR THE FUTURE OF AERONAUTICS

NASA will deliver, by September 2001, a Visionary Blueprint for National Aviation for the 21st Century. This blueprint will, within the Administration's vision for the role of the Federal government, establish:

—Clear National objectives for the future of U.S. aviation.

—Reinvestment of existing research and technology into revolutionary new vehicle technologies.

—A plan for the infrastructure necessary to support the blueprint.

—A plan for working with universities to train a new generation of scientists and engineers with the necessary multi-competency skills.

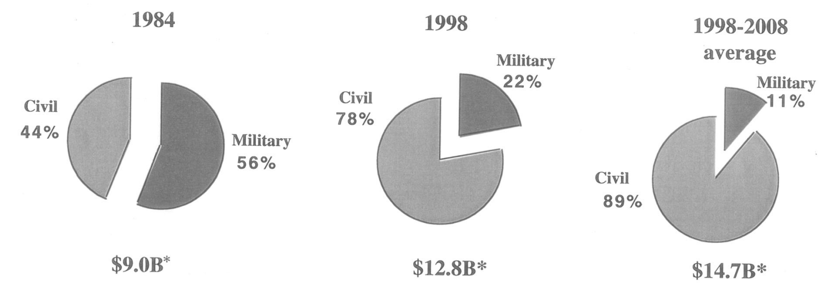
—A plan for development of public-private partnerships required ensuring the success of the blueprint.

The realignment of the fiscal year 2002 NASA aerospace research and technology program is the beginning of this vision. The blueprint will be prepared in concert with the development of the fiscal year 2003 budget.

We look forward to working together to develop the right aeronautics program for the continued benefit of U.S. National security and transportation mobility.

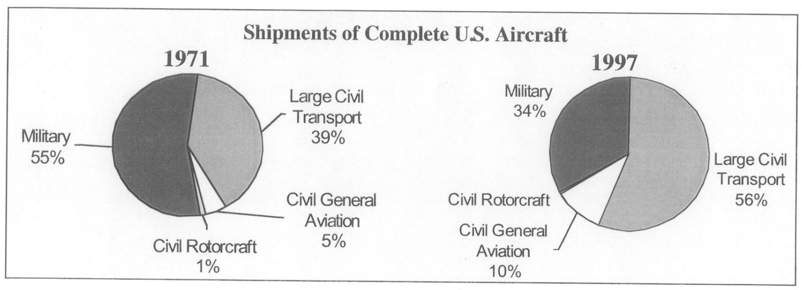
Shifting Marketplace

U.S. Sale of Aircraft Engines and Parts

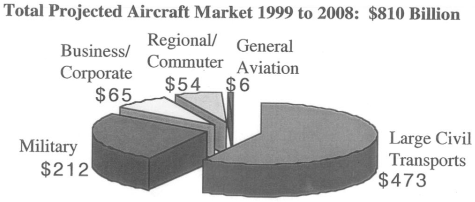


*current year dollars

Shifting Marketplace

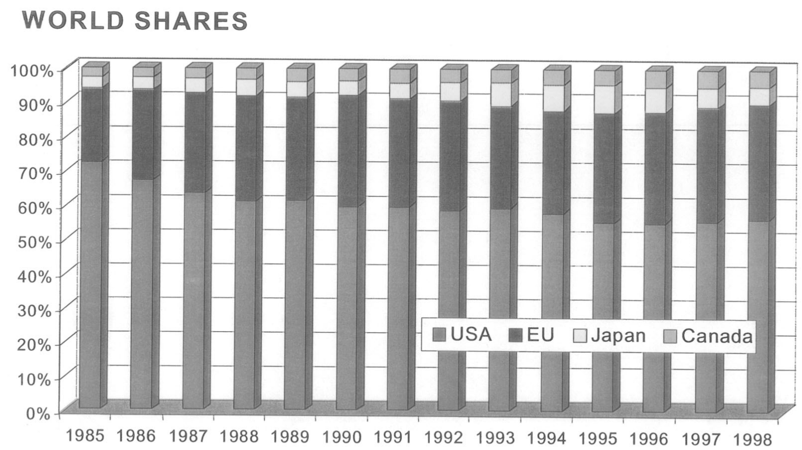


Total Projected Aircraft Market 1999 to 2008: $810 Billion



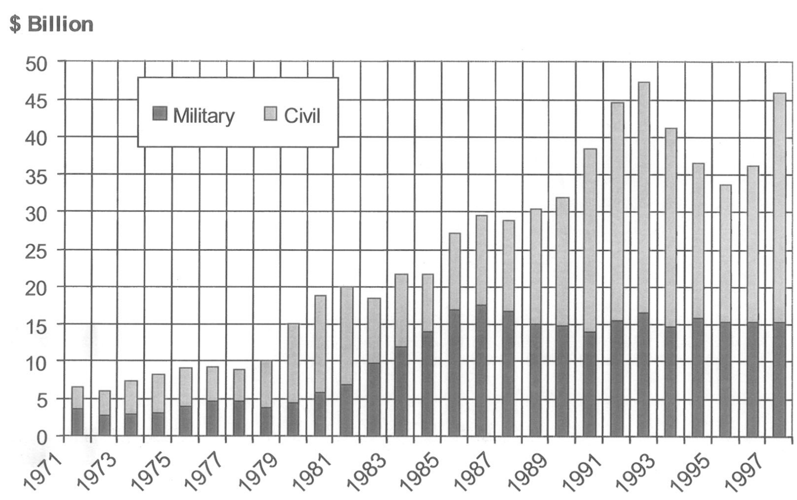
Source: L. Anderson, op cit., from Forecast International

Declining Market Share



Source: Commission of the European Communities, *Trading Position and Figures*, 1997 and AECMA for 1996 to 1998.

Growing Civil Market



Source: *Aviation & Aerospace Almanac, 1999*, McGraw Hill from Dept. of Commerce data, in current year dollars.

Senator MIKULSKI. Also I know that we could also look at perhaps launching small payloads to the Space Station on a short notice, particularly for an emergency resupply mission.

But I want to discuss it with you, and I also know that Senator Warner and I am sure Senator Allen, as a former Governor, would be interested. Wallops is in Virginia, but as you know it is a Maryland-Virginia workforce. Senator Warner is very keen about the viability of Wallops.

Mr. GOLDIN. We will come and present the plan to you before the end of June.

Senator MIKULSKI. I think that would be good, and we could again work on a bipartisan basis on this.

Senator BOND. Thank you very much, Senator Mikulski.

Senator Shelby.

IN-SPACE PROPULSION

Senator SHELBY. Thank you, Mr. Chairman. I had to go to another meeting, as we all do, and I apologize. I may have missed some of these questions and also I missed some of Mr. Goldin's testimony.

Mr. Goldin, travel times in space currently limit NASA's mission of exploration. We have talked about this before. What is NASA doing in terms of in-space propulsion technologies to address these limitations, given budget limitations?

Mr. GOLDIN. We made a very hard decision in this year's budget to add $310 million to in-space propulsion. We want to go to the outer planets. It takes too long to get there. There is fabulous science out there. Ultimately we are going to want to send people to Mars. We do not want to spend 9 months to get there, 9 months to a year. We want to get there in months. So, we have reprogrammed about $310 million to take a look at this very, very critical technology.

Senator SHELBY. Is Marshall not central to this mission?

Mr. GOLDIN. Yes, it is.

PROPULSION RESEARCH INFRASTRUCTURE

Senator SHELBY. Mr. Goldin, revolutionary advances in propulsion will be required if NASA is serious—I say serious—about its mission of exploring and developing space. I believe NASA has to be serious.

What has NASA invested in its propulsion research infrastructure, specifically facilities and equipment to enable future, cutting-edge propulsion technology breakthroughs? You alluded to that a minute ago.

Mr. GOLDIN. Yes. There is $8 million that we are going to be spending this year and I believe another $2 million next year. There is one issue that I would like to bring up here because we have a good Senator from Ohio and a good Senator from Alabama.

Senator BOND. We had a metal detector screening device set up before we came in. We have taken appropriate precautions.

Mr. GOLDIN. My life is living hell.

Senator SHELBY. But we are all friends.

Mr. GOLDIN. We need to get the Alabama and Ohio delegation together. I spoke with Mr. Hobson from Ohio in Dayton. There is a stress that I think especially in this area that if we could have the help of both delegations, NASA would like to meet with you, and then sort out the right place to do the right things so our people will see the leadership working together. I think that could do wonders in accelerating the pace at which we could work. I would like to propose that before the end of June NASA does the homework, we get our two center directors together, and then we come and present to both delegations. It will make my life so much nicer.

Senator SHELBY. Would it make the mission stronger?

Mr. GOLDIN. Yes, it would. Yes, sir.

ADVANCED HEALTH MONITORING SYSTEM

Senator SHELBY. We will work with you, as you know.

Mr. Goldin, could you explain how the advanced health monitoring system for the Space Shuttle main engines will improve shuttle safety?

Mr. GOLDIN. Yes. One of the issues we have today is we find out that we have problems in the engines when we have a real contingency in space and could not do anything or when we take the engines apart on the ground and then we find the problem. This is a revolutionary breakthrough where we are going to monitor critical functions to predict incipient problems rather than letting them happen. We are counting on this advanced health monitoring system to go into the Space Shuttle main engines to improve the reliability so when those astronauts go to space, they will go with a much safer launch.

MICROGRAVITY RESEARCH PROGRAM

Senator SHELBY. I want to get into microgravity research that we have talked about on many occasions. It has been reorganized and so forth. It seems that the low gravity in space provides our Nation with an opportunity for significant advances in materials processing on earth. It is crucial to our manufacturing industry among other things.

What kind of assurance can we get from you today regarding NASA's commitment to our Nation's manufacturing sector through a vigorous materials research microgravity program?

Mr. GOLDIN. I wish on that one I could look you in the eye and tell you we could do it. We have some very strict operating instructions from our administration, our President.

Senator SHELBY. I know that.

Mr. GOLDIN. And we have to go through this. We are going to go through a process on the research over the next 2 to 3 months, come up with a plan, do the prioritization, see how much money we could find. I will tell you that anything that is not essential in the human space flight account—and by the way, Senator Mikulski, we put a hard boundary. No money will come from any science account, outside the Human Space Flight account, to fund the problems we are having in the Space Station. But within the human space flight account, we are looking at shutting down facilities, shutting down advanced programs to see how much money we could gather up to do this.

I cannot guarantee the results of this, but what I can guarantee you is we will show you the resources we have available. We are going to ask an external review panel at the National Academy to take a look at it, and after they review it, we will share the results with you. I agree with this research.

Senator SHELBY. It could be some of the most important research, could it not, because of our manufacturing?

Mr. GOLDIN. For manufacturing. But again, we have a lot of things to do. So, all I could say is we will work with you and tell you the results of what we get within the budget that we have.

Senator SHELBY. Do you consult in any way with the U.S. manufacturing community on any of this?

Mr. GOLDIN. Yes, we do.

PRIVATIZATION OF REMAINING SPACE SHUTTLE TASKS

Senator SHELBY. In your testimony, Mr. Goldin, you refer to the President's call "for advancing the privatization of Space Shuttle activities." Has NASA conducted or will you conduct a cost-benefit analysis on the privatization of remaining Space Shuttle tasks?

Mr. GOLDIN. We are taking a look at a broad range of issues, some of which are cost-driven, others are policy-driven. It will not only be a cost decision. We have consolidated all the contracts except three, the external tank, the Space Shuttle main engines, and the RSRM's, the solid rocket motors.

We are trying to work with Boeing and Lockheed and the United Space Alliance in seeing how we could get the safest system possible at the lowest cost. We just do not have an answer to that question just yet.

Senator SHELBY. Do you think you will in months to come?

Mr. GOLDIN. I met with the CEO of USA. I met with the leadership of Boeing and Lockheed. We hope, in the next 3 to 6 months, to see if we could get at it. The first item we are looking at is the external tank.

NASA'S SPACE TRANSPORTATION MISSION

Senator SHELBY. Mr. Goldin, this is in the area of NASA and military space transportation synergy. For years, air superiority has been critical for our military. Just yesterday, the big news from DOD was that the U.S. military is now developing a strategy to establish space superiority. I believe the U.S. military is reliant, to a very large extent, on the success of NASA's space transportation program.

How would you characterize the importance of NASA's space transportation mission to our military?

Mr. GOLDIN. It is very important. I have been meeting on a periodic basis and frequent basis with CINCSPACE. General Eberhart and I are scheduled to have a meeting on June 7. We have told CINCSPACE, we have told air staff that as far as we are concerned, this is U.S. taxpayer money. There is almost $5 billion in the Space Launch Initiative. We want them to be our partners. To have two separate programs that would be criminal to the American taxpayer.

We are working jointly with them on the X–37, which is a space maneuvering vehicle. It is a joint program office. They are putting funds in; we are putting funds in. So, it will be the same vehicle that satisfies our needs and their needs. That is the only way I know how to go.

Senator SHELBY. Senator Bond, thank you. I might have some questions for the record, but thank you for your indulgence.

Senator BOND. Thank you very much, Senator Shelby. I can assure you there will be lots of questions for the record because we are not going to be here till dark, and there are lots of interesting things on which we need to follow up. We appreciate your questions both in person and for the record.

I now turn to Senator DeWine.

Senator DEWINE. Mr. Chairman, thank you very much.

Mr. Goldin, let me just state that Ohio is more than willing to participate in this Alabama/Ohio summit, and we will get that worked out.

Mr. GOLDIN. Thank you, sir.

Senator BOND. We can have it in Missouri.

AERONAUTICS PROGRAM

Senator DEWINE. That might be all right. We could do that. The chairman would be a good host, I am sure.

Let me ask you one more question. In a recent document, entitled European Aeronautics: A Vision for 2020, the European Aeronautics Commissioner for Research articulated a vision, a vision for Europe to secure global leadership in aeronautics, specifically—and I quote—"winning more than a 50 percent share of world markets for aircraft, engines, and equipment by the year 2020."

A government-industry-academia partnership is working to bring that vision to a reality, including the required $100 billion over the next 20 years.

Given this threat to one of our vital industries, why is NASA reducing its investment in aeronautics research? The aeronautics budget is being decimated, frankly, in an apparent attempt to help solve some of the other budget problems, specifically in regard to the Space Station. The Space Station is important, but maintaining leadership and preeminence in commercial aviation is a necessity I think. I am just concerned. You and I have talked about this before. I am just concerned with where we are going as we look at where we are going to be 10 years from now, 20 years from now, 30 years from now. I just think we are making a very, very serious mistake.

Mr. GOLDIN. This is a major problem that is bigger than NASA. This is a problem, that is, the fact that we have only one long-haul jet transport manufacturer in America and only two jet engine manufacturers in America. That is point number one.

There has been a shifting demographic over the years whereby Defense used to cover the large share of the engines. They used to buy, I think, 70 percent of the engines just 20 years ago. They are now buying 20 percent and within 5–6 years, they will buy 11 percent.

There used to be 46 aeronautics programs in Defense. There is now one, and that may not be there. It may just be an unmanned vehicle.

It is hard to train young engineers. The dilemma we have at NASA, not having competition in that field, not having Defense working on a brand new engine with us, we are alone.

In addition, there are members of the American community who have lobbied very hard saying NASA should not be involved in working with the commercial U.S. aircraft industry. They have brought unbelievable pressure on this issue, saying it is subsidy.

So, what we have done this year in the budget is made a very clear, bright line distinction so there is no ambiguity. We showed this video, and I showed that video for a reason. We have an aeronautics program that is not corporate subsidy, unlike what is going on in other parts of the world. In this program, we are going to take a look at the leap-frog, high-risk, high-payoff research that no one company could undertake themselves and to form a partnership with them.

But the dilemma is in space, we could conceive a vehicle and then we build it and fly it. In aeronautics, we do not build anything except technology. For us to tell the Boeing company what to do or the Pratt-Whitney company or GE company what to do is very, very difficult.

So, to get at it, we need a Team America. So, what we are doing, under the leadership of Sam Venneri, is we are going to put together a blueprint and have it done by September. I went to the Secretary of Defense, Mr. Rumsfeld. I asked for some help, and they have assigned someone from the DOD to work with us. We are going to work with the industry. We are going to work with academia, and we hope to come up with a blueprint to get an agreement in America. What is NASA's role in this? How far should we go, and what should the industry do?

Now, I have to tell you, whatever is going to happen in the next 5 or 10 years, the industry is going to have to do by themselves. Otherwise, it will be subsidy.

But what we have to do is take a look at what are the national defense needs 10 and 20 years from now, and why is America not developing a new generation of plane and engine? What are the commercial needs 10–20 years from now, and what is the kind of research we ought to be doing that is high-risk—some will fail—high-payoff? And getting that vision I think is the right way to go instead of having NASA do the near-term tasks and then we end up getting accused of subsidy.

I got to tell you it has been a very tough task. I am very disappointed, and I intend to meet with those in the outside community that want NASA's aeronautics budget to go to zero. Let me put it point blank. They almost did it in 1980. Under David Stockman, who was head of OMB, the NASA aeronautics budget was zeroed out for the same reason, and thank God, during the Cold War where there was a recognition that we were late to the defense of the Nation, it got put back.

I think we all need to not just look at putting dollars in, but we need to take a look at Team America. We put together a blueprint. For the record, I would like to submit the white paper, not just for aeronautics, but how do we solve the air space problems. I have shared with Secretary Minetta and we have a partnership going there. But I will submit both those white papers for the record to give you a sense of where we think we ought to go.

Senator DEWINE. Thank you very much. Thank you, Mr. Chairman.

Senator BOND. Thank you very much, Senator DeWine.

Senator DeWine did raise the question that is of great interest to me.

Senator MIKULSKI. Me too.

Senator BOND. I know the Europeans have European Aerospace Vision 2020. I am delighted to hear your discussion of the steps you are taking. We will accept for the record the information you are going to submit because it is very important.

[The information follows:]

A TECHNOLOGICAL REVOLUTION FOR THE NATIONAL AIRSPACE SYSTEM

TODAY'S AIR TRANSPORTATION SYSTEM

As we approach the centennial of flight, the size and scope of the Nation's air transportation system are truly impressive. Today, 75 percent of all passenger trips over 2,000 miles and 50 percent over 1,000 miles are made using air transportation. Furthermore, air freight carries 27 percent of the value of the Nation's exports and imports.

Air transportation is vital to this Nation's economy and quality of life. Since 1978, when the airline industry was deregulated, the inflation adjusted gross domestic product (GDP) has increased by 62 percent, while total output of scheduled passenger air transportation (as measured by Revenue Passenger Miles, or RPM's) has increased by 190 percent and total air freight ton miles have increased even more, by 289 percent. Both passenger and freight growth continue to outstrip the growth in GDP. In many ways, the U.S. has only begun to tap what is possible in air transportation. The U.S. has 5,400 airports, but the vast majority of passengers pass through a little more than one percent of those airports and only about 10 percent are used to any degree.

Technological advances over the past 30 years, many of them first pioneered by the National Aeronautics and Space Administration (NASA), have enabled a ten-fold improvement in aviation safety, a doubling of fuel efficiency with reductions in emissions per operation, a 50 percent reduction in cost, and an order of magnitude reduction in noise generation. In large part, the gains we have enjoyed have been due to the efficient transfer of the benefits of technology to consumers via competitive air transportation markets.

AIR TRAFFIC CONTROL

The U.S. Air Traffic Control (ATC) System controls the movements and ensures the separation of aircraft within the U.S. and coordinates the departure and arrival of aircraft leaving or entering the U.S. This is an enormous system operated by the Federal Aviation Administration (FAA). It safely handles 63 million aircraft operations carrying 544 million passengers traveling over 537 billion revenue passenger miles annually.

The U.S. system is the largest and most complex system in the world. The U.S. system is staffed by 17,000 air traffic controllers in 476 towers, 194 Terminal Radar Approach Control (TRACON) Facilities, 21 Air Route Traffic Control Centers (ARTCCs) and one Command Center. A typical flight crosses 7 ATC centers and communicates with over 25 air traffic controllers. By comparison, the European system, the second largest, is about half the size measured in total operations.

Unfortunately, the system has grown in size and complexity overtime in a reactive manner in response to serious accidents and to safely keep up with demand that resulted from deregulation, especially at the huge hubs. Moreover, the system has not fundamentally changed since the 1960s and is based on technology that had its origins in WWII—radar surveillance of aircraft by air traffic controllers, radio navigation along air corridors and voice communication between pilots and air traffic controllers to maintain safe separation between aircraft.

THE SYSTEM IS REACHING SATURATION

Serious constraints to the growth of the air transportation system are now emerging. The air traffic and airport systems in the U.S. are reaching full capacity. Delays are increasing. Experts agree that the congestion and delay problems experienced throughout the U.S. last summer will only get worse unless drastic action is taken. Each year, airlines must add more "padding" to their schedules to maintain on-time performance as well as the integrity of their scheduling systems, while facing more congestion in the system. At the same time, environmental issues (e.g., noise and emissions) are preventing expansions to airport infrastructure, such as additional runways.

In 1998, airline delays in the U.S. cost industry and passengers $4.5 billion—the equivalent of a 7 percent tax on every dollar collected by all the domestic airlines combined. With demand projected to double over the next decade, NASA estimates, based on a computer model of operations at the Nation's top 64 airports (80 percent of enplanements), that in the absence of change, annual delay costs will grow to $13.8 billion by 2007 and $47.9 billion by 2017. But growth in airport infrastructure that might offset this problem is not likely in the foreseeable future. Several key airports are unable to gain approval for projects to expand infrastructure because they are in areas where National objectives to reduce emissions have not been met. Noise concerns are also preventing the extension or addition of new runways at many airports. Therefore, we are seeing constraints to growth that could threaten the integrity of our transportation system.

Beyond these numbers is another serious problem. Because the networked nature of air transportation, as the system gets closer to its capacity limits it becomes more "chaotic". This chaos manifests itself such that an isolated problem within the system, such as a thunderstorm, creates missed connections, severe delays and canceled flights throughout the system. This chaotic behavior cuts to the heart of the National imperative to have a dependable transportation system. As the figure below demonstrates, even in good weather many of our major airports are at or will exceed capacity within the next ten years, and in poor weather demand is well beyond capacity for most of these airports.

WHAT IS NEEDED

To solve these problems a balanced approach of aggressively developing and implementing current ATC modernization efforts must be coupled with an aggressive effort to develop a new, high-capacity architecture. This will provide essential relief to ever worsening delays in the near-term while fundamentally resolving the air transportation challenges for the long-term.

CURRENT ATC MODERNIZATION EFFORTS

While the addition of new airport infrastructure will be limited and costly, the existing system can be improved by leveraging technology advances in digital communications, precision navigation, and computers. Currently the FAA is replacing aging computer, display and navigation equipment in an effort to modernize the infrastructure upon which the ATC architecture operates. Within that architecture, air traffic controllers need improved computer aids to help them plan and manage air traffic more efficiently. As an example, through the FAA Free Flight Program, the FAA implemented the NASA developed Center-TRACON Automation System (CTAS) at the world's busiest airport, Dallas-Fort Worth, to support daily operations in all weather conditions, 24 hours a day, 7 days a week. CTAS provides computer intelligence and graphical user interfaces to assist air traffic controllers in the efficient management and control of air traffic. The system has allowed a 10 percent increase in landing rate during critical traffic rushes. These improvements have translated into an estimated annual savings of $9M in operations cost.

In fact, NASA and the FAA have a long-standing partnership on air traffic management systems. NASA uses its unique technical expertise and facilities to develop advanced air traffic decision support tools, improve training efficiency and cockpit safety through human factors research, and develop advanced communications, navigation and surveillance systems. The FAA defines system requirements and applies its operational expertise to ensure that the technically advanced airborne and ground equipment, software and procedures developed by NASA are operationally useful, efficient, safe and cost effective. The FAA performs complementary research in the application of new technologies in addressing airborne and ground-based communications, navigation, and surveillance needs and in new decision support tools for strategic management of the system.

Overall, NASA is currently working on a suite of 16 technologies, of which CTAS is a subset, to improve gate-to-gate air traffic management to increase capacity and flexibility and to overcome airport capacity constraints due to weather. Most of these are Decision Support Tools that increase the efficiency of operations within the current infrastructure. And while these tools will add critical capacity and improved flexibility over the next several years, the capacity increases they provide will soon be outstripped by increasing demand. They will not fundamentally solve the capacity crisis, reverse the rise in delays or prevent the disruptive, chaotic behavior of the system.

The remaining technologies that NASA is working on add new capability beyond the current system for the worst delay problem: airport delay in adverse weather. These technologies rely on transitioning to satellite-based surveillance and navigation utilizing the National Airspace System (NAS) implementation of DOD's Global Positioning System (GPS). This implementation is under development but has not yet been achieved for full system operation. A critical element of this deployment is implementing a Wide Area Augmentation System (WAAS) to ensure reliable signal availability over the entire U.S. Realistically, however, it will be several more years before the current issues associated with FAA's required WAAS can be solved. Therefore, this suite of tools will not be available until GPS/WAAS is available.

NASA models indicate that these technologies fully implemented across the system would increase operational capacity by about 30 percent and reduce future predicted delays by about 50 percent. (Note: Full implementation of the entire suite of technologies is not within the scope of the FAA Free Flight Program.)

Therefore, given the lack of sufficient infrastructure growth, it is absolutely critical to aggressively pursue this approach in the near term.

A REVOLUTIONARY APPROACH TO AIR TRAFFIC MANAGEMENT

The current system structure, where most passengers and cargo are carried by tens of air carriers through tens of airports, must be revised to permit the continued long-term growth of the system. The thousands of airports distributed across this country are a true National asset that can be tapped with the right technology and the right Air Traffic Management (ATM) system. Also, "airspace," one of the nation's most valuable national resources, is significantly underutilized due to the way it is managed and allocated. Therefore, the airspace architecture of the future must increase the capacity of the Nation's major airports, fully tie together all of our Nation's airports into a more distributed system, and create the freedom to fly in a safe, controlled environment throughout all of the airspace.

One thing that will remain constant is that free market forces will drive the air transportation system. Therefore, the future system architecture must be flexible to respond to various transportation system possibilities. The airline industry must have the flexibility to move and expand operations to be responsive to transportation demands. This is the highest level guiding principle for the future ATM system. The next tier of system requirements are robustness (a system that can safely tolerate equipment failures and events such as severe weather) and scalability (the ATM system automatically scales with the traffic volume). One possibility for achieving scalability would be achieved by building the ATM system into the aircraft, so that as you add aircraft to the fleet the ATM system would automatically scale to accommodate them.

The system will be built on global systems, such as GPS, to allow precision approach to every runway in the Nation without reliance on installing expensive ground-based equipment, such as Instrument Landing Systems (ILS) at every airport. However, the robustness of the global communication, navigation and surveillance (CNS) systems must be such that the system can tolerate multiple failures and still be safe. This is a significant challenge upon which the new architecture depends.

If we are successful at meeting the challenge of a robust global CNS, then with precise knowledge of position and trajectory known for every aircraft, it will no longer be necessary to restrict flying along predetermined "corridors". Optimal flight paths will be determined in advance and adjusted along the way for weather and other aircraft traffic. This fundamental shift will allow entirely new transportation models to occur. For example, with precision approach to every airport in the U.S. and a new generation of smart, efficient small aircraft, the current trend of small jet aircraft serving small communities in a point-to-point mode could be greatly extended.

Airborne self-separation will become the dominant method of operation. Each aircraft will become capable of coordinating and avoiding traffic. They will have full knowledge of all aircraft in their area and will be able to coordinate through direct digital communication with other aircraft. The pilot will be able to look at his flight path at different scales—from a strategic view of the entire origin to destination route showing other aircraft and weather systems, to a tactical view showing the immediate surroundings and flight path over the next few minutes. Aircraft will employ synthetic vision—which uses advanced sensors, digital terrain databases, accurate geopositioning, and digital processing—to provide a perfectly clear three dimensional picture of terrain, obstacles, runway, and traffic.

By empowering the pilots to control their own flight paths, the system can operate at maximum efficiency and will change the role of the air traffic controller to more of an airspace manager who will manage the traffic flows and system demand. The air traffic "manager" will have a full three dimensional picture of all aspects of the airspace system. The highly compartmentalized "sectorization" of the airspace would be largely eliminated. Through direct interaction with the three dimensional, high-fidelity representation of the system, they will dynamically reconfigure the airspace based on weather systems, equipment failures, runway outages, or other real-time problems. Intelligent systems will provide expert support to such decision making. This real-time airspace redesign will be uplinked to aircraft to recompute flight trajectories. They will also manage the allocation of scarce resources, such as runways when there are conflicts that cannot be resolved between aircraft directly.

Eventually, the entire system will be fully monitored for faults and other risks. The system will move from a paradigm of being "statistically safe" to real-time knowledge of risk and safety. In addition, with pilots and air traffic managers having full data and situational awareness of the system, a new level of collaboration can occur allowing them to work together to correct anomalous situations. An air traffic manager or backup "ground" pilot with the ability to move between top level strategic views of the system down to seeing the view from a single airplane perspective could "virtually" sit next to and aid a pilot experiencing an emergency situation.

The future system will truly be "revolutionary" in scope and performance, but it must also be implemented in a mode that allows continuous safe operations to occur, even in the face of unpredicted events. In designing the future airspace system, a systems engineering approach must be used to define requirements, formulate total operational concepts, evaluate these operational concepts, and then launch goal-oriented technology activities to meet requirements and support the operational concept.

This is an extremely complex problem. The system is dynamic and real-time. At the same time, system integrity is absolutely essential. It can't be turned off and it is highly interconnected. At the present time, we believe it will take a substantial public-private partnership to tackle such a large and difficult problem. And yet the payoff from a capacity, efficiency and safety perspective is absolutely enormous.

PROPOSED NATIONAL OBJECTIVES

Given the strong partnership that is in place today, it is possible to move quickly to begin developing a new airspace system. At the same time, we must continue along an evolutionary path of upgrades within the current architecture to obtain the maximum capacity of the system and continue to ensure safe operations.

Five Year Objective [1].—(1) Support evolutionary upgrades to the current NAS; (2) Define new high-capacity architecture and implementation pathway, including development and operational costs.

Benefit.—Increases overall capacity up to 30 percent and reduce future predicted delays up to 50 percent and postures Nation for new high-capacity architecture.

- —Continued development and deployment of decision support tools, GPS based navigation and information sharing technologies to maximize capacity of the current NAS architecture;
- —Detailed definition of a new high-capacity airspace system architecture to meet the increasing demand for air transportation including the business case for the Nation and individual stakeholders;
- —Develop a detailed system modeling and simulation capability to provide real time quantitative assessments of the performance benefits of new tools and architectures to provide a rational basis for evaluation.
- —Systems engineering, preliminary testing and evaluation of the key elements of the proposed architecture and integrated evaluation using large-scale, high fidelity, real-time simulation of the new airspace system;
- —Evaluate and quantify the risk of satellite-based CNS systems for the future airspace system architecture.
- —A risk mitigation plan with all required technology components defined;
- —A National public-private transition plan, including benefits and costs, to move from the current NAS architecture to the high capacity architecture.

Ten Year Objective [2].—Implement the major elements of the new high capacity architecture.

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[1] This five year objective would require an augmentation to current efforts to achieve.

[2] The ten year objective requires FAA leadership and would require a change in National policy to implement a new architecture.

Benefit.—Achieve a 60 percent increase in the all weather capacity at the major airports and the mobility/capacity benefits of opening a fully distributed air transportation system.

—Utilizing highly accurate, global navigation systems, achieve precision approach to every runway in the Nation;

—Implement aircraft onboard systems and a communications infrastructure for strategic flight path management, self-separation and coordination, and synthetic vision;

—Implement integrated, strategic management of the airspace system to manage traffic flows and demand and the ability to dynamically redesign the airspace system.

Fifteen to Twenty Year Objective.—Complete the transition to the high capacity, distributed system architecture.

Benefit.—A fully integrated, dynamic, distributed system at twice the all weather capacity at major airports and 10 times current levels at small airports.

—Procedures for very precise operations at "all-weather" operational rates greater than today's clear weather rates;

—Real-time, distributed intelligent automated aviation system-wide monitoring with safety and operational advisories.

CRITICAL ISSUES

Leadership is required.—The air transportation system is fast approaching a crisis. The system is becoming increasingly unpredictable and frustrating for travelers. Problems of delays, missed connections, canceled flights and air rage are being reported almost daily in our Nation's press. In this environment, strong leadership will be absolutely required if the Nation is going to come together to fix this problem.

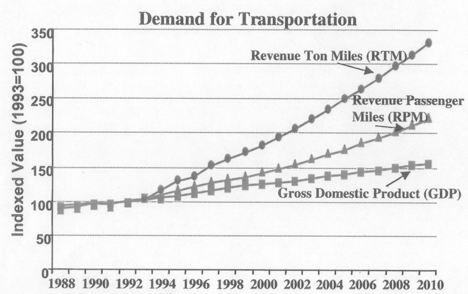
A New National policy must be developed.—While this paper has focused on technology and a new approach to air traffic management, we recognize that this must fit within an overall National policy that blends near-term actions with the type of long-term fundamental solutions addressed here. Today, however, there is no comprehensive policy to ensure the long-term health of our air transportation system.

A roadmap for a cost-sharing public-private partnership is needed.—The air transportation system has critical public and private roles and responsibilities. The only way to effectively change the system is through investment and change by all parties, government and industry. However, in the absence of a clear roadmap and policy that lays out the costs and benefits of such change, it has been difficult to achieve this partnership. As we move forward, such a roadmap must be negotiated and developed.

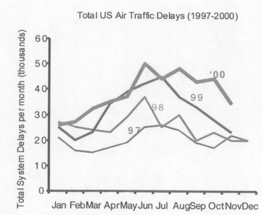
CONCLUSIONS

NASA is a key partner in the future of the air transportation system. Through the unique talents and history of the Agency, we have become the National leader for research and technology for air traffic management. NASA is prepared to continue this leadership and to be a catalyst for positive change. We believe it is absolutely essential that the Nation take a long-term perspective and begin now to enable the high capacity, distributed system we need for the future. We look forward to supporting the Secretary of Transportation and the FAA Administrator in developing the future National Airspace System.

The Aviation System Problem…

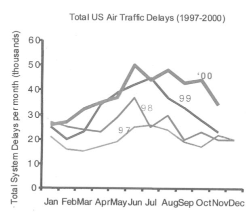


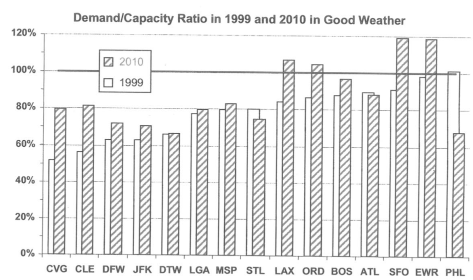
Demand is growing...



Delays are climbing…

The capacity and delay problem



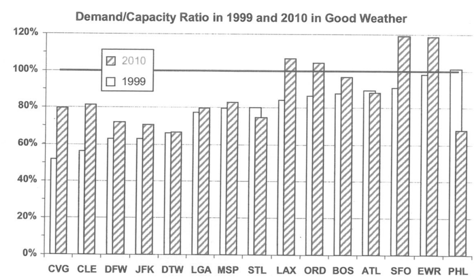


Delays have been increasing substantially every year. Aviation experts expect the trend to continue, leading to greater traveler frustration and a less dependable transportation system.

Our major airports are running out of capacity, leading to major delays and extreme sensitivity to isolated events, such as thunderstorms.

Major hub airports are running out of capacity

Delays begin to grow when demand / capacity ration exceeds 60%...



Source: MITRE

QUALIFIED SCIENTIST/ENGINEERS

Senator BOND. Let me ask you a related question. We are hearing about acute shortages of qualified scientists, researchers, and technicians for aerospace, aeronautics, and all the other tech industries. Many foreign-born, U.S.-trained scientists are returning to their own country.

How do you see the supply of scientists? Is there anything that NASA is doing, can do, or we should do to get qualified scientists here in the United States?

Mr. GOLDIN. I view this as the single biggest long-range challenge to the vitality of the American economy and its national defense. I have been giving speeches around the country on this subject. Let me give you a few statistics.

In the next decade, 2 million scientists and engineers will retire, 2 million scientists and engineers will come into the workforce, for a net gain of 0.

A recent study was done, through the auspices of the National Science Foundation, and that indicated that we need a 50-percent increase in the number of scientists and engineers over the next decade to be able to meet the economic growth that we need to maintain our economy. So, we are way, way off.

Then you take a look at the statistics. The scientist and engineering degrees are going down. The number of foreign people entering are going down, and those that get degrees are going back home. So, it has become a real crisis. I have talked about this subject at the Council on Competitiveness.

But there is another part to it. If you look at the demographics, only 9 percent of the women are scientists and engineers. If we got to parity with women in science and engineering, we have almost got the problem whipped. If you look at minorities, only 7 percent of minorities, who make up 24 percent of the population, are scientists and engineers. If you take a look at minority enrollment in universities, it is going down.

And here is a statistic that really gets me: In 1986, we produced 25,000 electrical engineers and 10,000 people with degrees in parks and recreation. By 1996, we were at a crossover point of 14,000, and now we are producing more people in parks and recreation than electrical engineers. You would want to cry. Are we going to do the parks and recreation and the books and litigation for the world?

So, what are we doing at NASA?

Senator BOND. That is the question.

Mr. GOLDIN. I had to get that off my chest.

Senator BOND. I appreciate the buildup. I understand that.

Mr. GOLDIN. In this year's budget, we have started a program where we want to provide scholarships to promising young engineers in return for service, summer jobs, and then they come to work for NASA for a few years. Next year we have to hire 700 engineers. So, 300 to 500 scholarships are going to be awarded for this next year. That is a pilot program. If that is successful, we would like to ramp it up.

Second, I met with John Hennessey, the President of Stanford University, and I said, why does Stanford not apply for research grants at NASA? He says, we cannot hire faculty or students on these 50–100K grants.

So, we are going to start a new program called Research and Education Technical Institutes (RETI), where we are going to fund $3 million to $5 million a year on open, peer-reviewed competition five of these institutes that will go for 10 years. You win a competition, you go for 5 years, and then you get a peer review, then you go for 5 more years. This way you can hire faculty, engage students, work with industry. We are going to do it in nanotechnology, biotechnology, information technology, the fusion of those four technologies, power and propulsion. We believe that this is going to really help American universities attract American kids into science and engineering. If this is successful, we hope to expand that program.

Senator BOND. This is something that is of interest to me. How much are you going to commit to that?

Mr. GOLDIN. $18 million a year for the next 10 years.

Senator MIKULSKI. Mr. Chairman, I have to go to another committee.

Mr. Goldin, let us keep in touch.

Mr. GOLDIN. Yes, ma'am. I will be there.

Senator BOND. Thank you very much, Senator Mikulski.

Senator MIKULSKI. Thank you, Mr. Chairman.

Senator BOND. We thank you.

Senator MIKULSKI. Actually it is interesting. We all had pretty much the same line of questions.

Senator BOND. Oh, I know. There is so much to cover and we thank you very much for your good leadership on it.

Please go ahead.

Mr. GOLDIN. Then we are funding a very significant amount of work at universities like Hispanic-Serving Institutions (HSI) and

Historically Black Colleges and Universities (HBCU). We started an Administrator's fellowship program where we select some of the top researchers at NASA and send them to some of these disadvantaged universities to teach them how to do research grants so they could then come back and be funded at NASA. In fact, we are really pressing hard in all these areas.

Then we are looking at feeder programs.

We are involved in the first competition, which you saw in that video. That is a nationwide competition and we get students from around the country, 400 teams. NASA is the biggest sponsor. We sponsor one-quarter of all teams in the country. And these kids design and compete robots, and usually the NASA team wins. We are getting kids from across the country to get interested in math and science. It is like going to a football game.

So, we have a broad range of these programs. All of them are pilot and experimental, and what we would like to do is, over the next few years, work with this committee and get some metrics from the program.

Finally, I met a gentleman named Paul Romer, who is a professor at Stanford University, who is an expert in these areas. He is an economist. He is going to develop metrics for us and he is going to work with us to see the effectiveness of these programs. But this, in my mind, is not exciting like a mission to Mars, but it is only about the future of NASA and the country.

MANNED MISSION TO MARS

Senator BOND. Speaking about a mission to Mars, I understand you made an announcement yesterday about a manned mission to Mars by 2020. What are your plans for that? What are you looking at there?

Mr. GOLDIN. First, let me say I came to NASA April 1, 1992, to follow a vision of George H.W. Bush who said we are going to get to Mars by 2018. I reconfirmed the fact that I believe we are going to do it. We are doing all the right things to get there.

First, we are building the Space Station and we are going to solve the horrendous biomedical problems that have to be overcome in going to Mars.

Also, on the station, we are going to figure out how to live and work in space. I do not know if you saw those awesome pictures of those astronauts doing space walks. How do you assemble things in space? That is going to get done.

Second, this budget has the most aggressive Mars program for robotic exploration that this Nation has ever undertaken. We have a series of progressively difficult missions that will allow us to develop the technology to do precision, high reliability landing on Mars. We are going to develop reconnaissance pictures of Mars with the accuracy of the size of a basketball. We are going to be putting mobile laboratories on Mars, searching for water, doing drilling. All this is necessary to build up.

Finally, with the Space Launch Initiative, I think we are going to take out the biggest barrier. And this is not a commercial need. NASA needs to get to low earth orbit with high reliability. We need to improve the reliability for people by a factor of 100, and we need to cut the cost by a factor of 10. As a result, instead of taking a couple of million pounds at 10,000 a pound to low earth orbit, if we could do it with 1,000 a pound, each mission will not be $20 billion to get to low earth orbit, but $1 billion. Doing those things and with the in-space propulsion that Senator Shelby talked about, I believe that this Nation will be able to meet the goal of getting there by 2018.

Senator BOND. 2018. All right, we will hold you to that.

Mr. GOLDIN. I would love to do it. That is my life.

Senator BOND. Thank you very much.

I turn to Senator Shelby.

Senator SHELBY. I have no other comments. I do want to thank Mr. Goldin. This is your 10th year, is it not? That is a long tenure. We want to continue to work with you and make a lot of these things happen. Thank you, Mr. Chairman.

INCREASING COST OF ENERGY

Senator BOND. Thank you, Senator Shelby.

Mr. Goldin, increasing costs of energy have become a critical issue throughout the country and very especially in California. NASA has a significant investment in facilities in California. There are a number of these, Ames, Dryden, JPL. Do you see the energy costs in California making a substantial hit on your budget? How big an impact are these energy costs going to be?

Mr. GOLDIN. Right now at just our three laboratories, not at our contractors, we are seeing $36 million. That is under the best conditions, negotiating with DOD and GSA, and the summer has not even begun. So, if you just look at our facilities, the numbers are going to go up.

But then if you consider the fact that about a quarter of our budget is in California, we could be looking at an energy bill that is very, very serious. We have no way right now of getting the costs from our contractors, but we are working on it. But my concern is it is going to get even worse as we go into the summer. So, I think we have just hit a small number right now. I think it is going to be a lot worse.

Senator BOND. We need to be talking with you about that because that is a concern clearly for your own facilities and the contractors.

Mr. GOLDIN. By the way, Mal Peterson just sent me a note. At Dryden, we are reprogramming funds for energy just to keep the facility open. I view this for this year as a real problem. We are worried about costs on the shuttle. We are worried about costs on the station. These are things that are just well beyond our control.

NASA CONTRACT MANAGEMENT

Senator BOND. One final tough area. GAO continues to identify NASA contract management as a high-risk area. They indicated that some progress has been made to address its contract management weakness with a new system for measuring procurement-related activities. But still, GAO in its 2001 high-risk review reported that NASA needed to rely less on the use of undefinitized contract actions—undefinitized. Is that the same as undefined? What is the difference between undefinitized and undefined?

Mr. KAMARCK. The spell-check could not find it.

Senator BOND. How about rely less on certain uncertain contract actions, namely unnegotiated contract changes, as a way of doing business since the practice could result in contract cost overruns and cost growth.

What is NASA doing to deal with this problem?

Mr. PETERSON. Let me give you an example because one of the key issues on Space Station several years ago was we had a very large backlog of undefinitized contract changes.

Senator BOND. What the heck is the difference between an undefinitized and an undefined?

Mr. PETERSON. Undefinitized means simply that you have a proposal for a contract change, and in order to definitize it, what you must do is agree with the contractor on a price. That negotiation process requires you to get pricing data from the contractor, exercise due diligence in making sure they are going to be doing exactly the right thing. That process can, particularly when there are a lot of changes, take an inordinate amount of time. Some people see it, in fact, as being sort of busy work, not getting the engineering done, instead sitting at a negotiating table with the contractor.

Several years ago, we became very alarmed at the backlog of undefinitized changes in the Space Station and the amount, knowing that that backlog impeded our ability to have a good baseline for contract assessments. We took a concerted effort to reduce that, working with the Boeing company, and in fact, have done so.

It remains an issue. It in part has to do with the number of procurement personnel that are available to work these changes, and with the series of downsizings that we have gone through in some areas, we have cut personnel in the procurement organization and we have perhaps induced a problem that we now are struggling with. On the other hand, we are committed to working this to expedite the negotiation process and to enlist the Department of Defense audit agency support to try to get a quicker turnaround on the validation of the contractor cost estimates.

Senator BOND. Are we going to get off the high-risk list?

Mr. GOLDIN. Yes, sir.

Senator BOND. When do you hope to achieve that?

Mr. GOLDIN. Within a year.

Senator BOND. That is a little easier to follow up on than the 2018.

Mr. GOLDIN. We should only all be around for that.

Senator BOND. Administrator Goldin, thank you very much. There is much, much more, obviously, that my colleagues and I would like to ask you. But I think the attendance that you have had today from members of the subcommittee indicates the great interest and commitment this subcommittee has to the work of NASA. We thank you for your strong leadership and your visions, and we appreciate your good efforts to answer the toughest questions we can come up with. We look forward to working with you.

SUBCOMMITTEE RECESS

With that, the hearing is recessed.

[Whereupon, at 11:47 a.m., Wednesday, May 9, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, MAY 16, 2001

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:12 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Christopher S. Bond (chairman) presiding.

Present: Senators Bond, Domenici, Stevens, Mikulski, and Johnson.

FEDERAL EMERGENCY MANAGEMENT AGENCY

STATEMENT OF JOE M. ALLBAUGH, DIRECTOR

ACCOMPANIED BY:

JOHN MAGAW, ACTING DEPUTY DIRECTOR

PATRICIA ENGLISH, ACTING CHIEF FINANCIAL OFFICER

OPENING STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Good morning. The Subcommittee of VA, HUD, and Independent Agencies hearing will come to order.

Today we meet to take testimony from the Federal Emergency Management Agency on its fiscal year 2002 budget request. It is a pleasure to welcome for the first time before this subcommittee FEMA's new Director, Joe Allbaugh. Mr. Allbaugh is no stranger to the needs of natural disaster response, having managed for President Bush, when he was Governor of Texas, disaster response coordination in Texas for nine presidentially declared disasters. As one who has served as Governor and presided over quite a few disasters, I know how significant and how difficult the position is to be the person actually responsible for coordinating that work, and I cannot think of better on-the-job training for the current position he holds as Director of FEMA. There he will be responsible for one of the most critical responsibilities in the Federal Government, namely preparing for and responding to the devastation of natural and other disasters throughout the Nation.

FEMA is an agency that the American people depend upon following a disaster event. They depend upon FEMA to help come in and pick up the pieces and get their lives back together. It is an agency that has been performing this task admirably over the last several years with a strong focus on customer service.

But make no mistake. There is plenty more to be done at FEMA. We must improve accountability for disaster relief expenditures. We have to revamp the flood insurance program. We must streamline disaster field operations, and we must improve the management of mitigation programs.

Joe, you have gotten off to a great start at FEMA with a quick-paced and very effective response to the Seattle earthquake in February. You have been mired in plenty of flood events in the Midwest. Soon it will be, sad to say, hurricane season, and perhaps with a few fires and a plague or two thrown in, you will be able to round out your experience in no time.

DISASTER REFORMS

You have initiated some very important debates about preparedness and mitigation, which we look forward to discussing this morning. I am glad you are willing to take on the much-needed, albeit it very controversial, reforms to FEMA's current Federal disaster assistance programs. I have been pushing for these reforms for several years, and I can tell you that there are a lot more pleasant things that you can do than to tell people that we have to have guidelines and safeguards and limits on disaster assistance. People do not want to hear that, but if you are willing to work with us, we think, for the good of the Nation, we must clearly move down that path.

FLOOD INSURANCE REFORMS

It is clear to me that you recognize where improvements are needed and we look forward to working with you to do all we can to support your efforts. In particular, I am very interested in pursuing a dialogue with you on ways to reform the National Flood Insurance Program. It must be made actuarially sound. We must increase participation. I share your concerns about the costs to the American taxpayer of continuing to pay for repetitive flood loss properties at a subsidized rate. That cannot go on. If people continue to live in areas where they are exposed to flood damages, if they will not mitigate or move out, then at some point we have to say enough is enough. And that is truly not popular.

We also need to encourage people with homes at risk of flooding to participate in the National Flood Insurance Program, as well as to encourage people in communities to take all necessary steps to minimize the risks of floods, earthquakes, and hurricanes. It is not an easy task, but it is a necessary task.

2002 BUDGET

FEMA's fiscal year 2002 budget requests $2.1 billion, including roughly $1.4 billion for disaster relief, $140 million for the emergency food and shelter program, and roughly the current level of spending for FEMA's operating accounts. This is a responsible budget which will ensure that critical disaster and emergency needs will be met.

FUNDS FOR DISASTERS

At this time, it appears there is plenty of money currently in the disaster relief fund to meet disaster needs for the rest of the year, including those associated with the Seattle earthquake and the Midwest flooding, so long as we do not have any truly catastrophic events later this year. Including contingency funds, as of the end of March, there was almost $2.3 billion in unobligated disaster relief funds.

FEMA's budget assumes the creation of an emergency reserve for extraordinary disaster events. The budget resolution passed by the Congress does not provide for this reserve. This means that we will need to provide at least another $1 billion in your budget, consistent with historic costs of disasters, and perhaps depending upon an emergency declaration from the President.

But in any event, we look forward to working with you and the Office of Management and Budget on these fiscal issues and, most of all, working with you on reform of the programs to ensure that people who are in need are served, but that the taxpayer is not unnecessarily assisting people who have played out their string or providing funds that are not absolutely needed.

Before hearing your comments, Mr. Director, it is my pleasure now to turn to the distinguished ranking member, Senator Mikulski.

STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Good morning, Mr. Allbaugh.

Mr. ALLBAUGH. Good morning, Senator.

Senator MIKULSKI. Again, I would like to most cordially welcome you for your first appearance as the FEMA Director before this subcommittee. I most enjoyed our conversations both in my office, when you first came to your post, and the very informative, instructive testimony that you gave in our 3 days of hearings on America's ability to respond to terrorism. Later in the questions and answers, I want to go into this.

You know, FEMA has truly become the Nation's 911 agency. Unfortunately, that 911 could be called a hurricane, a flood, or a terrorist attack from either a foreign or domestic thug. That is why I believe that FEMA must truly be an all-hazards agency and would like to discuss that with you. It must be ready to respond to anything at any time that the President so designates.

FEMA'S TERRORISM ROLE

I want to hear about FEMA's plan for taking on an expanded role in terms of the presidential announcement last week. I have long believed that FEMA, with its ties to State and local emergency response units, should be a major force in this area, particularly to coordinate consequence management for these acts. Terrorist acts, though, are not the same as natural disasters. There will be a whole host of national security and law enforcement issues mixed in as well. I know the President had asked you to undertake a review, and I will be talking with you about it. But I see that part as a work in progress and that we will need to have further conversations and, even later in the year, an additional hearing. But we will get into that in the Q&A.

FEMA AS ALL-HAZARDS AGENCY

I used the term "all-hazards" agency because FEMA, when it really modernized itself and professionalized itself during the last 8 years, followed the three R's: readiness, response, and recovery. What we see is that, in preparing for the cost of any disaster that could affect an American community in which there would be a presidential declaration—the reason I use "all-hazards" agency is that a chemical explosion in, say, one of my chemical plants in Baltimore, could either happen because of an accident or a malevolent act. We could have an outbreak of a disease because of West Nile, and at the same time, there could be a bio-attack. It could be domestic, as well as foreign. We had Oklahoma City which was domestic. We had the World Trade Center which was foreign. But either way, there was a response to these, and it is something that we should really consider in our training particularly for readiness and response the concept of all-hazards.

2002 BUDGET REDUCTIONS

As Senator Bond has indicated in his testimony, going now directly to the budget, I am concerned about the cuts in prevention and preparedness programs when it comes to natural disasters. There are flashing yellow lights in terms of the reduction of the Federal costs for State hazard mitigation programs, I would like to talk about what you anticipate as the consequence of that. The elimination of the Project Impact program is troubling to me because it is where we would hope to lower costs in the future, which I know you are trying very hard to look ahead to do. So, we need to know the consequences of these cuts not only to State and local government, but often for the very impact on the communities themselves.

The changes we are making could be, inadvertently, at odds with the theory of helping those who help themselves, encouraging State and local governments on how best to handle the insurance.

I also want to talk about this proposal along with the phase out flood insurance of repetitive loss properties. It is an issue that I have been troubled about for some time. How then do we best address that and what would be the criteria? Because very often repetitive loss properties, particularly for a Senator like me with my rivers and my bay, tend to be older, poorer people who built along the river long before it was the Gucci thing to do.

I say Gucci because waterfront property in Maryland used to be what working men and women could afford, and now it is very pricey. Mr. Magaw knows what I am talking about. But we need to look at that.

FIRE PROGRAMS

The other, again, focusing on the risk that American people face, was the commission report on America Burning. It outlines pretty clearly what we need to do in terms of helping at the local level with a partnership through the National Fire Academy and others on how we can prevent fires. You know the grim nature of what it is.

Also, there has been a new program instituted in terms of helping our fire fighters with equipment, protective gear, and so on. I think what we are concerned about is how can we support those communities, particularly those that are stretched thin with trying to buy the new equipment, and they cannot do it with tip jars and bingo, but that we do not create a whole new entitlement or a whole new block of earmark potentials in this appropriation. So, I think that can be dealt with with good management and clear criteria.

Again, we look forward to your testimony. I regard this hearing as part of our work in progress as we get ready to do our work. Thank you very much.

Mr. ALLBAUGH. Thank you.

Senator BOND. Thank you very much, Senator Mikulski.

We are pleased to be joined by the chairman of the full committee, Senator Stevens.

RISING SEA LEVELS IN ALASKA

Senator STEVENS. Good morning, Mr. Allbaugh. It is nice to see you again. I have but one question I think. I read over your statement.

I have got a strange circumstance in my State, and that is the ever-increasing level of the water table along the ocean. I am going up in this coming recess to look at Point Barrow where the water level is so high now, it is starting to flood the periphery of the city of Point Barrow. It looks like it is going to threaten the sewage lagoon and particularly some facilities that were built by the Federal Government along the coastline.

The same thing is happening on the west coast of Alaska where there are at least three villages I can think of right now where the level of the ocean is coming up and in one instance has started to flood the airport and in another instance has started to flood the city itself. These are small villages really. They are incorporated cities under Alaska law, but they are basically native villages along the coastline.

As we examine it, it appears—and, Mr. Chairman, you may be interested in this—that they are not covered by disaster laws because it is an ever-encroaching sea that is coming slowly but surely higher every year. I do not think I am going to ask you any questions about it, but I am going to ask if you will come join me sometime to go take a look at this.

Mr. ALLBAUGH. I sure will.

Senator STEVENS. I am going to have hearings in Fairbanks this next recess, Mr. Chairman, on the global climate change and how it is affecting the Arctic. We think there is, in fact, an increasing possibility that this sea level is rising because of global climate change and that we need to find a way to deal with it.

All of these areas were basically built with Federal funds because of the indigenous population that is there. Point Barrow was basically built by the Navy during the days when the Navy was controlling Naval Petroleum Reserve No. 4. We have got to find some way to deal with this.

To my knowledge, it has not happened anywhere else in the country. Are you aware of anywhere else where the encroaching sea is inundating the coastline?

Mr. ALLBAUGH. I am not aware of anything in the coastal areas, but I am aware of a couple of inland basins, one in North Dakota and one in South Dakota. I have not had the opportunity to visit the lake outside of Watertown, South Dakota—I believe that's where it is—but I have visited Devil's Lake in North Dakota. I am somewhat familiar with those areas in Alaska, but I would love to have the opportunity to join you on a trip.

Senator STEVENS. I am familiar with those areas. They are basically a result of increasing rainfall and probably increasing diversions from other rivers.

In this instance, this is complicated by the fact that it is reported to me that the pack ice, the ice that is just from year to year in the Arctic, is 8 inches thinner this year than it was last year. We have got some complications coming and I want to try to find a way to see if we can understand.

But in any event, I think it would be important. One of these days we are going to have to call on you to see if you can help us deal with moving those villages back from the sea. They certainly cannot continue to live as they are because a good storm, with the wind and sea conditions right, would drive the water right through the villages today.

But I appreciate seeing you and look forward to getting an opportunity sometime to have you come up and take a look around and to become acquainted with that and see if, together, we can work with you and other agencies to devise a plan to help these people avoid the consequences of being flooded out.

Mr. ALLBAUGH. Yes, sir. Thank you. I always look for opportunities to become better educated and better acquainted with areas around our country.

Senator STEVENS. Thank you. We will arrange a convenient time so we might do a little marine research along the way.

Mr. ALLBAUGH. Yes, sir.

Senator STEVENS. Thank you.

Senator BOND. Thank you very much, Mr. Chairman. I assure you that we will join Director Allbaugh as he seeks to learn more about this. This sounds like a very important matter upon which to follow up. I believe my ranking member and I are very much interested in that. Is that correct, Senator?

Senator MIKULSKI. Absolutely.

Senator BOND. I thought we would have bipartisan agreement on it.

Turning now to Senator Johnson.

STATEMENT OF SENATOR TIM JOHNSON

Senator JOHNSON. Well, thank you, Mr. Chairman.

I want to welcome, of course, Director Mr. Allbaugh to the subcommittee today and look forward to the testimony.

I, in the past month or so, have spent a fair amount of time home in my State inspecting flood damage in the Watertown area, and I want to commend Director Allbaugh for his immediate personal attention to the issues that we have there in South Dakota with the enclosed basin, but also problems we have on a couple of our rivers. This is the Prairie Pothole region where we have had a very wet year. Unfortunately, it is a part of the country that is prone to volatile swings of the weather and the damage that it can cause.

I am very appreciative of your contact with me and also your willingness to work closely with Governor Janklow. Governor Janklow in our State has done just an extraordinary job in dealing with a string of natural disasters that we have had, and the partnership that we have had with FEMA has been an important partnership for our State.

There was a time many years ago where FEMA's reputation was not all that it really needed to be. But over the past decade, it has become a very high quality, very professional organization. I commend James Lee Witt on his work as your predecessor, and I know that Mr. Allbaugh is going to continue to build on the strengths of what has gone before him here over the last number of years to really continue to build FEMA into the key agency that it needs to be.

Governor Janklow submitted a formal request late last week for Federal disaster assistance for 11 counties, and it is our hope and our confidence that FEMA will be examining that request in a very expeditious fashion.

PREPAREDNESS INITIATIVES

I have some concerns about the preparedness initiatives, and I appreciate that there is more than one way to approach this preparedness concern. Project Impact may not be a perfect program and if the administration has ways to improve upon a whole range of preparedness issues, I respect that, and I look forward to working with the administration.

But for what it is worth, I do want to convey to the Director that Project Impact has been a very popular program in my State. I have some copies of letters I have received from Project Impact communities in my State, and with the chairman's consent, I would submit them for the record.

Senator BOND. Without objection, they will be accepted.

[The information follows:]

LETTER FROM MARY A. PERSON

CITY OF HURON,
Huron, South Dakota, May 9, 2001.

Senator TIM JOHNSON,
324 Hart Senate Office Bldg.,
Washington, DC.

Dear Senator JOHNSON: I was glad to see that you were elected to serve on a subcommittee that will be addressing Project Impact's viability. We were selected as a Project Impact Community in 1999 and there are not enough words to express our gratitude for this FEMA program. I would like to share with you and the rest of the committee why the City of Huron strongly supports the continuation of this program.

We were awarded $302,609.00 in order to make our community a disaster resistant one after the 1997 flood. The City of Huron spent $45,750.00 in cash towards our matching portion, along with $44,792.00 worth of in-kind services and used $37,714.00 from other sources of funding in order to make our projects a reality.

We purchased new outdoor warning sirens, flood-proofed Jersey Avenue lift station, completed drainage projects at 15th Street SE and 20th Street SW, installed an EPN/Reverse 911 multi-media warning system, provided adjacent community warning systems in Wessington, Wolsey, Cavour, Yale and Hitchcock), installed county-wide two way radio system and will be distributing community education brochures to each household.

We would not have been able to accomplish the above projects without securing the necessary funds from Project Impact. I would like to encourage you to do everything in your power to convince the current administration that the continued funding of this project is vital.

Please let me know if I can be of further assistance to you and the efforts of this committee to make sure the right decision is made four all concerned.

Sincerely,

MARY A. PERSON,
Mayor.

LETTER FROM BRENDA S. BARGER

CITY OF WATERTOWN,
Watertown, South Dakota, May 14, 2001.

Senator TIM JOHNSON,
324 Hart Senate Office Bldg.,
Washington, DC.

DEAR SENATOR JOHNSON: I understand that the future of Project Impact is being reviewed. As Mayor of a city with 20,000 residents, I wish to express my views on what Project Impact has meant to our community.

In 1997, Watertown was one of many cities in the Midwest to suffer severe flood damages. Since then we have taken many progressive steps to mitigate the impacts of future flooding. Help from Project Impact has allowed us to broaden our efforts to become, not only more disaster resistant but, more disaster-ready.

Project Impact has provided the help we needed to accomplish such things as public tornado shelters, equipping a hazardous material response team, providing early warning devices for schools, day cares, nursing homes and other public locations, equipping and training our local search & dive rescue team and, of course, flood damage mitigation.

To date, we have leveraged $94,000 of Project Impact funds into a total investment in these improvements of nearly $325,000. In other words, every $1 in Project Impact money has resulted in $3.46 in disaster damage mitigation. This is the result of partnerships fostered by Project Impact between our community, local and national businesses and the federal government. These partnerships continue and we're not done yet!

Project Impact has made this possible. With this vital help, our community has learned first hand what can be accomplished by working together. Personal experience has convinced the community of Watertown that it is much more effective and far less expensive in the long run to be better prepared before disaster strikes. This is true in both financial costs and in terms of human suffering.

Thank you very much for your attention to this important matter.

Sincerely,

BRENDA S. BARGER,
Mayor.

LETTER FROM THOMAS L. HOPPER

CITY OF ABERDEEN,
Aberdeen, South Dakota.

Senator TIM JOHNSON,
U.S. Senate,
Washington DC.

DEAR SENATOR JOHNSON: It is my understanding that the program, Project Impact, may be eliminated from the federal Appropriations budget. The elimination of Project Impact would be a devastating blow to communities around this country. Aberdeen was the first community in South Dakota to participate in Project Impact. As Mayor of this community, I can personally say that Project Impact was a godsend.

Project Impact was extremely beneficial, not purely from the financial aspect ($500,000); but from the standpoint of identifying and working to eliminate the risks facing this community from natural as well as manmade disasters. The potential from these risks are high and it is our duty as elected officials to do all we can to prevent catastrophe from affecting our citizens. The total elimination of disaster is not possible; however, the ability to prepare and lessen those risks are possible.

Project Impact allowed Aberdeen to identify and proceed on 17 major projects. Project Impact allowed us to become acquainted with and maintain communication with Federal and state officials who were able to keep our "feet to the fire." Projects completed through Project Impact totaled $1,400,000, with assistance through federal and state grants, partnerships, in-kind and, of course, local government share. Future projects identified with Project Impact have a total budget cost of $4,100,000.

Projects identified through Project Impact included:

—Area-wide Contour Mapping;
—Area-wide Drainage Studies;
—Outdoor Warning System;
—Wastewater Treatment Plant Flood Protection;
—Water Treatment Plant Flood Protection;
—Stream Gaging Improvements;
—Public Education and Awareness Campaigns;
—Moccasin Creek Dredging Study;
—Kline Street Storm Sewer Improvements;
—Business Preparedness and Recovery Planning;
—City Watch Program;
—Goodrich and Grand Streets Holding Pond (storm-water retention);
—Flood Control Structures; and,
—NOAA Weather Radios Distribution Program.

Some of the future projects initiated through Project Impact include:

—Southwest Aberdeen Drainage Improvements;
—Noah Aberdeen Drainage Improvements; and,
—Royal Road and Dick Drive holding Pond (storm-water retention).

Project Impact fulfilled its obligation as outlined in the federal regulations. Aberdeen was indeed, and still is, very fortunate to have participated in Project Impact. Project Impact is a program that needs to be continued in order to provide assistance to other communities around the country. As I mentioned at the beginning of this letter, the elimination of Project Impact would, in itself; be a catastrophe.

Senator Johnson, I urge you to do all possible to secure funding for Project Impact.

Thank you for your time on this issue.

Sincerely,

THOMAS L. HOPPER,
Mayor.

Senator JOHNSON. As I look at the President's proposals to eliminate Project Impact, double the local match requirements for hazard mitigation projects, and require public facilities to purchase disaster insurance, this does cause me some concern. I look forward to working with Mr. Allbaugh and FEMA on ways then that we can be proactive in terms of helping our communities prepare for the kinds of disasters that in some instances we know are likely to occur.

I commend the President for his work to establish the Office of National Preparedness at FEMA.

I again look forward to Mr. Allbaugh's testimony and to working with him and express my appreciation again for his very hands-on approach to the problems we have had in my State already this year.

Mr. ALLBAUGH. Thank you, Senator.

Senator BOND. Thank you very much, Senator Johnson.

Now we welcome back to this committee a good friend, the chairman of the Budget Committee and the Senator from New Mexico, Senator Domenici.

Senator DOMENICI. Thank you very much, Mr. Chairman.

Where are we in the process? Is it time to ask questions?

Senator BOND. We are at opening statements and the Director has not yet presented his initial statement.

Senator DOMENICI. I think I will just let him do that.

STATEMENT OF JOE. M. ALLBAUGH

Senator BOND. All right, with that, Director Allbaugh, if you will proceed.

Mr. ALLBAUGH. Thank you, Mr. Chairman. Good morning, Mr. Chairman, members. I appreciate the opportunity to appear before the subcommittee today to discuss our goals and priorities for fiscal year 2002. I welcome this opportunity to have a conversation with you on our vision for FEMA.

Mr. Chairman and members, I appreciate the time that you and your staffs have spent with me in preparation for this hearing. I am pleased that we are developing working relationships that will serve our country well both in dealing with future emergencies and in setting emergency management policies. I look forward to working closely with you as we address the critical issues that are facing us all in emergency management.

My senior staff is also here to listen to what you have to say today so that they can continue to make FEMA a better agency. FEMA is made up of great folks who entered public service to help others, and it is my great honor and privilege to join ranks with not only our FEMA employees and disaster reservists, but State, tribal, and local emergency response professionals, and volunteers as well. They provide speedy, appropriate help to our fellow citizens in time of need.

I want to introduce John Magaw, former Director of the U.S. Secret Service and Bureau of Alcohol, Tobacco, and Firearms. John has served as Acting Director of FEMA before my confirmation and is currently serving as the Acting Deputy Director. In addition, John is our resident expert on interagency coordination of terrorism related efforts.

I especially want to recognize Patricia English. She is sitting to my left. Pat has been serving as FEMA's Acting Chief Financial Officer, to whom I have turned frequently in these first couple of months of my tenure as the FEMA Director. I know that Pat, along with our congressional affairs office, has worked to give you and your staff a clear picture of FEMA's spending priorities and historical financial records.

If I could, Mr. Chairman, I would like to mention another important person to FEMA, your departing staff member, Carrie Apostolou. She has been exemplary in every aspect of her professional task. She took the time to look inside FEMA and question the what, when, where, why, and how of every issue, always fair and constructively critical, while at the same time displaying a caring, helpful attitude. We will miss Carrie's input.

In recent decades, we have seen Federal emergency management swing from a set of prescriptive preparedness programs and a single focus on response and recovery to a more comprehensive approach that incorporates mitigation by taking prudent, protective measures to reduce losses. At the same time, we have seen soaring disaster relief costs that need to be managed more effectively.

RESPONSIBILITY AND ACCOUNTABILITY IN BUDGET

The administration's budget request for FEMA in 2002 will build on this progress by emphasizing responsibility and accountability. This budget request asks individuals, communities, States, and FEMA to take on an appropriate degree of responsibility in resisting and responding to disasters. We at FEMA will continue to work with our customers to empower them with the tools to accept this greater responsibility. Internally, we will be working toward a greater accountability to the members of this committee, the Congress, the President, and ultimately the American people.

As President Bush said in his February address to the joint session of Congress, our new governing vision says Government should be active but limited, engaged but not overbearing. We believe you can see that the budget proposal for FEMA truly reflects the President's goal of restoring a proper balance, moving away from the expectation that the Federal Government is the option of first resort to the option of last resort.

Recently, I met with the Executive Board of the National Emergency Management Association representing the Nation's State emergency management directors, and we agreed that there is a definite need to restore proper balance. Local communities have historically been the first line of defense against disasters, and Federal disaster assistance has always been designed to supplement the efforts of local and State governments. Even though we have spent many years working in partnership to be prepared for disasters, we have also focused many of our efforts on simply responding to and recovering from disasters. In recent years, we have been emphasizing the need for pre-disaster mitigation.

IMPORTANCE OF PRE-DISASTER MITIGATION

Most recently, I saw this firsthand. I visited community after community on both sides of the Red River in North Dakota and Minnesota as the river was rising. As Governor Hoeven, Senator Dorgan, Senator Dayton, Congressman Pomeroy, and I toured the areas, the story was the same. In almost every community, they had learned the critical value of pre-disaster mitigation. Communities as large as Fargo, North Dakota, and as small as Breckenridge, Minnesota took seriously their flood threat and acted to minimize the impacts of this year's event. It worked. Levees and dikes held and temporary levees erected by the Corps of Engineers did their job. In areas where FEMA and the State and local governments had conducted buy-outs of neighborhoods and businesses, the water came up again, but this time there were no people nor houses to be impacted. There was less suffering. Pre-disaster, community-based mitigation works.

Although I have been only on the job as FEMA Director for a short while, it has been an active period in which I have dealt with a wide range of disaster activities. I have seen firsthand the responsibilities that fall within my stewardship.

On day 12 of my tenure, February 28 as has been noted, the Nisqually earthquake hit, shaking major areas of Washington State. I have visited the Pacific Northwest twice since the earthquake, once to see the immediate damage and the second time to check on recovery efforts. To date, more than $72 million in disaster assistance has been dispersed to disaster victims.

I have also seen the devastation, in some ways greater, caused by an F4 tornado that devastated Hoisington, Kansas, on April 21. FEMA has been active in that community, supporting the rebuilding efforts and urging residents to consider building safe rooms and to take other tornado mitigation efforts.

In Cerro Grande, New Mexico, where terrible fires last year destroyed many homes, I have visited twice to assure the residents of that community, Los Alamos County, that FEMA was doing all it could do to expedite their recovery. On my second visit, I was pleased to present Los Alamos County with about $13 million to help make the community more fire resistant.

Given the huge issue of wildfires in recent years and the terrible destruction that those fires bring, I made it a priority to visit in April the National Interagency Fire Center in Boise, Idaho, where I was briefed on how FEMA and that center will work together and what risks lay ahead for this upcoming fire season.

In addition, I hosted a conference in Florida on the issue of drought management, and visited 3 of our 10 regional offices. These visits have allowed me to quickly get a feel for FEMA, its important mission, its successes, its challenges. There is no substitute, quite frankly, as you all know, for getting out of Washington, DC, and seeing what is happening around the country. I will continue to be on the scene.

PROJECT IMPACT

Part of my challenge is to review ongoing programs. One, in particular, as has been mentioned this morning, that I am currently reviewing is Project Impact. I believe it is time to take Project Impact to the next level and not have our pre-disaster mitigation efforts limited by a $25 million grant program that was largely designed to raise public awareness about mitigation. We are accomplishing that and seeing results. We need to build on the success of Project Impact's marketing strategy by working to continue access for communities to private resources and all the various resources in FEMA's mitigation tool kit. At the same time, we need to move toward achieving results by implementing our mitigation programs. The awareness is there. What we need now are the results.

MITIGATION IN IOWA

I received some coverage on my recent remarks about the Mississippi River and its awesome desire to flood. I think it is important to note that the State of Iowa and the city of Davenport have done a great job with their pre-disaster mitigation funds—I saw that firsthand on my visit—and in the way they have implemented those dollars. The results of their efforts will substantially reduce physical and financial losses during this flooding season. This is what mitigation is all about and it is what we need to focus on in the future.

FEMA'S TERRORISM ROLE

FEMA is now tasked, as has been noted, with responsibilities in other areas in addition to natural disasters. It is clear that there is an important Federal role regarding acts of terrorism and the use of weapons of mass destruction. President Bush is concerned that the efforts to address terrorism by various agencies in the Federal Government are not well coordinated. We have a responsibility to the American people to be as prepared as possible to deal with these events, and we need greater accountability to avoid duplication in these efforts.

As you know, the President has directed me to establish the Office of National Preparedness at FEMA, which will serve as the focal point for the coordination and implementation of preparedness and consequence management programs for dealing with the threat of weapons of mass destruction. This office will work closely with the State and local governments to ensure their input into those programs and activities as it seeks to improve the quality of Federal support for State and local emergency management personnel and our first responders.

While this is a new assignment for FEMA, this role of coordinator and facilitator is not. FEMA is recognized and supported as the Federal coordinator of assistance to State, tribal, and local governments and individuals in all types of disasters, whether they are natural, technological, or national security events.

I appreciate the support you have provided this agency over the years. My appreciation comes from the fact and understanding that each year you are faced with tough choices. With your support, we will make FEMA an even more responsible and accountable national resource in preparing for and responding to all types of disasters and an agency that will continue to be an international model for disaster response, mitigation, and recovery.

Thank you for the opportunity to appear before the committee this morning, and if you have any questions, I will be happy to try and answer them. Thank you very much.

[The statement follows:]

PREPARED STATEMENT JOE M. ALLBAUGH

Good Morning Mr. Chairman, Senator Mikulski, and other Members of the Subcommittee. I appreciate the opportunity to appear before the Subcommittee today to discuss my goals and priorities for fiscal year 2002. I welcome this opportunity to have a conversation with you on my vision for FEMA.

Mr. Chairman and Committee Members, I appreciate the time you and your staffs have spent with me in preparation for this hearing. I am pleased we are developing working relationships that will serve the country well, both in dealing with future emergencies and in setting emergency management policies.

FEMA is made up of people who entered public service to help others. I consider it a great honor and a privilege to join ranks with the FEMA employees including disaster reservists, and State, Tribal and local emergency response professionals and volunteers. There can be no higher calling than providing speedy, appropriate help to our fellow citizens in their time of need.

This morning several senior officials accompany me from FEMA. Sitting next to me is Patricia English, FEMA's Acting Chief Financial Officer, who I have turned to frequently in my first few months as FEMA Director. I know that Pat, along with my Office of Congressional and Legislative Affairs, have worked to give you and your staff a clear picture of FEMA's spending priorities and historical financial records.

I'd also like to take the opportunity to introduce John Magaw, former Director of the United States Secret Service and the Bureau of Alcohol, Tobacco and Firearms.

John served as the Acting Director of the FEMA prior to my confirmation and is currently serving as the Acting Deputy Director. In addition, John is our resident expert on interagency coordination of terrorism-related efforts.

I'd especially like to introduce my first addition to the FEMA team, our new General Counsel, Michael Brown.

Also with me today are:

—Lacy Suiter, Executive Associate Director for Response and Recovery.
—Margaret Lawless, Acting Associate Director for Mitigation.
—Ken Burris, our Chief Operating Officer of the U.S. Fire Administration.
—Trey Reid, our Acting Associate Director for Preparedness, Training, and Exercise.
—Howard Leiken, the Acting Administrator of the Federal Insurance Administration.

Less than a hundred days ago, I told the Committee members at my confirmation hearing that I am a "doer" and that I viewed FEMA as a "doing" Agency. I laid out six goals I wanted to achieve. Neither the employees nor I have wasted any time addressing these goals since I became Director.

During my tenure in this position of public trust, we will:

—Enhance responsiveness to Governors and local leaders because effective and immediate response is critical in disasters;
—Implement pre-disaster mitigation programs that encourage the building of disaster resistant communities;
—Guide the Federal Insurance Administration to implement policies encouraging the purchase of flood insurance and reducing the costs of flood related disasters;
—Enhance the capabilities of the U.S. Fire Administration, which has a new opportunity to make a real difference in the firefighting community;
—Pay special attention and strengthen those volunteer and non-governmental organizations responding to disasters; and
—Take great care to foster and support the professional, experienced workforce at FEMA through enhanced training and creation of a business-like culture within the Agency.

In addition, President Bush has asked me to establish the Office of National Preparedness at FEMA, which will serve as the focal point for the Federal coordination and implementation of preparedness, training, exercise and consequence management programs for dealing with the threat of weapons of mass destruction.

I consider these initiatives the foundation of an improved system of emergency management that focuses on saving lives and protecting property through responsibility and accountability. In recent decades, we have seen Federal emergency management swing from overly prescriptive preparedness programs and a single focus on response and recovery, to a more comprehensive approach that incorporates mitigation, by taking prudent protective measures to reduce losses. At the same time, we have seen soaring disaster relief costs that need to be managed more effectively.

The Administration's budget request for FEMA this year will build on this progress by emphasizing Responsibility and Accountability. This budget request asks individuals, communities, States, and FEMA to take on an appropriate degree of responsibility while empowering them with the tools to accept greater responsibility. Built into this budget request are sound public policy tools to ensure greater accountability to each other and the American taxpayer. We can enhance responsiveness to our State partners by enforcing our current policies and developing meaningful and objective criteria for disaster declarations that are applied consistently. We need to eliminate the "guesswork" and focus on fundamental needs for disaster declarations by examining all relevant factors and not just dollars. I am developing a process to accomplish this goal.

Almost immediately following the release of the Budget Blueprint, I was on my way to tour the earthquake damaged Seattle area. This tour gave me an opportunity to see personally the value of mitigation. The National Earthquake Hazard Reduction Program (NEHRP)—a joint venture among FEMA, USGS, NSF, and NIST—has been studying earthquakes, developing guidance, and helping implement the most current earthquake mitigation methods for almost 20 years.

Taking my lead from Congress' enactment of the 2000 Stafford Act amendments, we will focus on implementing pre-disaster mitigation programs that encourage the building of disaster resistant communities. FEMA has made solid progress in this area, but more can be done to limit the human and financial toll of disasters. As we work to develop regulations implementing the Disaster Mitigation Act of 2000, we will identify and codify those elements of pre-disaster mitigation that work effectively. FEMA will capture the suggestions from our customers in State and local government on how we can better help them to minimize losses before a disaster strikes.

I want to take the "concept" of Project Impact and fold it in to the program of mitigation. Project Impact is not mitigation. It is an initiative to get "consumer buy-in." In many communities it became the catch-phrase to get local leaders together to look at ways to do mitigation.

Project Impact was a successful initiative to get local leaders together to look at ways to do mitigation. Now we move forward from the buy-in to doing the work of mitigation.

I am here to tell you that mitigation works. The Seattle-Tacoma area did not suffer significant losses because 20 to 30 years ago local leaders invested in its future by passing building codes and issuing municipal bonds that implemented solid protective measures.

FEMA has provided nearly $2.5 billion in Hazard Mitigation Grant Program (HMGP) dollars since 1989 and only $105 million in Project Impact dollars since 1998. The HMGP dollars have gone to build, rebuild and have become the underpinning of community recovery. In the States of the members of this Committee alone, more than $864 million in HMGP funds are available. More than $691 million of which has already been spent on mitigation projects.

Project Impact has accomplished its objective of raising awareness, understanding and "buy-in" for mitigation. We need to refocus our efforts from marketing to implementing. I am here to reassure you that mitigation will not stop. Working with communities, businesses, and associations will not stop.

I am convinced that locally initiated mitigation activities can be effective. The technical assistance offered by FEMA employees in our Headquarters and the Regional Offices advances the positive effects of community-based mitigation. Locally initiated mitigation activities make sense and, in fact, should be the rubber band holding together all of our various mitigation programs. However, we must better quantify the cost-benefit of the Federal dollars spent in this effort.

We must take time to complete our efforts to quantify the cost-effectiveness of mitigation before FEMA seeks any additional funding for Project Impact. We also need to complete the regulations implementing the Disaster Mitigation Act of 2000. Likewise we need to complete our analysis of the cost-benefits of other activities under this initiative. This important information will guide our decision making process. I want to make sure that the Federal taxpayer, FEMA, and the State and local governments are getting the biggest bang for their buck. Over the next year, grants already awarded will continue to be distributed and the technical assistance offered by our Headquarters and Regional Offices will continue to support communities in their efforts to become disaster-resistant.

Disaster mitigation and prevention activities are inherently grassroots. These activities involve local decision-making about zoning, building codes, and strategy planning to meet a community's unique needs. It is not the role of the Federal Government to tell a community what it needs to do to protect its citizens and infrastructure. I saw this first hand most recently when I visited community after community on both sides of the Red River in North Dakota and Minnesota as the river was rising. As Governor Hoeven, Senator Dorgan, Senator Dayton, Congressman Pomeroy and I toured the areas, the story was the same. In every community, they had learned. Communities as large as Fargo, North Dakota, and as small as Breckenridge, Minnesota, took their flood threat seriously and acted to minimize the impacts of this year's event. It worked—levees held—and temporary levees erected by the Corps of Engineers did their job. In areas where FEMA and the State and local governments had conducted buyouts of neighborhoods, the water came up again but there were no people or houses impacted. Pre-disaster, community-based mitigation works!

At the same time we are giving more control to State and local governments through the Managing State concept of the Hazard Mitigation Grant Program and other initiatives, we are asking that they take a more appropriate degree of fiscal responsibility to protect themselves.

The original intent of Federal disaster assistance is to supplement State and local response efforts. Many are concerned that Federal disaster assistance may have evolved into both an oversized entitlement program and a disincentive to effective State and local risk management. Expectations of when the Federal Government should be involved and the degree of involvement may have ballooned beyond what is an appropriate level. We must restore the predominant role of State and local response to most disasters. Federal assistance needs to supplement, not supplant, State and local efforts.

Having Federal assistance supplement, not supplant State and local efforts is, most likely, going to be one of the more difficult measures aimed at responsibility and accountability that this Administration will have to work through.

FEMA is looking at ways to develop meaningful and objective criteria for disaster declarations that can be applied consistently. These criteria will not preclude the President's discretion but will help States better understand when they can reasonably turn to the Federal government for assistance and when it would be more appropriate for the State to handle the disaster itself.

Developing disaster criteria is not a new initiative and there is a wide range of options. FEMA staff has been working on some possibilities and we have been discussing some preliminary ideas with the States. Just this past week, I met with several National Emergency Management Association members to discuss the disaster declaration criteria issue. All are in agreement that something needs to be done to take the guesswork out of the declaration process. The hard part is going to be the solution.

This is an effort that will require a strong partnership among the State leadership, the Congress, and the Administration to make it happen. I will be spending a lot of time with the State emergency management directors, the Governors, members of Congress, and others to work on disaster declaration criteria.

This Administration wants to make a real attempt to budget for disasters up front rather than using "emergency" supplemental appropriations. The Disaster Relief Fund request of $1.4 billion and the establishment of a National Emergency Reserve of $5.6 billion, for FEMA and other Departments and Agencies to tap into when needed, represent a request based on realistic averages for disaster expenditures. We consider these steps necessary to lead to responsibility, accountability, and stewardship of tax dollars.

We can do this through the new Disaster Mitigation Act 2000 and through the new disaster declaration criteria. And, we want to make this a State and local initiative. FEMA should not be the cheerleaders and the event planners. We should instead be providing the tools to make the communities strong self-starters.

I also look forward to working with the Federal Insurance Administration, the single national source of flood insurance. We will design policies to effectively balance the insurance and mitigation risk management strategies by creating incentives for the purchase of flood insurance and reducing the costs of flood-related disasters. This Administration is proposing that flood insurance coverage at subsidized premium rates for vacation homes, rental properties, and other non-primary residences and businesses be phased out. I understand it has been the practice of charging many of these policyholders less than actuarial rates. This practice undermines financial stability of the program. We will also work to address the problem of "repetitive loss" properties that are a disproportionate burden on this important program.

I intend to place special emphasis on enhancing the capabilities of the U.S. Fire Administration, which I believe has a new opportunity to make a real difference in the firefighting community. Firefighters lay their life on the line regularly. They have been advocating prevention and mitigating hazards long before FEMA was in existence. That is why President Bush and I fought hard to continue the FIRE grant program in this budget. Firefighters and first responders are critical to the public safety of our communities and we must support them.

We will pay special attention to volunteers and non-governmental organizations responding to disasters. Disasters hit hardest in communities and neighborhoods, and our solutions to disaster problems rely on local solutions. Faith-based groups at the community level, like the Salvation Army and the Mennonite Disaster Service, play critical roles in disaster relief, as does the American Red Cross. The power of neighbors helping neighbors should never be underestimated. These people make a vital difference without any expectation of thanks or recognition. Our Community and Family Preparedness, and Emergency Preparedness Information programs focus on building effective self-help, self-reliance capability targeted to all members of a community.

On a recent visit to Hoisington, Kansas, to view the effects of a tornado that ripped through the center of the commercial and residential heart of that small prairie town, I viewed firsthand the role of voluntary and faith-based organizations. The Baptist Church mobile feeding kitchen was preparing hot meals for displaced disaster victims. The Salvation Army had leased a warehouse for donations and was providing feeding vans for workers helping to clear away the debris. The Adventist Disaster Services had organized volunteers from around the region to help with arduous clean-up tasks. The American Red Cross was providing vouchers for emergency lodging, clothing and other essentials. I learned later that other groups, such as the Lutheran Disaster Services and the United Methodist Committee on Relief, had mobilized to begin doing case-work to identify and help with un-met needs. Faith-based and voluntary groups such as these, drawing heavily from people who live and work in the affected communities, bring out the best of our society. These folks play critical roles in disaster relief at the community level.

President Bush's compassionate conservatism is a hallmark of his core philosophy. The President is promoting faith-based organizations as a way to achieve compassionate conservatism. Not only does FEMA work with the faith-based organizations that I mentioned, but FEMA's Emergency Food and Shelter Program is the original faith-based initiative and is a perfect fit with President Bush's new approach to helping the poor, homeless and disadvantaged. Through this program, FEMA works with organizations that are based in the communities where people need help the most.

I would like to address the events of the past two weeks regarding FEMA's role in Federal consequence management efforts. As you know, the President has directed me to establish the Office of National Preparedness at FEMA, which will serve as the focal point for the coordination and implementation of preparedness, training, exercise and consequence management programs for dealing with the threat of weapons of mass destruction.

This Office will work with other Departments and Agencies to coordinate Federal programs and assistance in support of an integrated local, State and Federal preparedness and consequence management response capability. This Office will also work closely with the States and local governments to ensure their input into those programs and activities as it seeks to improve the quality of Federal support for State and local emergency management personnel and our first responders.

I am committed to working closely with Attorney General John Ashcroft to ensure that the Department of Justice's lead Federal role for crisis management programs and FEMA's lead Federal role for consequence management efforts are seamless and thoroughly integrated. The role of coordinator and facilitator is not new to FEMA. FEMA has developed its reputation as the Federal coordinator of assistance to State and local governments and individuals in times of disaster. As the President's Director for emergency management, I am also aware of the expectations of our citizens that their government protect their lives and property when an emergency or disaster occurs, whether it is a hurricane, earthquake, flood, tornado, or as the result of an act of terrorism.

As we implement criteria empowering State and local governments to assume greater responsibility for people and property, we need to equip them to do this. Developing State and local capabilities can only be accomplished through effective training. Training must be a cornerstone of our goal of increasing responsibility and accountability.

In the same way FEMA is harnessing new technologies to revamp the response and recovery operations and to expedite disaster claims processing, we need to maximize and multiply delivery of quality training to our State and local customers. We will accomplish this through e-learning, distance education, video teleconferencing and computer simulations.

We must utilize the technologies that allow sharing of knowledge and resources among various communities and states. FEMA can be the leader in helping experts in the field assist each other instead of immediately turning to the Federal Government for assistance.

We will take great care to foster and support the professional, experienced workforce at FEMA. This Administration wants to make sure the internal infrastructure of FEMA is retrofitted and prepared to excel well into the next century. We intend to focus on new, innovative ways to promote professional development opportunities and training. It is of critical national importance for us to continue recruiting top-notch people while finding ways to retain the talented and experienced emergency managers who coordinate our nation's disaster program. FEMA has many dedicated, long-term employees, who perform their duties day-in and day-out, steadily and competently. They are truly the "Cal Ripkens" of the Federal Government who get the job done when it matters.

Today, FEMA is being called a model of government success due to the hard work and dedication of the career employees. With all of its success, however, FEMA is not free from problems. I have a respectful appreciation for the role of the Inspector General at FEMA and am pleased to report that I have established a very good working relationship with the Office. In testimony delivered on March 15, 2001, Mr. Richard Skinner, Deputy Inspector General, outlined a number of areas that FEMA needs to focus on improving. I am committed to tightening the internal controls and improving the Agency's processes to ensure responsibility and accountability at all levels within FEMA. In order to do so, adequate funding and resources are required. Without the resources requested in this budget, we will be unable to start the many improvements recommended by the Inspector General.

In addition to ensuring the internal controls and processes are improved, I plan to realign some functions within the Agency in order to fine tune the organization.

As President Bush said in his February address to the Joint Session of Congress, "Our new governing vision says government should be active, but limited; engaged, but not overbearing." We think you will see that the budget proposal for FEMA truly reflects the President's goal of restoring a proper balance—moving away from the expectation that the Federal Government is the option of first resort to the option of last resort.

My team at FEMA wants to meet these goals and design and implement sound public policy. But we need your assistance to meet these goals without undermining public health and safety. We want to make certain FEMA continues to be a shining example of good government. We will carry out our mission responsibly and, will be accountable to the members of this committee, the Congress, and the American people.

I appreciate the support you have provided to this Agency. My appreciation comes from the understanding that each year you are faced with tough choices.

With your support, I will make FEMA an even more responsible and accountable national resource in preparing for and responding to all types of disasters, and an agency that will continue to be an international model for disaster mitigation, preparedness, response and recovery.

Thank you for the opportunity to appear before this Subcommittee. I am happy to answer any questions that you may have.

Senator BOND. Thank you very much, Joe.

I think we would certainly agree with you, number one, on the need to get out of D.C. and go visit firsthand the areas with which you are dealing and to listen to the people we serve. That is, I think, absolutely essential for effective service.

Second, regarding your kind words about Carrie Apostolou, she has been an invaluable aide to this subcommittee, and we wish her well as she assists other subcommittees. But it is a significant loss for us.

I am going to defer my first round of questions and ask Senator Domenici if he would like to take the first round since he was kind enough to pass on the opening remarks.

CERRO GRANDE FIRE

Senator DOMENICI. Thank you, Mr. Chairman. I first want to say that I do have before me a Cerro Grande booklet. It has been put together by people in the area who have given of their time and by Los Alamos National Laboratory. It has scenes like this one. There are some that are even worse. It was at the peak of this fire which destroyed 400 residences when many of these photographs were made, and we are going to make sure you get one so you will have a constant reminder of how it was.

Mr. ALLBAUGH. Thank you, sir.

Senator DOMENICI. Obviously, you have done a wonderful job in helping us streamline this operation.

Mr. Chairman and ranking member, I think you know we took a chance in terms of this disaster as to how we were going to pay for the damages and who was going to manage the losses. We decided that since the fire was started by the Interior Department, that we should not let them manage the aftermath. I guess some people had strange feelings that might not sit right. So, you all and many others agreed to put in the emergency law which was drawn for this fire alone and to give to FEMA the sole responsibility for managing the money, handling the literally thousands of claims.

I must tell you it was not easy to get that started. It was obviously in a state of disrepair for quite some time, but I do think we can say today that it is being managed very well. There are many claims yet to be handled, but we appreciate your management directions to those running that operation.

Now I want to ask about the $150 million in the original presidential budget concepts that were going to be rescinded from the Cerro Grande fire claims fund. I understand that when the administration and you found out about the large remaining needs to solve these claims, that money was put back and it is in the base of the President's budget now that is before us. Is that correct?

Mr. ALLBAUGH. That is my understanding, sir.

EMERGENCY RESERVE IN 2002

Senator DOMENICI. Senator, Mr. Chairman, and ranking member, I wanted to note, as a matter information—I think your staff probably knows this but when we put this year's budget together with your assistance, Mr. Chairman, we did not give the President and OMB their request that there be a $5.6 billion fund set up for disasters during this year. Rather, we said we are going to handle them the old-fashioned way, which means as they come up, we will have to fund them. That permitted us to spend that money on other programs. I think there is over $700 million in this budget of yours that comes within that purview that you will not have to charge against your allocation.

Senator BOND. Mr. Chairman, is it your understanding that for emergencies such as FEMA, that we can handle those as an emergency subject to the President's declaration of an emergency?

Senator DOMENICI. That is correct.

Senator BOND. He can choose not to sign it, but if he signs it, then it is not scored against our budget allocation.

Senator DOMENICI. I think the fair way to say it is that——

Senator MIKULSKI. It is an important point.

Senator DOMENICI. It is a very important point. It is $5.6 billion that will be available for the rest of the budget. This was one of the reasons we got an agreement. Let us just put it in simple terms. Current law will govern how we fund and pay for fires. There will not be a new regulation, a new budget manner. It will be handled the way we always did. There will be emergencies and they will not be counted against your allocation, as I understand it.

Senator MIKULSKI. Seeking further clarification from a brother appropriator and, of course, the chairman of the Budget Committee, you used the term "fires."

Senator DOMENICI. Oh, excuse me.

Senator MIKULSKI. But you really meant disasters. Am I correct?

Senator DOMENICI. Wherever I used "fires," fire was on my mind, but it is disasters.

Senator BOND. We do floods.

Senator DOMENICI. You do floods, yes, indeed. You do tornadoes, earthquakes, all of them.

Senator MIKULSKI. In the President's budget, there was an average that was placed in the budget based on a 5-year historic average of disasters. Last year we got a breather. It was a bit lower and there was some carryover money. And then the President was calling for a reserve fund, which is not in the budget.

But what you are saying is let us not worry about it. Essentially we would use the money that we currently have, but should there be a series of things, then the chairman of the Budget Committee would agree that these would be funded as emergencies because Senator Bond and I both endured paying for emergencies that came from other parts of VA–HUD, and quite frankly, we are going to be stretched this year.

Senator DOMENICI. I think what we ought to do, so that there is no misunderstanding, because there are a number of subcommittees that fund disasters, not just this one, I think maybe we will get a letter and clear it with Chairman Stevens and give it to the subcommittees as to what does not count against their allocation. And this is a very big one. In this particular one, there is $700 million already that seems to us to be not allocable. You will not be bound by that in your allocation because it is a disaster already declared, a reserve fund for a disaster.

Senator BOND. Mr. Chairman, we very much appreciate that clarification. As you have so generously noted, in recent years, the budget allocation for HUD has been used as a reservoir to fund disasters, and this has left the budget of this committee, as it relates to HUD, in difficult shape. But I understand we will still need to appropriate the funding subject to the emergency designation, and we thank you very much for that clarification.

TELEREGISTRATION

Senator DOMENICI. Just four or five quick ones. You have a program that you call Tele-registration. That is for people with small claims. Your system would allow the claimants to register their claims over the phone, allowing more customer service representatives to handle claimants with larger claims. That is your goal and objective. Is that going to be carried out?

Mr. ALLBAUGH. That is correct. That is in operation as we speak.

Senator DOMENICI. Is it working somewhat?

Mr. ALLBAUGH. It is working fabulously. We have an 800 number where individuals call. They receive a live operator on the other end, they give all the pertinent information over the phone and their claim is processed right after that phone call is completed.

PROJECT RECOVERY

Senator DOMENICI. I understand there is also a help network referred to as Project Recovery. My understanding is that FEMA established that with Stafford Act funds after the fire in Los Alamos. This is useful because it provides anonymous counseling to many victims. Are you committed to continuing that beneficial service that we are aware of?

Mr. ALLBAUGH. Absolutely. Oftentimes the scars from any type of disaster are not those that are physical or at the scene of the loss. They are emotional. They are traumatic. And it is important that we provide counseling for those individuals who have suffered.

PERSONAL PROPERTY CLAIMS FROM CERRO GRANDE

Senator DOMENICI. With reference to that series of claims which make you get involved in all method and manner of evaluating property claims, they are having difficulty in some instances with their personal property claims. That would mean the inventory of what was in their dresser drawers, what kind of jewelry they owned, and all that went up in flames.

Mr. ALLBAUGH. Right.

Senator DOMENICI. Are you going to continue to help them fill these out and to extend time, if necessary, which is one of your current statements to the Los Alamos——

Mr. ALLBAUGH. Absolutely. I think we have even instituted a process just recently where there is a certain amount of self-certification, if you are speaking specifically about the Cerro Grande claims.

Senator DOMENICI. Yes.

Mr. ALLBAUGH. There is a self-certification to help expedite this process, and that has been in place for 4 months. We have processed 11,000 claims. I would tell you that in the last 35 to 45 days, we received over 6,300 claims on this point.

Senator MIKULSKI. Who processes those claims? Is it the Red Cross or who at the local——

Mr. ALLBAUGH. No, ma'am. Right now, with regard to Cerro Grande, FEMA processes those claims.

Senator MIKULSKI. But in any other disaster, who processes those?

Mr. ALLBAUGH. Initially, there are other individuals who are involved. Ultimately, if the President declares a particular event a presidential disaster, we take over that responsibility.

Senator DOMENICI. I am going to hold the rest of my questions.

Actually for the first time in the history of FEMA in the Cerro Grande legislation, which was sui generis—it was just for it—we did say that they would process the claims. They would be the people that would pay the claims, as I indicated, because the option was to give it to Interior, and that did not seem right to many people. They probably would have done a good job.

But I wanted the committee to know that given this onerous job, they are handling it in a very good way, especially since his arrival on the scene, and I want to thank him for that and thank the committee.

Senator MIKULSKI. Mr. Chairman, I think there are a lot of lessons learned from the terrible experience in New Mexico. As we move forward on some of our continued reforms, we are going to learn a lot from what happened in that very horrific situation.

Senator DOMENICI. I reserve any time for a second round, Mr. Chairman.

Senator BOND. Senator Mikulski.

OFFICE OF NATIONAL PREPAREDNESS

Senator MIKULSKI. Thank you very much, Mr. Chairman, and to the other chairman. It really answered one of the areas of questions that I wanted to direct to Mr. Allbaugh, which was how would we pay for disasters because it is not even predictable. But I think we have now got clarification particularly on this scoring as an emergency upon presidential declaration.

Before I go to our regular activity, I would like to discuss the new responsibility that President Bush has asked of you, Mr.

Allbaugh. As I understand, in the President's statement he has directed you to do a review and to establish something called the Office of National Preparedness at FEMA. What I would like to know is what did the President ask you to do? When will it be done regarding this, again, as a work in progress, as we discussed last week? And is the Office of National Domestic Preparedness being moved from the FBI to you?

Mr. ALLBAUGH. This is a new office at FEMA the President asked me to establish. I am taking over our proposal for its creation to the White House this afternoon to make sure that we have their input. This office will, first and foremost, find out what the lay of the land is in this area of terrorism and weapons of mass destruction. As has been noted in other committee hearings, there are somewhere between 40 and 50 agencies that are involved in this arena. I asked for a grid as to what agencies were involved and what they were doing, and to my knowledge that grid and matrix has never been produced.

Senator MIKULSKI. I know we had it at our hearings.

Mr. ALLBAUGH. First and foremost, this office will find out exactly what the picture is currently of this world of terrorism and weapons of mass destruction with regard to what the Federal Government is doing. I think that over the last several years we have spent in excess of $12 billion and we still do not have a national preparedness plan.

Senator MIKULSKI. Are you doing the review of—as I understand it, number one, President Bush is not changing PD–39, which says FBI does crisis management, FEMA does consequence management.

Mr. ALLBAUGH. That is correct. PD–39 will still be in existence.

REVIEW OF CONSEQUENCE MANAGEMENT

Senator MIKULSKI. And are you undertaking a review of both crisis management and consequence management, or the 46 different agencies involved in consequence management.

Mr. ALLBAUGH. My focus will be the 40 or so agencies in consequence management first and foremost.

Senator MIKULSKI. I see.

When do you expect the review to be done?

Mr. ALLBAUGH. I do not exactly know when. This is going to require the Vice President's request oversight, and he has willingly agreed, at the President's to oversee this process. I am hoping that over the next several months—and I would hate to tie anyone's hands inappropriately—that we should have something to talk about by early fall or the middle of the fall. That is kind of my own personal time frame.

Senator MIKULSKI. Well, first of all, I just want to say this. Number one, I really pledge my support to work with the President, the Vice President, Dick Cheney, and you on this because those 3 days of hearings last week really show that our consequence management and even aspects of crisis management is often quite disjointed and that there are several issues to be addressed.

President Clinton, through former Attorney General Reno, did establish something called the National Domestic Preparedness Office, and it was to look exactly at those agencies that you talked about. And it was over at Justice. It was Defense and HHS and the National Guard and first responders, and it was to assist State and local emergency responders. That is why I asked is this moving from the FBI to you.

Mr. ALLBAUGH. I think it is premature to make that decision. I know that is a subject that the President, Vice President, and I have discussed. I think we need to complete this review first before any decisions like that are undertaken.

Senator MIKULSKI. I understand that. I think that the intention in mission established at Justice was excellent, an open, interdisciplinary, interagency forum to coordinate all this. They also had a State and local advisory board, which was also good.

I would just ask you to review this, see what is the best place to do it. I do not prejudge it either. I believe that you are an extraordinarily competent person, and I believe the President has been clear on what he wants. In this matter, what President Bush wants, so does Barb Mikulski. We look forward to hearing this. I think, Mr. Chairman, when we get to the fall or even ongoing, we can talk about what we need to do in this area.

Mr. ALLBAUGH. Thank you, ma'am.

COST SHARE OF HAZARD MITIGATION

Senator MIKULSKI. In terms of hazard mitigation, this then goes to the whole issue of changing the Federal share from 75 to 50 percent, actually doubling the cost of State and local governments. Also, I note in your testimony bringing Project Impact into hazard mitigation. Am I correct in that?

Mr. ALLBAUGH. That is correct.

Senator MIKULSKI. Now, could you tell us what would be the consequence of this on State and local governments? And the whole point of disaster mitigation was to really encourage them to look ahead, plan, and be prepared. We took FEMA from often an inept response agency and focused on recovery, at which they were not very good, to readiness, response, recovery, and of course, prevention early on. What would be the consequence of this? Do you think we are going to undo the gains for preparedness by this change?

Mr. ALLBAUGH. Well, I certainly hope not, and I do have some concerns in this area of moving the share from 75/25 to 50/50. I am not sure that that is fair to the States, quite frankly, and it is something that I want to look closely at. I have some deep concerns about it. I think ultimately we need to be designing, overall disaster criteria so all the States know exactly what we are faced with regardless of whether it is a small disaster, a medium disaster, or hopefully not a catastrophic disaster, but at the same time couple some pre-mitigation efforts that States are doing right now, maybe rewarding those States for taking those efforts and initiatives. We have started this process internally, which at some point I hope to share with members of the committee. We need to have a comprehensive plan to look at the entire mitigation area. In my world, I would prefer not to have 15 different programs—excuse me?

Senator MIKULSKI. Well, I agree with you. First of all, I would hope in any formula change, knowing of your previous life experience, that there will be really rigorous consultation with the National Governors Association——

Mr. ALLBAUGH. Absolutely.

PROJECT IMPACT

Senator MIKULSKI [continuing]. And with the National Association of Counties, which would be crucial.

And then second, Project Impact was meant to be prevention, it was not meant to be a new form of pork in Maryland. When we looked at what we needed to do to stop disasters in western Maryland, the Speaker of the House and also the Army Corps of Engineers did a review for us so that when we moved, we could see what the State needed to do and what the Feds needed to do. Perhaps that type of prevention should come through their State plan when they are applying to you.

Mr. ALLBAUGH. I could not agree with you more.

Senator MIKULSKI. This is not about pork. This is about prevention.

Mr. ALLBAUGH. I could not agree with you more. I think oftentimes we possibly have left out those local communities, the State emergency managers who ought to have a say in implementing these programs particularly when it comes to mitigation efforts. They need to be seated at the table figuring out the right game plan for that particular State.

Senator MIKULSKI. Well, my time is up. I will come back. The chairman has been waiting.

SELF-CERTIFICATION FOR CERRO GRANDE CLAIMS

Senator BOND. Thank you very much, Senator Mikulski.

Just to follow up on a discussion you were having previously, you were talking about self-certification. We know the importance of moving forward. Self-certification speeds up the process, but I am concerned that there be standards, processes, or post-audits to make sure that fraud and abuse does not creep into the system. We assume that 95 percent of the people are honest. Is there a system set up to catch the 1 or 2 percent?

Mr. ALLBAUGH. Absolutely, sir. This is not just walk in the door, make something up, and jot it down on a newspaper. There has to be follow-up after the fact.

Senator BOND. Do you do that? Are you doing the follow-up?

Mr. ALLBAUGH. We have not started that yet, sir. We have a couple of people who have, unfortunately, been found out through their misdeeds, and I think prosecuted to the fullest extent of the law.

Senator BOND. There is criminal prosecution for deliberate fraud.

Mr. ALLBAUGH. Absolutely. There are 22 cases pending in New Mexico right now, if I remember correctly.

COORDINATION OF MITIGATION PROGRAMS

Senator BOND. I think a couple of good prosecutions may be the healthiest antidote or actually preventive medicine for that in the future and not just remedying the past.

Let me turn now to the hazard mitigation grant program because you have touched on it. This is so important. Funds are made available under the disaster relief fund through section 406 for mitigation, and FEMA has been provided funds in the past for buy-outs. But I am concerned whether there is adequate coordination among these programs and other FEMA programs.

Can you outline for us what steps you intend to take to assure better coordination of the mitigation activities or what kind of overhaul you might make generally of the mitigation program in FEMA?

Mr. ALLBAUGH. Well, first and foremost, I think we are in the process of a systematic review internally of what programs exist in the mitigation arena. With regard to Project Impact, one particular pet peeve that I have, which may be not fair, but it seems to me that that particular program—right now there are 250 communities that participate out of roughly 25,000 nationwide. I think whatever program we devise needs to be encouraging for all communities to participate when it comes to pre-disaster mitigation as opposed to meeting some very strict and confining criteria.

So, I think it is first and foremost incumbent upon the agency to review programs internally. My goal is to devise a program that is easily understood by everyone and applicable to everyone. I have a basic theorem in life: what is fair for one is fair for all. We should not devise programs that may be operable in one State and not operable in another State. I think we can do this review in short order, sir.

NATIONAL MITIGATION PLAN

Senator BOND. As you may recall, former FEMA Director James Lee Witt was a big supporter of buy-outs of properties in the flood plain, and we had I think some very successful examples in Missouri. But unfortunately, despite some massive dollars provided by Congress for the buy-outs, FEMA still does not seem to me to have a coordinated, cohesive buy-out program with clear rules and procedures.

I would like to know your view of the role of Federal buy-outs in terms of the national mitigation plan. What should the role of States be in the national mitigation plan in terms of decision making and what I believe must go along with it, funding responsibilities?

Mr. ALLBAUGH. Well, my opinion is that we probably ought to be almost equal partners in that process. If there is not common agreement on any mitigation plan, then it will not be effectively carried out. It is my goal, as a part of reviewing all the mitigation efforts, that we more clearly define in short order what the national plan should be. I would like to share that with you at my next opportunity.

UNSPENT HAZARD MITIGATION DOLLARS

Senator BOND. We will be interested to find that out.

Under the hazard mitigation program, the FEMA Inspector General has found some significant problems and reported it appears that grants are being awarded, but a significant number of the projects are not being completed. As of last fall, 57 percent, or $1.2 billion, of HMGP dollars, remain obligated but unspent.

Can you tell us why this is happening and does it suggest that maybe the States or somebody does not have the plans in place to spend the dollars effectively? What can you do about it?

Mr. ALLBAUGH. I have asked that same question, sir. When I showed up, I noticed that in some cases some of these grants have been on the books for 3, 4, and 5 years. I have asked for everyone to take a close look at that. In fact, we have already shaved back some programs with respect to the amount of time that is available to communities to take advantage of these grants. I think 5 years is too much. I think possibly 4 years is too much. Three years might be a good average. I am not sure. I think it requires us to sit down with those communities to find out what is a reasonable time period. We just have too much money that we are carrying on the books.

HAZARD MITIGATION GRANTS AS A DISCRETIONARY PROGRAM

Senator BOND. Director Allbaugh, generally I am a big fan of block grants and not having a lot of Federal strings attached to funds that we send out to State and local governments. But I am a little concerned the hazard mitigation program works almost like an entitlement program and funds are automatically made available as a set percentage of total disaster cost.

Last year, during consideration of the Stafford Act amendments, I suggested the possibility of turning HMGP into a competitive grant program to make funds available up front for pre-disaster mitigation activities, most addressing national priorities to those States and communities that are really doing all they can. I would be interested in your thoughts on converting the hazard mitigation program into a discretionary program so the money does not automatically fall into the laps of somebody who has had a disaster, but goes to those places where they are willing, able, and ready to take on the significant obligations.

Mr. ALLBAUGH. I would like to take a look at that, Senator. What I worry most about, quite honestly, is that sometimes we have the proclivity of not addressing items that should be addressed until after an event takes place. Oftentimes, once an event takes place, that gets everyone's attention in the community or that county or State's, and I would hate to throw that particular part of the program out the door because it may be the one incentive to bring those folks to the table to do something.

I will cite you a specific example, sir. As you all know, we have been talking about Davenport most recently. The city council has before it now an issue to go forward with not only their own engineering study, but to go back and revisit a Corps of Engineers study that was done in the early 1980's. They probably would not have been thinking about that, quite frankly, until this water started rising on the Mississippi.

So, I would like to take a look at what you are suggesting. I do not know enough to really have a firm idea at this point.

Senator BOND. Well, I can tell you that it is not my normal procedure to suggest moving away from block grants, but I am delighted to hear that Davenport is really focused in on it. Certainly they would rank highly on a competitive grant program. But apparently there are some communities in some States that just do not get it and are not able to move forward. So, we look forward to discussing it with you.

Now, Senator Johnson, thank you for your patience.

MITIGATION

Senator JOHNSON. Thank you, Mr. Chairman. I will just very briefly move along, building on the questions that you and Senator Mikulski have asked relative to mitigation, which is an area of some concern of mine. I appreciate that Mr. Allbaugh has talked about moving on to the next level relative to mitigation efforts.

But it does concern me if we are going to eliminate Project Impact, rather than developing better and more thorough-going criteria, to address the pork issue that Senator Mikulski raised, if we are going to do that and at the same time double the local costs on mitigation programs. I just am concerned whether the funding is going to be there to move to that next level, or if in fact we are going to see a retreat on the part of communities and their ability to prepare for serious problems of the future, which in the long term then cost us still more.

So, on the one hand, we do not want this to become an irresponsible use of the taxpayers' money. I think that you are absolutely right that what we are doing now is just barely scratching the surface of the numbers of communities that really ought to be involved in an aggressive mitigation strategy. But on the other hand, it is hard to do something with nothing. I worry about the overall level of funding available in your tool box to come up with a broader, more aggressive strategy.

Mr. ALLBAUGH. You have put the finger on my major concern about moving from 75/25 to 50/50. We have to be partners with State and local communities. I do not want to be in a position of penalizing those communities for something that they would like to do. I just met recently, as I alluded in my remarks, with the board members of NEMA who are very concerned about this funding shift. It is a concern to me. I am not so sure that I am there, quite frankly, but I would like to study it further without getting myself in too much more hot water.

Senator JOHNSON. I appreciate your observations, and I would share again the comments of my colleagues that I would hope that on these mitigation issues, that you would work in close communication with the Governors and the mayors and the counties, the local government officials who oftentimes are dealing with very thin budgets themselves and yet are on the front line of trying to think ahead prior to disasters. And sometimes at the local level, that is very difficult to do. You have got all kinds of urgent crises of one kind or another going on, and we need to do more, I think, to encourage them to be fixing the roof before it rains.

Mr. ALLBAUGH. Absolutely.

Senator JOHNSON. So, thank you again, Mr. Allbaugh.

Mr. ALLBAUGH. Thank you, Senator.

Senator JOHNSON. I yield back.

Senator BOND. Thank you very much, Senator Johnson.

We have just had a vote called. Senator Mikulski and I are going to try to play tag team and keep this going as best we can. Now we turn to Senator Domenici for his questions.

CONSEQUENCE MANAGEMENT

Senator DOMENICI. Thank you very much, Mr. Chairman.

Mr. Director, let me say that many of us have been part of the establishment of the first responder system in the country. You know, the big one is 120 American cities. There are only 16 that remain to be done under the first responder preparation.

I think while we are sitting here today saying it is good that the President moved the terrorism function to you, I think you should know that there will be some opposition to that up here because the Department of Justice has a lot already going on and then the FBI has been in charge of crisis management. You are going to be in charge of the crisis consequences I think.

But when will we have a description of how you are going to do this and when? Is this the one that the Vice President is going to supervise?

Mr. ALLBAUGH. Yes, sir. As far as the structure of the office, you will have that very soon. Insofar as the overall plan, which incorporates the involvement of the President and Vice President, I think that is several months down the road.

Senator DOMENICI. I wanted to suggest to you that with reference to terrorism, that there is a great deal of information, scientific and otherwise, that has been accumulated by the two national laboratories, Sandia and Los Alamos—and Livermore, the three that do nuclear weaponry --with reference to many of the facts that surround what can happen, what detection processes, chemical analysis processes. They have a lot of that going on, and I hope that you make note of it as you put your process together because right now I do not think there is a direct line from anyone. But they are just supplying the information. I think when you get into it, you will find it is a very valuable asset.

Mr. ALLBAUGH. I appreciate your pointing that out.

CLAIMS AND SETTLEMENTS FOR CERRO GRANDE

Senator DOMENICI. I am going to ask for the record, at your earliest convenience, you supply this subcommittee with the current facts regarding claims, settlements, and the like of the fire at Los Alamos.

Mr. ALLBAUGH. I will be happy to do that.

Senator DOMENICI. Bring us current and also give us your best assessment of how many remain, how many that you know about that are filed and not yet settled, and somebody has an estimate of those who still have not filed. If you would give us a summary.

I think we took a chance in saying let you run this, and I think my good friend, the chairman, was kind of worried about day-to-day management by FEMA, and we want to make sure that we were right and that those things you have worried about are not going to come to fruition at Los Alamos. Will you do that for us?

Mr. ALLBAUGH. We will do that. You will have it before the week is out.

Senator DOMENICI. Thank you.

FEMA'S EVER EXPANDING ASSIGNMENTS

Senator BOND. Thank you, Mr. Chairman. I a budgeteer at heart, and I just hate to see things that are spent without control. I am trying to reflect the discipline that you have——

Senator DOMENICI. What is not wasted is there under our system to use for better programs that are not getting funded.

Senator BOND. Thank you very much, Senator Domenici.

Director Allbaugh, I have been concerned over the years about mission creep at FEMA. For example, a few years ago, the former Director was named to head up a task force on the District of Columbia snow removal problems. I mean, snow does happen in the District of Columbia. In my view that is not an unexpected emergency. Last year for the first time, FEMA declared a public health emergency in two States and awarded funds for prevention of West Nile virus. Now, I understand FEMA has been asked to coordinate plans in the event foot and mouth disease enters into the United States.

I have some concerns about why FEMA should be involved in such problems which have little to do with FEMA's principal role of natural disaster preparation and response for activities which would seem to be more logically in the purview of the Department of Health and Human Services or U.S. Department of Agriculture, even for those activities which are truly above and beyond the capacity of State and locals to respond. I know if you have a big snowfall, everybody would like to have the Federal Government come in and plow the snow.

But are you taking a look at the scope of FEMA with respect to these new activities?

Mr. ALLBAUGH. I am concerned about mission creep as you are. I believe that we should do what we are charged with doing and do it well. FEMA has a great reputation and it is because it is a can-do agency. The reservists, the 2,600 or so employees, all the volunteers have worked hard to earn that reputation. They deserve that reputation. At the same time, we suffer from the success of that reputation; if you want something done and you want it done right, you give it to FEMA. I am hoping that mission creep will slow to a crawl, quite frankly.

With regard to the foot and mouth disease and the West Nile virus, we have been asked to participate in those responses primarily because we are one of the agencies that has the closest, most active relationships with the first responders, the local responders, the State and local emergency managers. These are relationships that have grown over the years and because of those relationships, some other agencies are not as fortunate as we. They have invited us, particularly Agriculture with regard to foot and mouth disease, to participate in a task force. Agriculture still has the lead with regard to foot and mouth and we are there as a resource.

With regard to snowfall, I think the Stafford Act limits us to participating in snowfalls that are the record snowfalls. So, it is not every snowfall that we are involved in now, even though over the last several months, it seems as if that is the case.

But your point about mission creep is well taken.

WEST NILE VIRUS

Senator BOND. With respect to the West Nile virus, what about the Centers for Disease Control? Who is going to handle that? What is the administration's policy? I mentioned plagues in my opening comments, but who is going to handle those kinds of things? Is that FEMA's job or somebody else?

Mr. ALLBAUGH. I know we are in discussions with HHS and CDC right now insofar as who will ultimately take the lead. We believe there are defined lines of authority and responsibility, and unless there is an absolute need for FEMA's participation, I would suggest that those responsibilities lie with those two agencies.

STATE AND LOCAL PREPAREDNESS FOR DISASTERS

Senator BOND. When you were in Davenport recently, you raised the issue of the need for communities to take the steps necessary to protect themselves against the risks they face rather than relying on American taxpayer time, and again for natural disasters which can be reasonably anticipated.

What specifically do you intend to do to improve State and local government accountability for disaster preparedness and mitigation?

Mr. ALLBAUGH. FEMA has a great relationship with the State emergency managers, with regard to pre-disaster mitigation and mitigation as a whole. It is my desire, quite frankly, to meet more often with those individual managers who are responsible for that implementation, making sure that they are a full partner in this effort.

Davenport is a community that has taken several steps over the past several years in the area of buy-outs. That is one of the reasons their damage is less this time around than it was in previous years, 1997 or even 1993, and I commend Davenport for having taken those steps. Many communities up and down the Mississippi have done exactly the same thing. What I worry about are not the communities so much that have taken those steps, but more so those communities that have not taken the steps to prevent future disasters.

MEASUREMENT OF STATE AND LOCAL CAPABILITIES

Senator BOND. That actually leads into my second question. The Inspector General said one of the top challenges facing FEMA is developing a method of assessing State and local capability and developing a reliable basis to implement risk based funding in the allocations to the State. FEMA instituted a process called Capability Assessment for Readiness. The IG seemed to suggest it is basically a self-assessment by States, and according to the IG, there is apathy at both the State and local level because of concerns that responses to the assessment may have an impact on funding.

Do you think that FEMA needs to improve its measurement of State and local capabilities? And if you have plans to do so, do you believe that the State funding for pre-disaster preparedness activities, $135 million this year, should better align with risk?

Mr. ALLBAUGH. We have a great relationship with the Inspector General, and I appreciate their comments. I happen to believe that we have a pretty good system for making assessments right now.

My feeling is that this is more in the area of determining the benefits of pre-disaster mitigation; we need some ability to measure those benefits. We could do a better job in that arena. That seems to be a nebulous area that almost relies upon seeing it with the naked eye as opposed to any concrete, tangible evidence that is proven.

Senator BOND. We need to work on that.

Mr. ALLBAUGH. We do need to work on that.

Senator BOND. Mr. Director, if you will excuse me, we are going to call a temporary recessed. The hearing will resume at the call of the chair when we have a chair, and we trust that members of the committee will be returning shortly. But I have to go vote. The hearing is temporarily recess.

[A brief recess was taken.]

Senator MIKULSKI [presiding]. I know I saw Senator Bond dashing for the vote as well.

Mr. Allbaugh, let me pick up on the Project Impact issue for just a moment. Project Impact was my idea, but it is not my pet rock. So, know that I am wedded to the outcome, which is prevention.

STATE PLANS FOR DISASTER PREVENTION IN MARYLAND

Mr. ALLBAUGH. I agree.

Senator MIKULSKI. Prevention of disaster, the consequences to families, the consequences to taxpayers we want to prevent.

So, therefore, we are looking at other models to accomplish our policy objectives. In my mind, where there are repetitive situations that exacerbate the consequence, that some are just in flood plains, beach plains, a variety of things. So, we look forward to that.

I just want to share with you a Maryland model, if I could, just for your observation. We were hit pretty badly by floods and ice storms a couple of years ago with terrible consequences to the community. There was one whole street along the Potomac River where we had four automobile dealerships under water. You understand what I am talking about.

We did have the response of FEMA. It was excellent, but Governor Glendening and I put our heads together and said how could we avoid this again. And that is when we created something called the Western Maryland Task Force, and it was co-chaired by the head of the Baltimore Corps of Engineers, as well as the Speaker of the House of the Maryland General Assembly who lived in western Maryland. The Corps told us what the problems were, using flood maps and all the things that Corps of Engineers have at their disposal.

Then we did an inventory of what the Feds should do, also what the local government should do, and also the private sector because there was a bridge that would fill up on the Potomac with debris and it acted like a dam which caused the flooding.

So, you see when we went to FEMA for this new program that I essentially created, we were on solid ground because we had had solid engineering and community participation. It was not to get a couple of bucks to buy out something we wanted to do anyway.

The reason I say this is that is why I go to State plans for disaster mitigation. Also, when we look at the cost sharing, and the concept of authentic in-kind contributions, I am not talking about desks and phones that they would have anywhere. But, for example, if you ask a railroad to help pay for the cost of improving a bridge that is functioning as a dam, those are expenditures that should count in my mind. The Governor says, we are going to take care of XYZ because the engineers say, if we do our share along the Potomac with certain kinds of levees, it will help. In other words, where the State is already going to put its own money in, that should also count.

So, I am just offering that as a model and then also the consequences to that.

Then the other was, we do not want this to be like Superfund sites that go on forever, and we do not solve the problem. We eat the money up. I do not know where the cleanup sometimes is.

So, I just lay that out for you as we ponder this and analyze it because we are about to embark upon a very serious, new Federal policy. To date, we have been doing it piecemeal and I would acknowledge that—Project Impact here, et cetera. So, I am looking forward to further conversations on this and hope that we could do a rigorous analysis of Project Impact, what worked well and what did not.

Do you have any comments on that?

Mr. ALLBAUGH. Yes, I do. Your model may be something that we need to look closely at. I am a firm believer of periodically analyzing all programs, figuring out what works and what does not work, and getting rid of the part that does not work or making sure it evolves into something that does work. We are about to do that in the entire mitigation arena. If we do not have our act together, there is no way that we can go to a State to promote the pre-disaster mitigation. Again, I feel that those individuals at the State level, and even at the local level, have to become our partners, and 9 times out of 10, they view that the same way.

Senator MIKULSKI. They say all politics is local, but all disasters are local.

FLOOD MAPPING

Mr. ALLBAUGH. Sure.

Senator MIKULSKI. So, I am not looking for cookie cutter approaches. Ours was a model. I do not say it should be the only model because I think one of the places where you and I will actually agree, because it is where I have such a great relationship with my colleague, is we are not government people. We are local people. We are problem solvers. So, we do not believe that one size fits all, or one plan will fit all. So, we will look for your good management skills.

Where are we on the flood mapping, though? That is an important tool for a lot of things that you want to do.

Mr. ALLBAUGH. This is the never-ending story.

Senator MIKULSKI. There are a lot of things you want to do, including the flood insurance, et cetera. Could we talk about flood mapping and how we can get it done?

Mr. ALLBAUGH. Well, it is a matter of money. I believe the figure is somewhere around $1.1 billion. We make a little money over a 7-year program. We make a little money from policyholder fees and off of sales of the maps, but not much. So, basically you reduce the unfunded cost by $750 million or $800 million over 7 years. Once you start that process, by the time you end that 7 years down the road, those current maps are already outdated.

There are some communities who have taken it upon themselves, because of growth pressures, construction, and development, to update their own flood maps.

Senator MIKULSKI. Which could count as their in-kind contribution.

Mr. ALLBAUGH. Absolutely. I think we ought to take a close look at——

Senator MIKULSKI. In other words, give help to those who practice self-help.

Mr. ALLBAUGH. I am sorry?

Senator MIKULSKI. Let us give credit to those who practice self-help.

Mr. ALLBAUGH. Absolutely. I am not sure how many communities we are talking about, but we ought to take a look at those communities that have taken that initiative and see if those maps meet our criteria and then adopt those maps. But this is, as I said earlier, the never-ending story. And it is so important because it drives development, it drives pre-disaster mitigation, it drives overall mitigation and planning for these communities.

Senator MIKULSKI. Well, I do not know why it should cost $1 billion, but I am not disputing that. But I do know this that there are new technologies that are developing called geographic remote sensing, in which we can map our own planet, and there are now technological ways, new ways of simulation. I am not sure of all the technology, but I have seen some of the demonstrations tied in with NASA and even the private sector. I wonder if maybe there needs to be an assessment of how we can do flood mapping using some of the new technologies that would both reduce the cost and the time.

Mr. ALLBAUGH. I am open to that. I ask that same question almost daily. I think some folks are getting tired of me asking that question. I am assured that we are as technologically current as we possibly can be. But it never does hurt to review an ongoing program and we will do that.

Senator MIKULSKI. Again, I do not want to over-dwell on this, but——

Mr. ALLBAUGH. Another vote.

Senator MIKULSKI. I think it is a quorum, or it is the Office of National Preparedness at the FBI doing a drill while you are testifying.

I am going to leave it there, but I do know NASA had a program called Landsat where it took pictures year after year after year after year. One of the things Senator Bond and I are so hot on is we love data, but we do not like data mortuaries. Again, I offer perhaps a suggestion to talk to Dan Goldin to see what is it that we have already.

Mr. ALLBAUGH. I agree with that.

REPETITIVE LOSS PROPERTIES

Senator MIKULSKI. Again, we have been collecting lots of data through civilian means. We are talking civilian data.

Let us go to the flood insurance. I know you are talking about phasing out the insurance coverage for repetitive loss properties. It sounds reasonable, but I am concerned about unintended negative consequences and also the grandfathering or grandmothering in where there have already been properties built, longstanding, et cetera, even whole communities.

Mr. ALLBAUGH. I would agree with that.

Senator MIKULSKI. Particularly along those coastal areas.

Mr. ALLBAUGH. Yes, ma'am. This is an area we need to take a close look at. I know there is a proposal to reduce flood insurance to one additional claim and then you are out if you do not relocate. There is a part of that that causes me a little heartburn. I know there are several bills in both houses right now, some of which really appeal to me insofar as a way to address this situation.

Senator MIKULSKI. Well, will you be able to alter the program without an authorization and do it through a budget appropriations process?

Mr. ALLBAUGH. I am not sure of the answer to that question, ma'am.

Senator MIKULSKI. I would strongly recommend that the authorizing committees be involved. This is a significant change, and the Stafford Act has given us enormous responsibility. But I do believe committees of jurisdiction would get prickly if we did anything new and dramatic without an authorization. The very process of an authorization enables congressional review hearings, et cetera. So, before we make changes in repetitive loss, I really think the authorizing committees need to be involved in some way.

Mr. ALLBAUGH. Interestingly enough, when I started asking questions about repetitive loss, I learned that essentially what we are talking about is 10,000 properties nationwide that are the problematic properties year in and year out. I really thought that was a smaller amount than I had anticipated, to tell the truth.

Senator MIKULSKI. Here is what I envision. People are not going to be happy about any changes we would do.

Mr. ALLBAUGH. Of course.

Senator MIKULSKI. And we get to where we have to move our bill, and then they are going to come running to us and say, how can you do this without an authorization? We are going to have such a complex bill this year, and I do not think we are going to have the appropriations that even a tight wad like Senator Bond will like. So, I think we really need to understand both the policy and the politics of this.

I have just one last area. First of all, just a comment. The emergency food and shelter program is a terrific one.

Mr. ALLBAUGH. Yes, ma'am.

SUPPORT FOR FIRE PROGRAMS

Senator MIKULSKI. And God bless all those groups that do it. It is another area where FEMA gets high marks.

The second is the fire prevention and training. In your testimony, you talk about a new involvement of the Fire Administration. Could you elaborate on that and what resources you think you would need?

Mr. ALLBAUGH. Well, first, thanks for recognizing that very important program. I think it has been in existence since 1983, if I am correct, providing emergency food, shelter, clothing. It is probably the original faith-based program in the Federal Government, if you think about it for a minute.

Second, to answer your question directly about the Fire Administration. I have, for a long time, been an admirer of those men and women out there who put their lives on the line day in and day out. I am not so sure that I could do what they do. They not only fight fires, they respond to automobile accidents. They protect our infrastructure. I think it is important that we properly train and equip with the latest technology those individuals who are protecting our country. They are the ones, along with the men and women in blue, who will respond to the 911 phone calls when there is a disaster, regardless of where it is. We can never say thank you enough for what they do.

In exchange for what we ask of them day in and day out, I think we ought to fully support them to the best of our ability, and I think the Fire Administration will have no finer friend than myself during the coming years. It is important to highlight what they do. It is important to educate the American public that they do a lot more than fight fires, and it is important that we support them to the best of our ability.

FIRE GRANT PROGRAM

Senator MIKULSKI. Well, Mr. Chairman, I know we want to return to your questions.

I know there was a blue ribbon panel, commissioned by James Lee Witt, for people involved in the fire first responder community to give candid assessments of both the Fire Administration, as well as the Fire Academy in my home State in Emmitsburg. I would commend you to look at these. Again, I am not wedded to the recommendations, but that we really see where we are going.

On the fire grant program, I know that this is a new program, and my strong hope is that we could have a very clear agreement between the House and the Senate that these be competitive grants based on criteria you are developing. I hope this does not become an earmarked program because I think if we go down that road, it will be terrible. In other words, have very clear criteria, competitive grants, et cetera because if we get into earmarking in this Congress who gets what fire truck, I do not think the Nation's needs will be served.

Mr. ALLBAUGH. I understand.

Senator MIKULSKI. We all have to kind of shake hands. We are in it.

Senator BOND [presiding]. I wholeheartedly concur with my ranking member.

Now, let me finish up with just a couple of quick questions as the newly designated tight wad in the appropriations process.

Senator MIKULSKI. Tight fisted.

Mr. ALLBAUGH. Mr. Chairman, if I may before Senator Mikulski leaves, I would just like to make sure she knows that I am not wearing Guccis. These are Naconas. There is a big difference.

Senator MIKULSKI. Are you talking about those boots?

Mr. ALLBAUGH. Yes, ma'am. [Laughter.]

Senator MIKULSKI. My idea of Gucci boots is what Senator Kay Bailey wore to the inaugural ball. We are still teasing her about that.

FLOOD INSURANCE PROGRAM

Senator BOND. Or Jack Oliver.

In any event, Mr. Director, I am very much concerned about the abysmal performance of the flood insurance program. There are some inherent disconnects. It encourages construction in high risk flood plains in coastal areas, and I understand that 2 percent of the properties in the program account for about one-third of the program's claims over the lifetime of the program. I think that FEMA's management of this program has been a failure. It viewed its role primarily as a marketing agent, but according to GAO testimony, which we will be submitting today for the record and we will obviously make available to you, if you have not seen it, FEMA does not even have data on participation rates, the percentage of structures in flood prone areas that are insured.

Senator BOND. How are we going to overhaul the program? How can FEMA implement the GAO recommendations to collect data on participation rates in order to gauge the success of the program? Where do you see us going on this thing?

Mr. ALLBAUGH. Actually, Mr. Chairman, I am not really equipped to answer that question very well. This is day 90 for me. What I would like to do is study the GAO report, study our recommendations internally, and report back to you.

Senator BOND. I would appreciate a well-considered answer for the record because I think this is vitally important.

Mr. ALLBAUGH. I appreciate that.

Senator BOND. We are going down the wrong road. Something is not working, and I think we owe the taxpayers better.

On counter-terrorism, I know that we have had some discussions about this, and the members of the committee are very much interested. In past hearings, I discussed with your predecessor the confusion of the roles and responsibility. We are very pleased that the President has now focused on this, and it is gratifying there is significant attention to this.

After 3 days of hearings last week, I do not want you to recreate those, but I would like a 90-second summary of what the task force is and what the mandate is and whether there will be funding requirements that we need to address in this appropriations cycle.

Mr. ALLBAUGH. For the balance of this fiscal year, sir, I believe we have enough fudge room to absorb the office getting up and running.

Senator BOND. Just be honest. Do not let it out of this room. If you know what you need, it might be easier to get for this year than for next year.

Mr. ALLBAUGH. Well, that is interesting. I will take $25 million.

Senator BOND. Okay. Document it, designate it, prorate it, applicate it, justify it, and get it approved by OMB, and we will take a look at it.

Mr. ALLBAUGH. Well, I think we can do that in short order.

Senator BOND. Seriously, we will work with you on it.

Mr. ALLBAUGH. Actually that is what I was going to suggest for 2002, but upon the chairman's suggestion, we will make a run at it for this year.

Senator BOND. Okay. It is called budgeting out of the hip pocket. But we will move forward.

A 90-second view of where are you doing, what are you going to do with this? You are like the dog that caught the Volkswagen. We caught it. We have been chasing it. This committee has been chasing it for years. We caught it. What are we going to do with it?

Mr. ALLBAUGH. Well, our forte is coordination and facilitation. That is what FEMA does best. I am going to take a proposal this afternoon of what the office will look like, what its requirements will be, how we are going to draw upon other agencies for that information to provide to the Vice President, and he will craft in short order a calendar. During that time, we will review all the various programs from all the Federal agencies that are involved in terrorism and weapons of mass destruction. Then at some point in the future, I hope early to mid-fall, we will present to the President a plan insofar as how the national strategy should look, should work in the future for our country.

Senator BOND. Thank you, sir. Obviously, we will look forward to working with you on that and all the other challenging issues before you. If you have further information on the report that you are going to make on the flood insurance program after reviewing the GAO report, we will hold the record open.

SUBCOMMITTEE RECESS

There being no further business to come before the subcommittee today, the hearing is recessed.

[Whereupon, at 11:57 a.m., Wednesday, May 16, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, JUNE 6, 2001

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:07 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Barbara A. Mikulski (chairman) presiding.

Present: Senators Mikulski, Johnson, Bond, and Domenici.

NATIONAL SCIENCE FOUNDATION

STATEMENTS OF:

DR. RITA R. COLWELL, DIRECTOR

DR. CHRISTINE C. BOESZ, INSPECTOR GENERAL

DR. EAMON M. KELLY, CHAIRMAN, NATIONAL SCIENCE BOARD

ACCOMPANIED BY ROBERT EISENSTEIN, ASSISTANT DIRECTOR FOR MATHEMATICAL AND PHYSICAL SCIENCES

OPENING STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. The VA, HUD Subcommittee will now come to order. This committee convenes the hearing on the appropriations for the National Science Foundation.

Before I welcome our witnesses, I would like to say a few words about this auspicious moment. I would like to say to my colleague, Senator Bond, that I assume this chairmanship in the spirit of bipartisanship that has always characterized this subcommittee. Senator Bond has a well established reputation for being a leader and being effective in the U.S. Senate and also in his chairmanship of this committee, he has always operated under a spirit of bipartisanship, courtesy, and collegiality. That is why this subcommittee has been a very successful subcommittee in doing the Nation's business. Our staffs have worked well together.

I really say here today that in assuming the chairmanship, we are going to keep the spirit and the operations of the committee. Again, working on a bipartisan basis, Senator Bond and I will have a very clear and, I believe, agreed-upon schedule.

First of all, in the area of veterans health care, on this day that commemorates the landing at Normandy, we continue to pledge our support to make sure that promises made will be promises kept to America's veterans.

In the area of housing, we have a bipartisan agenda that focuses on empowerment. We believe that public housing programs should not be a way of life, but a way to a better life, and we intend to pursue that course.

On the environment, I will work to fund programs to ensure clean air, clean water, and of course, the ongoing effect of cleaning up the Chesapeake Bay.

In the area of science and technology, we have really again focused on a bipartisan basis. Senator Bond and I believe that science is about ideas, not about ideology. We have supported our space program where we have taken it to the stars and seen untold discoveries.

And in the area of the National Science Foundation, on which we are holding today's hearing, we have an agreed-upon plan in which we want to double the National Science Foundation budget over the next 5 years. We believe that science is about new ideas that lead to new products, that lead to new jobs.

So, it is in that spirit of keeping America forward, working together to create a better future in this new century that I open this hearing today and welcome Dr. Rita Colwell. Dr. Colwell, we welcome you as the very able Director of the National Science Foundation; Dr. Kelly, the Chairman of the National Science Board; and also the National Science Foundation's very able Inspector General, Dr. Christine Boesz.

It is fitting today the hearing should be on the National Science Foundation. This is an agency which we support wholeheartedly increasing its budget. Dr. Colwell, you are in the third year at the National Science Foundation as the Director. You come from a distinguished academic career, leading the biotech initiatives in the University of Maryland. So, you bring sound science, remarkable scholarship, and yet a spirit of entrepreneurship.

So, we are interested in hearing what your thoughts are on the appropriations because we believe the NSF funds research and education in the critical fields of basic science and engineering. Because of the National Science Foundation research, we now have MRI's that are so widely used to detect disease and provide early detection. The NSF played a vital role in getting the Internet where it is today, and we are also now on the cutting edge views in biotechnology, nanotechnology, which offers whole new breakthroughs. Yet, I know that each year the National Science Foundation receives 30,000 proposals for great new ideas to be pursued and yet we can fund 9,000 of them at our academic centers of excellence.

Before I go on with my statement, however, and we turn to you, I would like to turn to my distinguished and most esteemed colleague, Senator Bond, and thank him for his long-term interest in science and for the really outstanding way he chaired this committee. I look forward to working with him in that spirit.

STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Thank you very much, Madam Chair. I welcome you and congratulate you and say that the spirit of bipartisanship, cooperation, and collegiality of this committee, which you described, was a spirit that you instilled before I got here. Being smart enough to look around and find out what works, I followed the Mikulski path, and it has worked extremely well. Now we have Senator Mikulski as chair, leading us back along the Mikulski path. I would say that we have probably had the best working relationship of any ranking member and chair, and I am extremely pleased to be here.

Now, I have been fat and I have been thin. I have been in the majority, and I have been in the minority. I would rather be thin and in the majority.

Senator MIKULSKI. So would I, Senator.

Senator BOND. But I have neither one. So, we are moving on.

I am pleased to be able to play the hand I have been dealt with because Senator Mikulski has laid out, I think extremely well, the list of priorities on which we have agreed.

I welcome Senator Johnson to the committee.

We know that when we get this steamroller going, it is on the basis of bipartisan cooperation, thoroughly working out how to resolve the many very important and difficult issues we have to face whether it be assuring adequate veterans' health care, or making sure that housing programs work. And I have always said that one of my highest priorities is cleaning up the Chesapeake Bay.

I am so happy that we are going to continue to work on that priority. Madam Chair, I have some comments about NSF. Do you want to make your comments about the NSF?

Senator MIKULSKI. Well, Senator Bond, I think it is clear that we truly have bonded. I just wanted to say in terms of the actual NSF, this whole issue of doubling is something not only that you and I agree upon, but it is really something that Dr. Harold Varmus, the Nobel Prize winner, the former head of NIH, has called for, as well as Dr. Bromley, the advisor to President George Bush in another era. Even Alan Greenspan has warned that if we do not maintain strong investment in university based research, this country could fall behind.

We are concerned, however, in this particular appropriation that the overall R&D in the NSF proposal is being reduced. We want to pursue this conversation. I am concerned that the administration has recommended cutting R&D at the NSF, and we need to really be able to take a look at that.

I support the government-wide increase in nanotechnology, but at the same time, I am concerned that we could lose our cutting edge in information technology. We need to be focusing on the R&D budget and what we can really do to move this forward.

I want to hear from the director about the new partnership for math and science. I want to hear about, if we work to double the funding of the National Science Foundation, what you would recommend that it be spent on, how we can not only be able to do the research, but how do we create the farm team for the next generation of science?

I believe the farm team for science is like the farm team in baseball. Being an Orioles fan and supporter, I know it starts with the little leagues, and those little leagues are K through 12 where you develop a passion for the game, a passion for discovery, a passion for engaging in the world around you.

So, we want to hear about those initiatives and then how can we support the people at the undergraduate level and the graduate level and at the same time make sure that those young people in our own country, though we welcome others who wish to come here to learn, really have the opportunity to pursue doctorates and at the same time be able to have opportunities for this stunning new research.

If there had not been the National Science Foundation of 50 years ago, I do not believe we would have the infotech and the new economy for the new century. So, we are looking ahead on how to create the farm team for the scientists for the next generation, as well as where we can pursue this. We need to be stewards of the taxpayers' funds. Yet, at the same time, we need to be investors in America's future.

Senator Bond.

Senator BOND. Thank you very much, Madam Chair. I am with you all the way, except I am a Royals fan and always will be a Royals fan. I wish your Orioles well.

I want to second what the chair has said about doubling the NSF budget. We are committed. We believe the scientific community understands the importance of a significant increase in the amount of funding we put into basic research. Doctors in Missouri and throughout the country have told me about the importance of it, and Harold Varmus has said, "Scientists can wage an effective war on disease only if we, as a Nation and as a scientific community, harness the energies of many disciplines, not just biology and medicine." Simply put, that means for NIH to do its job, NSF has to be adequately funded.

I am excited about many, many of the things that NSF does. I am going to ask my full statement be submitted as part of the record, but I do want to focus just a moment on biotechnology, specifically, the plant genome research which is critical in maintaining the long-term sustainability and competitiveness of our Nation's agricultural interests, improving the human condition, and improving the environment by limiting the amount of chemical pesticides that we have to use.

A good example of the benefits of biotechnology is a recent vaccine created through a genetically engineered potato. Scientists from Cornell University and the University of Maryland School of Medicine in Baltimore reported the success of this plant-based virus that would provide humans with immunity from the pervasive Norwalk virus, the leading cause of food-borne illness in the United States and much of the developed world.

I am saddened that hysteria and fear, instead of reason, often seem to be the driving forces behind the discussion about biotechnology and the benefits it brings. We need to publicize those benefits. We also need to have the scientists who are willing to stand up and speak out when people make unfounded criticisms and charges against the technology. I appreciate the efforts of the Office of Science and Technology Policy and NSF in educating the public about biotechnology, but clearly more needs to be done.

Senator Mikulski and I look forward to working with the administration to increase funding for NSF and keep us on a path of doubling the NSF budget by 2005. But I must say that while auditors have not identified any significant financial or management problems with NSF and congratulate it on its clean opinion, I just want to make sure that NSF is not taking on more responsibilities, especially when its staffing resources have remained flat over the past years, than it can handle.

I have no criticisms about the NSF or its management about the "Major Research Equipment" account or other management issues that have drawn my attention. I believe that the problems that have been raised can be resolved with the constructive assistance from the Inspector General and the guidance and wisdom of the National Science Board. But I do think that we ought to take swift and vigorous action because, as we ramp up what I hope will be an escalating curve upward of funding, we want to make sure that everything is in place.

One final point concerns me. I am still not convinced we are providing enough support for smaller research institutions. The smaller schools and their students, I am afraid, are not being caught up, and I am disappointed the administration did not request funding for the Office of Innovation Partnerships, which is an important priority of mine.

A recent report by NAPA on the merit review process found that NSF was supposed to add a new element to broaden the participation of under-represented groups. NAPA said it is too soon to make valid judgments about the impact, but it found that NSF lacked the quantitative measurements and performance indicators to track the new criteria. The NAPA report suggests there is validity to some of the criticisms that NSF's merit review process is too much confined to the "good old boys," the "haves," in the business who have been successful, and as a result, the "have nots" or the "want to haves," many of whom come from States that are represented on this subcommittee, are not adequately represented. We look forward to continuing constructive discussion on that issue.

Senator MIKULSKI.Well, without objection, Senator, your full statement will be in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR CHRISTOPHER S. BOND

Thank you, Chairperson Mikulski. These are strange times but I look forward to continuing our good relationship in meeting the needs of the Nation and especially, in the area of science and technology, a priority that we both share deeply. I also want to welcome Drs. Colwell, Kelly, and Boesz to the hearing today.

Unfortunately, since there is no Science Advisor in place, the White House Office of Science and Technology Policy is not here to testify. However, I am very pleased that the White House recently selected Floyd Kvamme to be co-chair of the President's Council of Advisors on Science and Technology. Floyd brings a lot of experience and expertise on science and tech issues and will be a valuable resource to the Administration and this Committee.

Before I get into some specific issues, I want to highlight the importance of supporting NSF. NSF plays an important and unique role in stimulating core disciplines of science, mathematics, and engineering and according to many economists, over the past half century, advances in science and engineering have stimulated at least half of the Nation's economic growth.

That is why my good friend and colleague Senator Mikulski and I have led the effort to double NSF's budget and have received such wide bi-partisan support. I think we can all agree that investing in research and development is positive and critical for the economic and intellectual growth and well-being of our Nation.

Support for NSF is also vital to the research being conducted in the biomedical field. I have heard from doctors throughout Missouri and the country who are alarmed by the disparity in Federal funding between the National Institutes of Health and the physical sciences that NSF mainly supports. Many medical advances could not have occurred without NSF-supported research. Medical technologies such as magnetic resonance imaging, ultrasound, digital mammography and genomic mapping could not have occurred, and cannot now improve to the next level of proficiency, without underlying knowledge from NSF-supported work in biology, physics, chemistry, mathematics, engineering, and computer sciences. Thus, the biomedical work that NIH currently supports will be hampered without the underpinning research supported by NSF. But don't just take it from me, take it from the medical experts. In the words of former NIH Director Harold Varmus, "Scientists can wage an effective war on disease only if we—as a nation and as a scientific community—harness the energies of many disciplines, not just biology and medicine." Simply put: supporting NSF supports NIH.

I have also spoken to many experts in the high-tech industry who have voiced their concern about the federal government's support of the physical sciences. According to the American Association of Engineering Societies, the number of bachelor degrees in engineering has declined by almost 20 percent since 1986 while the overall number of bachelor degrees have increased by 18.3 percent!!! This decline has put our Nation's capabilities for scientific innovation at risk and, equally important, at risk of falling behind other industrial nations. In the past decade, growth in the number of Asian and European students earning degrees in the natural sciences and engineering has gone up on average by four percent per year. During the same time, the rate for U.S. students declined on average by nearly one percent each year.

Thus, it is no surprise that many in the high-tech industry struggle to find qualified engineers and scientists and have become more reliant on foreign nationals to fill their positions. Further, it has limited the growth potential of the high-tech industries and allowed foreign competitors to catch up to US industry. I hope that people take this as a serious wake up call and recognize that our future economic health and competitiveness are at stake if we do not provide more support to NSF and other federal agencies that support the physical sciences.

I am excited by the many research areas that NSF supports but my biggest interest is plant biotechnology. I strongly believe that biotechnology and namely, plant genome research is critical in maintaining the long-term sustainability and competitiveness of our Nation's agriculture industries. Plant genome research also has exciting possibilities for improving human health and nutrition and can be a very powerful tool of addressing hunger in many third world developing countries. I have already seen first-hand some of the promises of plant biotechnology in Southeast Asia and am encouraged by its future applications.

A good example of the benefits of biotechnology is a recent vaccine created through a genetically engineered potato. Scientists from Cornell University and the University of Maryland School of Medicine in Baltimore reported the success of this plant-based vaccine that would provide humans with immunity from the pervasive Norwalk virus—the leading cause of food-borne illness in the U.S. and much of the developed world.

It is sad though that hysteria and fear instead of reason often seem to be driving the discussion around biotechnology and the benefits of biotechnology such as the potato example I just cited are not being publicized adequately. We cannot afford to have the experts sit in their ivory towers. I appreciate the recent efforts of the Office of Science and Technology Policy and NSF in educating the public about biotechnology but clearly, more needs to be done.

In terms of the budget, the Administration has requested $4.47 billion for fiscal year 2002, an increase of $56 million or 1.3 percent over the fiscal year 2001 enacted level of $4.416 billion. It is my hope and desire that we can work with the Administration to increase funding for NSF and keep us on the path of doubling NSF's budget by 2005. This is a priority of both myself and Senator Mikulski.

Notwithstanding our budgetary issues, I continue to have questions about the Foundation's management capabilities, especially as its budget grows and it continues to handle a number of new complex program responsibilities. While auditors have not identified any significant financial or management problems with NSF, I am concerned about NSF taking on more responsibilities especially when its staffing resources have remained flat over the past several years.

I congratulate NSF and its leadership for receiving a clean opinion on its financial statements audit for the third year in a row. The auditors also did not find any significant internal control deficiencies for the first time in NSF's history. Nevertheless, there is always room for improvement and, as the auditors found recently, NSF expended funds from its Research and Related Activities appropriations account to fund shortfalls in its Major Research Equipment appropriations account for the Gemini Telescope Project.

Let me be clear: I am not here to criticize NSF or its management about the MRE account issue or other management issues that have drawn my attention. Again, in context of the overall performance of the Foundation, these are not major problems and I believe that we can resolve these problems with constructive assistance from the Inspector General and the National Science Board. But, I do want to stress today that it is critical that swift and vigorous actions are taken by the agency to prevent these problems from occurring again. This includes ensuring that an adequate corrective action plan is developed and implemented.

The last point I would like to raise is the Foundation's failure to provide adequate support for smaller research institutions. As I have said over and over again, the federal government must be an active supporter to help level the playing field and ensure that these smaller schools and their students are not left behind. I am disappointed in the Administration for not requesting any funds for the Office of Innovation Partnerships, which is an important initiative to me.

I am also concerned about a recent report issued this past February by the National Academy of Public Administration on the Foundation's merit review process. NSF changed its merit review criteria in 1997, which added a new element on broadening the participation of underrepresented groups including minorities and smaller research institutions. While NAPA stated that it was too soon to make valid judgments about the impact and effectiveness of the new merit review criteria, it found that NSF lacked quantitative measures and performance indicators to track the new merit review criteria. In other words, NSF cannot determine whether the merit review process is addressing the need to broaden the participation of underrepresented groups. This report, instead, appears to validate the impression that NSF's merit review process is a "good old boys" network. I hope that this is not the case and NSF can assure us that the process is open and fair to all groups, large or small. I hope that Dr. Colwell and Dr. Kelly will help me in addressing this issue.

Senator MIKULSKI. Senator Johnson.

STATEMENT OF SENATOR TIM JOHNSON

Senator JOHNSON. Well, thank you, Chairwoman Mikulski. With consent, I will submit a full statement, but I do want to just quickly make a couple observations.

First of all, of course, I congratulate Senator Mikulski on assuming the leadership of this important subcommittee, and also I commend Senator Bond, whose leadership on this subcommittee has been extraordinary, not only substantively in terms of their work in that regard, but also with the tone that they have adopted for this subcommittee. It really has been a bipartisan effort, and I think that is something to be commended.

I want to welcome Dr. Rita Colwell and Dr. Tina Boesz and Dr. Eamon Kelly to the subcommittee today.

I am proud and pleased to have been a cosponsor of the Bond-Mikulski amendment to double funding for the NSF over 5 years. I have also been an enthusiastic supporter of increases at the National Institutes of Health, and I applaud the progress we have made there. However, it seems to me that we have not matched that effort with the same kind of commitment on the other side of our science agenda in the United States. I am hopeful that we can, in fact, do some serious catch-up with the NSF over the coming years.

I say that as an individual who actually secured a graduate degree at the University of South Dakota with an NSF grant many years ago.

In the State of South Dakota, looking at things from our narrower perspective, the NSF is most known for two things. One, of course, is its EPSCoR program which has been a very key component of our efforts to promote research at our smaller institutions. And second and more recently has been the Underground Laboratory Committee of the NSF selecting Homestake Mine in Lead, South Dakota, as the premier site for a national underground laboratory with a focus on neutrino research, in particular.

Senator Daschle and I have a great concern about this. The Homestake Mine is in the process of terminating the mining at that site, leaving an 8,000-foot shaft, and with plans to fill the shaft with water if no continued maintenance or alternative uses are found. So, this is fortuitous timing that the NSF would determine that this is a premier site for neutrino research. It is my hope that we can work with the NSF to, in fact, utilize the world's most extraordinary site for underground science and accomplish that in the course of this coming year.

PREPARED STATEMENT

So, with that, Madam Chairman, I appreciate again the leadership that you and Senator Bond have both provided for the subcommittee. I look forward to working with you.

[The statement follows:]

PREPARED STATEMENT OF SENATOR TIM JOHNSON

Chairwoman Mikulski, Ranking Member Bond, and other members of the subcommittee, I want to thank Dr. Rita Colwell, Director of the National Science Foundation, Dr. Tina Boesz, Inspector General, National Science Foundation, and Dr. Eamon Kelly, Chairman, National Science Board for appearing today to testify on the Budget of the National Science Foundation (NSF).

As you know, I was a proud supporter of the Bond-Mikulski amendment which would double funding for the NSF over the next five years. Without continued excellence in scientific research, the United States most certainly will not be able to compete in the ever changing, technology driven world market.

The NSF continues to play a major role in South Dakota in countless ways. NSF EPSCoR seeks to identify, develop, and utilize the state's academic science and technology resources in order to increase university research capabilities, provide student research experiences and support selected science and technology development. EPSCoR contributes to the educational experience for students, helps faculty develop and maintain expertise in their fields, builds research expertise in my state, and often supports economic development efforts.

EPSCoR is improving our nation's science and technology capability by funding merit-reviewed research activities of talented researchers at universities and nonprofit organizations in 18 states and Puerto Rico. EPSCoR helps researchers, institutions, and states improve their research capabilities and quality in order to compete more effectively for non-EPSCoR research funds. Because of intensive state involvement and the significant leveraging of non-federal funds, EPSCoR is considered a model federal/state partnership.

Additionally, the Homestake mine in Lead, South Dakota has been selected as the premier site for a National underground laboratory. Over a year ago, NSF established an Underground Laboratory Committee to evaluate the potential of various North American sites to address the need for specialized research.

However, I am concerned that the Homestake Company intends on leaving on December 31, 2001. If left unattended, the mine will naturally be effected by the elements, and will assuredly fill with water if there is no continued maintenance. We should take responsibility to provide resources to preserve and protect the integrity of the mine so it can be used as a national research laboratory. I want to work with NSF and my colleagues in Congress to ensure that this opportunity is not lost.

The unique nature of the preexisting construction of the mine is an advantage to tax payers. However, this advantage also places the mine on a strict timeline. I would encourage the NSF to develop an interim plan to maintain the integrity while specific comprehensive details of the project are developed.

Additionally, the NSF should recognize the existing skilled workforce operating at the mine, and they would be costly and difficult to replace. Any effort to retain services locally would be an added benefit to the tax payers.

I look forward to receiving the testimony of our witnesses, and especially look forward a productive relationship with the NSF in the future. Thank you Madam Chairman, and members of this committee.

Senator MIKULSKI. Thank you very much, Senator.

Now we turn to Dr. Rita Colwell, the Director of the National Science Foundation, and ask her to proceed. Then I understand after that, Dr. Kelly, you wish to also have a statement. Of course, we have always looked forward to hearing from our Inspector General. Dr. Colwell, why do you not just proceed.

Dr. COLWELL. Madam Chair, Senator Bond, members of the subcommittee, Senator Johnson, it is an honor to be here today as Director of the National Science Foundation, and I welcome this opportunity to discuss the NSF budget request for fiscal year 2002. I deeply appreciate your comments of support. It is much appreciated.

Let me also, just in a quick aside, say that if I look a little pained, it is not because of your questions. I had a minor back injury a few days ago, and it was either come here sedated and comfortable or pained and alert. I decided the latter was the better.

Before I begin my testimony, let me first turn to Dr. Eamon Kelly, Chairman of the National Science Board, for his comments on our budget request. Dr. Kelly.

STATEMENT OF DR. EAMON M. KELLY

Dr. KELLY. Thank you, Dr. Colwell. I came pained and sedated. Madam Chair and members of the subcommittee, I appreciate the opportunity to testify before you. On behalf of the National Science Board, I thank the subcommittee for its commitment to long-term investments in science, engineering, mathematics, and technology. Your support has enabled the scientific community to provide a broad base of research and education activities that have contributed to our Nation's well-being.

The National Science Board has two roles. It serves as the governing board of the National Science Foundation, and by law it advises the President and Congress on national policy issues for science and engineering research and education.

First I would like to comment on the National Science Foundation's fiscal year 2002 budget request, and then in the second role, highlight some critical policy issues affecting the health of the science and engineering enterprise.

The National Science Board has approved and endorses the National Science Foundation's budget request for fiscal year 2002. Adequate funding for the foundation's priority areas will allow the foundation to do what it does best: Nurture the people, ideas, and tools needed to generate new knowledge and new technologies. The National Science Foundation Director, Dr. Rita Colwell, will discuss the specifics of that budget request in her testimony. I commend my colleague for her far-sighted and energetic leadership of the broad scope of activities in the National Science Foundation's portfolio.

As a policy advisory body, the National Science Board is also looking at the broader context for Federal investment in basic research and education. Critical issues that the board has addressed recently in that capacity include research, education, and assessment on the environment, the U.S. role in international science and engineering, the quality of K through 16 education, and the allocation of Federal resources for research.

We have just begun two important new studies: One on the national science and engineering infrastructure, and a second on national workforce policies. The latter study is examining the collection of policies and practices, including immigration and admission to higher education, that affect the composition and adequacy of our science and technology workforce.

After the phenomenal 1990's, the public is increasingly aware that science and technology contribute to economic growth. Americans recognize that innovations improve the quality of life and that the benefits accrue to the entire society not just a few industries or entrepreneurs.

It has been said that future historians will label the 21st century the science and technology century. Clearly we are on the edge of exciting discoveries and radically new technologies in many scientific fields. To turn this potential into reality requires substantial and sustained Federal investment in basic research.

The new knowledge and technologies emerging today are a tribute to Federal research investment made years ago with bipartisan support. When those investments began, no one could foresee their future impact. Revolutionary advances, such as those in information technology, geographic information systems, genetics, and medical technologies, to mention just a few, remind us that although science and engineering require long-term, high-risk investments, they also hold great promise of high payoffs to the economy, the environment, and our national security.

Of our $10 trillion gross domestic product, the Federal Government budgets $23.3 billion for basic research, which represents only two-thousandths of 1 percent of the gross domestic product. The President, the Members of Congress, both the Republican and Democratic Parties, even the media speak out in favor of investing in basic research. The support appears everywhere except in the budget numbers.

Achieving a balanced portfolio investment in the basic sciences is also important. As the former NIH Director, Harold Varmus, and congressional leaders have pointed out, the success of the National Institute of Health's efforts to cure deadly diseases such as cancer depend heavily on the underpinning of basic research supported by the National Science Foundation.

In addition, Federal investment in the basic sciences is critical for the development of the science and engineering workforce on which our society and economy depend. The measure of our success will not be just the research we support, but also the trained and talented workforce we develop. We need to produce more scientists and engineers, certainly. But even future workers who are not directly engaged in scientific endeavors will need to be scientifically literate to perform their tasks. And to be an informed voter will require a basic appreciation for scientific knowledge and method.

Today we are losing many of our best and brightest science students to other fields, and our record of attracting minorities and women to science and engineering is poor.

The level of Federal investment is key to the health of the science and engineering enterprise. But even if Federal investments were to increase substantially, the difficult issue of how to allocate the funds would remain. For the past 2 years, at the request of the Congress and OMB, the Board has grappled with how the Federal Government should set priorities in allocating its approximately $90 billion annual budget for defense and nondefense research and development. That question is critically important, given the growing opportunities for discovery and the inevitable limits on Federal spending.

On May 21 and 22, the Board's Committee on Strategic Science and Engineering Policy Issues hosted a stakeholders' symposium to discuss our preliminary findings and recommendations concerning priority setting. The symposium was highly productive and we are in the process of incorporating the stakeholders' views into our report, which will be provided, of course, to the committee at the appropriate time.

PREPARED STATEMENT

Madam Chair, at this point, I would like to close my formal remarks. I thank the subcommittee for its long-time support of the science community, especially the National Science Foundation, and for allowing me to comment on critical national policy concerns, as well as on the Foundation's budget request. I look forward to future opportunities for discussion of these highly important national issues. Thank you.

[The statement follows:]

PREPARED STATEMENT OF DR. EAMON M. KELLY

Madam Chair and members of the Subcommittee, I appreciate the opportunity to testify before you. I am Eamon Kelly, Chairman of the National Science Board and President Emeritus and Professor in the Payson Center for International Development & Technology Transfer at Tulane University.

On behalf of the National Science Board, I thank the Subcommittee for its commitment to long-term investments in science, engineering, mathematics, and technology. Your support has enabled the scientific community to provide a broad base of research and education activities that have contributed to our Nation's well-being. The public is increasingly aware that science and technology contribute to growth of the economy after the phenomenal 1990s. People seem to recognize that innovations improve the quality of life and that benefits accrue to the entire society, not just to a few industries or entrepreneurs.

The President affirmed the importance of science and technology on March 28, stating that "Science and technology have never been more essential to the defense of the nation and the health of our economy."

In agreement with the President's statement, I would like to comment on the National Science Foundation's fiscal year 2002 budget request and then highlight some critical policy issues affecting the health of the science and engineering enterprise.

THE NATIONAL SCIENCE FOUNDATION'S BUDGET REQUEST

First, in its role as governing board of the Foundation, the National Science Board has approved and supports the National Science Foundation's budget request for fiscal year 2002 and endorses the submission. Adequate funding for the Foundation's priority areas in fiscal year 2002 will allow the National Science Foundation to do what it does best: provide the Nation with the people, ideas, and tools needed to generate new knowledge and new technologies. Dr. Rita Colwell will discuss the specifics of that budget request in her testimony. I commend my colleague for her far-sighted and energetic leadership of the broad scope of activities in the National Science Foundation's portfolio.

THE HEALTH OF THE SCIENCE AND ENGINEERING ENTERPRISE: SOME ISSUES

I also want to touch briefly on the broader context for the National Science Foundation's activities and contributions. In addition to serving as the governing board of the Foundation, the National Science Board, by law, advises the President and Congress on science and engineering policy, and is responsible for assessing and making recommendations on national policy issues for research and education. In that capacity, the National Science Board has recently addressed and made recommendations on some critical issues affecting U.S. science and engineering. These include research, education, and assessment of the environment, the U.S. role in international science and engineering, and the quality of K–16 education.

Recently, we have begun two important new studies: one on the national science and engineering infrastructure; a second on national workforce policies. The latter study is examining the collection of policies and practices, including immigration and higher education, that affect the composition and adequacy of our science and technology workforce.

Now if I might turn from that broad context to a significant policy issue, I'd like to draw your attention to a particular Board effort, that is, the issue of the adequacy of our Nation's investment in science and engineering and the process within the Federal government for allocating resources to research.

(a) Federal Investment in Science and Engineering

It has been said that future historians will label the 21st century the "science and technology century." Clearly we are on the edge of exciting discoveries and radically new technologies in many scientific fields. To turn this potential into reality requires substantial and sustained Federal investment in basic research.

The new knowledge and technologies emerging today are a tribute to Federal research investments made years ago in a spirit of bipartisanship. When those investments began, no one could foresee their future impact. Revolutionary advances in these—fields such as those in information technology, geographic information systems, genetics, and medical technologies such as MRI, ultrasound, and digital mammography, to mention just a few—remind us that although science and engineering require long-term, high-risk investments, they also hold great promise of high payoffs. These payoffs affect all aspects of American life: our economy, the workforce, our educational systems, the environment, and our national security.

Despite the recognition of the widespread benefits that result from Federally supported scientific research, we are seriously under-investing in basic research. Of our $10 trillion Gross Domestic Product, the Federal government budgets $5 billion to basic research and general science, which represents only five-ten thousandths of one percent of the Nation's Gross Domestic Product. The President, members of Congress, and both the Republican and Democratic parties speak in favor of investing in basic research.

Balance among investments in the basic sciences through the National Science Foundation and other agencies is also important. As Congressional leaders have pointed out, the success of the National Institutes of Health's efforts to cure deadly diseases such as cancer depends heavily on the underpinning of basic research supported by the National Science Foundation.

In a speech before the American Association for the Advancement of Science on May 3, Larry Lindsey stated that "the average annual real rate of return on corporate investment in America is about 9 percent." Compare that to a conservative estimate that the return on Federal investment in basic research is about 30 percent.

The recently issued report by the U.S. Commission on National Security for the 21st Century, led by Gary Hart and Warren Rudman, clearly states the importance(and the current condition(of scientific research and education to America's world leadership. I quote:

"Our systems of basic scientific research and education are in serious crisis . . . If we do not invest heavily and wisely in rebuilding these two core strengths, America will be incapable of maintaining its global position long into the 21st century."

As this Committee recognizes, the National Science Foundation is a major contributor both to scientific research and science education. In fact, the Foundation accounts for 54 percent of Federal funding for basic research and general science.

Federal investment in the basic sciences through the Foundation have produced

—New industries, such as E-commerce and biotechnology,

—New medical technologies, such as MRI and genetic mapping,

—New discoveries with great future promise in areas such as nanoscale science, cognitive neuroscience, and biocomplexity.

In addition, the National Science Foundation supports innovative education programs from kindergarten through graduate school, educating the next generation of scientists and engineers and contributing to a more scientifically literate workforce and society.

The link between our education system and the science and technology workforce is critical. Today we are losing many of our best and brightest science students to other fields. The science, mathematics, engineering, and technology education system needs to change, first by recognizing that the measure of success is the quality and quantity of the education people we produce—and not just the number of research papers published. Also, the pool of potential science and engineering students will increasingly reflect the growing diversity in American society. Population trends indicate that by 2010 about two-thirds of students will be female or minority. Our future scientists and engineers must be drawn from this diverse pool.

But science and technology education has a wider responsibility. Even our future workers who are not directly engaged in scientific endeavors will need to be scientifically literate to perform their tasks. And simply to be an informed voter will require a basic appreciation for scientific knowledge and method.

Clearly, there is an important link between Federal investment in basic research and education through the National Science Foundation, the vitality of our K–12 and higher education systems in math and science, the talent available for the workforce, and the achievement of national goals that depend on a strong science and technology enterprise.

(b) Allocation of Federal Resources

But even if Federal investment were to increase substantially, the difficult issue of how to allocate the funds would remain. For the past two years, at the request of national policy makers, the Board has grappled with how the Federal government should set priorities and allocate its approximately $90 billion annual budget for defense and non-defense research and development. That question is critically important, given the growing opportunities for discovery and the inevitable limits on Federal spending.

On May 21 and 22, the Board's Committee on Strategic Science and Engineering Policy Issues, which I chair, hosted a stakeholders' symposium to discuss our findings to date and evaluate potential approaches to Federal budget coordination and priority setting. The symposium was highly productive, and we are in the process of incorporating the stakeholders' views into our analysis and recommendations.

At this stage of our analysis, based on our discussion with Executive branch representatives and Congressional staff, the Board suggests that the Federal budget process in both the Executive branch and the Congress would benefit from instituting a continuing advisory mechanism for considering U.S. research needs and opportunities within the framework of the broad Federal research portfolio.

A possible process would include an evaluation of the current Federal portfolio for research in light of national goals and would draw on systematic, independent expert advice, studies of the costs and benefits of research investments, and analyses of available data. The process would identify areas ready to benefit from greater investment, address long-term needs and opportunities for Federal missions and responsibilities, and ensure world-class fundamental science and engineering capabilities.

In addition to an improved process, a strategy is needed to ensure commitment by departments, agencies, and programs to gather timely, accessible data that could be used to monitor and evaluate Federal investments. The Federal government would need to invest in the research necessary to build the intellectual infrastructure in the higher education sector (1) to analyze substantive effects on the economy and quality of life of Federal support for science and technology and (2) to improve methods for measuring returns on public investments in research.

The appropriate level of Federal investment and the allocation of Federal funds are keystone issues for the science and engineering enterprise. They are also extremely difficult, complex issues for policy makers.

Madam Chair, at this point I would like to close my formal remarks. I thank the Subcommittee for its long-time support of the science community, especially the National Science Foundation, and for allowing me to comment on critical national policy concerns, as well as on the Foundation's budget request. I look forward to future opportunities for discussion of these highly important national issues.

Senator MIKULSKI. Thank you very much, Dr. Kelly, for that very cogent testimony, and we will be coming back for some questions.

Dr. Colwell.

STATEMENT OF DR. RITA R. COLWELL

Dr. COLWELL. Before I turn to the budget, Madam Chair, I would like to commend you and Senator Bond and the members of the subcommittee for your commitment to investing in research and education. It is very clear that without your sustained support and vision, NSF and the Nation would not be enjoying the prosperity that we have today. Every day we see the benefits of these investments and the promise they hold for our future.

A very good example is the Mid-Atlantic Center for Mathematics Teaching and Learning, which is coordinated through the University of Maryland. This consortium of university mathematicians and educators, along with the local K–12 school districts, is making significant strides in addressing the shortage of mathematics teachers in Maryland, Pennsylvania, and Delaware. Moreover, this effort is a model for other NSF centers of learning and teaching across the country.

Similarly, we are now realizing the benefits of collaborations across disciplines, the interdisciplinary research areas. Late last year, an international team of biologists, computer scientists, and many others sequenced a complete plant genome for the first time. Now, this did not generate the same headlines as the human genome project, but its potential impact is just as profound. The major concern for the world's future is how to protect our planet while feeding a growing population and raising the standard of living. These are not mutually exclusive goals. Plant sciences can help us find the solutions that we seek.

These examples reflect the overall NSF investment strategy: Providing the Nation with the people, the tools, the ideas that are needed to fuel innovation and economic growth. And with these opportunities, however, come responsibilities.

Madam Chair, I would like to commend you for inviting Dr. Boesz to testify today. The NSF management has long worked in a close and productive relationship and partnership with the Inspector General to ensure the highest standards of stewardship, accountability, and management.

Turning to the budget, NSF is requesting $4.47 billion. That is $56 million more than last year. This includes an 11 percent increase for education and human resources and some solid increases for management and oversight. The research and related activities account will basically maintain its current level, and support for major research equipment will drop by a fifth with the conclusion of several projects in fiscal year 2001.

In fiscal year 2002, NSF is proud to launch the Math and Science Partnerships. This is part of President Bush's education plan, No Child Left Behind. It is a $200 million initiative. It will join States and local school districts with institutions of higher learning to strengthen K–12 math and science education. These activities, under the competitive awards program, will address some very important areas: Teacher quality, math and science curricula, enrollment in advanced math and science courses, and assessment.

The fiscal year 2002 request will also help to ensure that adequate numbers of U.S. students pursue higher degrees in science and engineering. A survey of recent science and engineering bachelor's recipients finds that more than one-third do not consider graduate studies because of financial reasons. Although enrollment in U.S. science and engineering graduate programs did increase in 1999, after a 5-year decline, the students with temporary visas accounted for the entire upswing.

I believe that raising stipends is one of the most important actions that NSF can take to invest in our Nation's future. Accordingly, we are seeking $8 million to increase graduate stipends in our key programs, from $18,000 a year to $20,500.

As for our core investments, a centerpiece of fiscal year 2002 is the $20 million interdisciplinary mathematics research program. Mathematics has a critical and a growing role in all of science and engineering, but funding for mathematics has not kept pace with the promise. We expect an increased emphasis on mathematics and statistics to spur new discoveries in diverse areas from how our brains function, to the prediction of hurricanes, to understanding our economy.

The fiscal year 2002 request also continues our emphasis on four priority areas. These are familiar to you. Biocomplexity in the environment, information technology research, nanoscale science and engineering, nanotechnology, and learning for the 21st century. Although all of these areas hold exceptional promise, I just have time for one example, and this is from nanotechnology.

Researchers at Stanford University have developed a tiny silicon chip that responds to nerve impulses. It simulates the firing of a normal neuron. It is a meeting of microelectronics and neurobiology because it holds great promise for developing prosthetic devices for artificial limbs, and it is quite possible that with these advances, Christopher Reeve might, indeed, walk again in the future. So, this emerging field could change the way almost everything is designed, from medicine, to computers, to automobiles.

Given the great potential of nanotechnology and the three other priority areas that I have mentioned, we are requesting increased funding for each of these in fiscal year 2002.

In closing, the budget lays the foundation for sustained increases over the long term. We know that our workforce and our economy depend on scientific and technological knowledge more than at any other time in our history. This gives us the responsibility but also the opportunity to demonstrate the impact of investments in science and engineering.

PREPARED STATEMENT

So, Madam Chair, we look forward to working with the subcommittee on the grander challenge, and I thank you once again for the opportunity to appear today. Thank you.

Senator MIKULSKI. Thank you very much, Dr. Colwell. Those examples are really quite compelling.

[The statement follows:]

PREPARED STATEMENT OF DR. RITA R. COLWELL

Chairwoman Mikulski, Senator Bond, members of the Subcommittee, it is an honor to be here today as Director of the National Science Foundation. I welcome the opportunity to discuss the NSF budget request for fiscal year 2002.

Before I begin with the budget, Madam Chairwoman, I would like to commend you and Senator Bond for your many years of dedication to sound investments in research and science education. You and the members of the Subcommittee have shown strong leadership in stressing the importance of basic research to the economic wellbeing of our nation. Without this sustained support and vision, NSF would not be where it is today. I am deeply appreciative of your efforts and your wisdom.

Now let me first lay out the big picture of what's being proposed for fiscal year 2002. NSF is requesting a total of $4.47 billion—that's $56 million more, or a 1.3 percent increase, above fiscal year 2001. The highlight is the request for Education and Human Resources (EHR), which receives an 11 percent increase. We have also provided solid increases for administrative accounts, which are very important in insuring wise stewardship of tax dollars. In other areas, the Research and Related Activities account will basically maintain its current level of support, and the Major Research Equipment account will drop by one-fifth.

Let me put these numbers in a different context. The fiscal year 2002 Budget Request reflects the strength of the Foundation—a broad base of research and education activities that provides the nation with the people, the ideas, and the tools needed to fuel innovation and economic growth.

In our fiscal year 2002 request, investments in people are up 13 percent from last year. We cover kindergarten to career development. This investment encompasses much of our Education and Human Resources Directorate as well as many activities funded across the Foundation. NSF directly supports about 200,000 people—including teachers, students, researchers, postdocs, and others. Moreover, the benefits of NSF programs are felt throughout the population in terms of new discoveries, scientific and technological advances, and improved math and science educational opportunities that affect all of our lives.

Now, let's look at the highlights.

MATH AND SCIENCE PARTNERSHIPS INITIATIVE

We are particularly pleased that the President's budget has designated NSF to lead the Math and Science Partnerships element of the No Child Left Behind education initiative. At the center of the fiscal year 2002 request is an initial $200 million of a planned $1 billion over 5 years which will be used to improve K–12 science and math education through partnerships. NSF will provide funds for states and local school districts to join with institutions of higher education—mathematics, science, and engineering departments of local colleges and universities—to strengthen K–12 math and science education. The request includes $90 million in new funds and a redirection of $110 million from existing EHR programs with similar strategies and goals.

This investment will provide K–12 students with enhanced opportunities to perform to high standards. This important component of the President's education initiative will help states address teacher quality; math and science curricula and textbooks; enrollment numbers in advanced science and math courses; and assessment.

GRADUATE STUDENT STIPENDS

The second key opportunity this request addresses is something that is long overdue: increasing graduate student stipends. The fiscal year 2002 Budget provides $8 million to increase stipends for the Graduate Research Fellowships, the Graduate Teaching Fellowships in K–12 Education, and the Integrative Graduate Education and Research Traineeship programs. Stipends will increase from $18,000 to $20,500 for academic year 2002–2003.

This increase is extremely important. According to an NSF survey of recent S&E bachelor's recipients, more than one-third stated that they would not pursue graduate studies because of financial reasons. We must work to ensure that adequate numbers of students are willing and able to enter graduate S&E programs.

Although graduate student enrollment in U.S. science and engineering programs increased in 1999 after five consecutive annual decreases, students with temporary visas accounted for the entire upswing. If we do not boost the number of skilled U.S. workers the nation will certainly suffer.

INTERDISCIPLINARY MATHEMATICS

A centerpiece of NSF's core investments in fiscal year 2002 is the Interdisciplinary Mathematics Research program funded at $20 million. Our total investment in mathematical sciences will increase 16.5 percent. Mathematics is a powerful tool for insight and a common language for science and engineering. This emphasis on the mathematical sciences recognizes its increasingly critical role in advancing interdisciplinary research. This investment will bring cutting-edge mathematics and statistics to address problems in the physical, biological, and social sciences. Some examples include studies of brain function, communication networks, modern economic behaviors, and the modeling and prediction of major weather events, such as tornadoes or hurricanes.

PRIORITY AREAS

In addition to investments in core research and education, NSF identifies and supports emerging opportunities in priority areas that hold exceptional promise to advance knowledge. The fiscal year 2002 Budget emphasizes four priority areas—Biocomplexity in the Environment, Information Technology Research, Nanoscale Science and Engineering, and Learning for the 21st Century. All of these areas receive increased investment over last year's amounts.

BIOCOMPLEXITY AND THE ENVIRONMENT

The fiscal year 2002 budget request builds on past investments in our Biocomplexity in the Environment portfolio and increases funds by nearly 6 percent, to $58 million. Computational and information technologies, real time sensing techniques, and genomics are providing insight into the interactions among ecological, social, and physical earth systems. For example, recently investigators have been studying contaminant flux of the lower Mississippi River, dynamics of an invasive non-native species on the Pacific Coast, and marine mammal abundance in the western Arctic Ocean. Developing new research instruments and software that advance cross-disciplinary studies in the environment will continue to improve our understanding of the planet and its systems.

INFORMATION TECHNOLOGY RESEARCH

The Information Technology Research budget request expands fundamental research in another multidisciplinary area. Our requested $273 million investment, 5 percent over last year, allows us to explore ways of making large-scale networking, software, and systems more reliable, stable, and secure. This will permit diverse applications from telemedicine, to interactive education, to the remote operation of experimental apparatus—such as the telescope at the South Pole. Other research will improve our understanding of human-computer interactions and investigate the impact of IT on our society, on our economy, and on our educational system. Because the information technology sector has contributed significantly to recent U.S. economic growth, these investments remain a top priority.

NANOSCALE SCIENCE AND ENGINEERING

In nanoscale science and engineering—colloquially known as nanotechnology—activities range from investigation of biologically based systems that exhibit novel properties to the study of nanoscale control of the structure and composition of new materials. Recognizing the importance of this emerging discipline, NSF is increasing its investment by 16.1 percent to $174 million in fiscal year 2002.

Fundamental research programs will investigate biosystems at the nanoscale—such as nanoscale sensors to detect cancer. Research will focus on system architectures, nanoscale processes in the environment—for instance, the trapping and release of contaminants—multi-scale modeling, and large-scale computer simulation of processes at the molecular or atomic level. Grand challenges include major long-term research objectives in nanoscale electronics, nano-based manufacturing, and nanostructured materials by design.

LEARNING FOR THE 21ST CENTURY

Learning for the 21st Century addresses two interrelated challenges: understanding how we learn; and transferring that knowledge for use in schools, homes and other learning environments. Research, development, and testing of educational tools incorporating information technology will give us a much better understanding of how they can be used effectively in the classroom. Accordingly, the NSF request for these activities, $126 million, is a 3.3 percent increase over last year.

A key component of this priority area is the Centers for Learning and Teaching program. Like the Math and Science Partnerships, these link K–12 and higher education. They allow opportunities for teachers to gain new skills in the use of information technology in education, new knowledge in science and mathematics, and—most importantly—allow them to integrate these with new research on learning. Applications of research results will increase opportunities for higher achievement and, ultimately, produce a workforce able to meet the challenges of rapid scientific and technological change.

OTHER FISCAL YEAR 2002 HIGHLIGHTS

I'd like to bring this overview to a close by noting some other highlights.

I am a firm believer in the Experimental Program to Stimulate Competitive Research, or EPSCoR—which enables researchers to participate more fully in NSF research activities. Fiscal year 2002 funding for EPSCoR will total nearly $100 million. This includes about $75 million provided through the EHR appropriation and another $25 million provided through NSF's Research and Related Activities account.

The fiscal year 2002 budget provides about $65 million to support ongoing research on the genomics of plants that have major economic importance. The long-term goal of this program is to understand the structure, organization, and function of plant genomes that are very important to agriculture, the environment, and health.

Along that same line, the 2010 project will support research to determine the functions of the 20,000 to 25,000 genes in the recently sequenced Arabidopsis genome.

On another front, the fiscal year 2002 budget provides about $26 million to initiate a new cohort of Science and Technology Centers in areas that span the range of disciplines supported by NSF.

As provided in recent legislation to strengthen the technology workforce, approximately $144 million is anticipated from H–1B nonimmigrant visa application fees. These funds support Computer Science, Engineering and Mathematics (CSEM) Scholarships and Private-Public Partnerships in K–12.

The budget request also includes $26 million for the GK–12 program. That will put hundreds of graduate students in K–12 classrooms to learn the art of teaching. They will share their research with younger students and serve as role models that are so important, especially in inner-city schools.

MAJOR RESEARCH EQUIPMENT

Finally, the Major Research Equipment account for fiscal year 2002 will fund three continuing projects:

First, $24.4 million is requested for the George E. Brown, Jr. Network for Earthquake Engineering Simulation. This is a national collaboration of approximately 20 geographically-distributed, shared-use experimental research equipment sites that seeks to improve the seismic design and performance of U.S. civil and mechanical infrastructure systems.

We will invest $16.9 million to continue funding the Large Hadron Collider, the internationally supported collaboration at CERN. This superconducting particle accelerator will advance our fundamental understanding of matter.

Additionally, $55 million is requested to support the infrastructure to allow access to terascale computing systems. This will enable all researchers and engineers access to leading-edge computing capabilities.

CONCLUSION

We know from past experience that NSF funding should cover a broad base of disciplines to insure constant sources of innovation. NSF should open the potential for every field to be connected and to contribute. Science and engineering today are integrated and answer each other's questions, and inspire future generations.

In order for the nation to be able to use new knowledge for economic and social progress, we have to make a national commitment to support these efforts. In the current fiscal climate, this budget lays the foundation for sustained increases over the long term while also providing opportunities in all fields of science and engineering.

We all have a responsibility to convince the public that long-term investments in science and engineering make our economy stronger and our lives easier and more rewarding. As we work more efficiently within budget constraints, we must plan for the future—ensuring a steady stream of investments. Working together, we can set the stage for increased investments over the long haul. Thank you.

Senator MIKULSKI. Dr. Boesz.

STATEMENT OF DR. CHRISTINE C. BOESZ

Dr. BOESZ. Madam Chair, Senator Bond, and members of the subcommittee, Senator Johnson, I appreciate the opportunity to appear before you today.

The National Science Foundation, NSF, is an innovative agency dedicated to maintaining American leadership in discovery and the development of new technologies across the frontiers of science and engineering knowledge. As the scientific enterprise changes and research evolves, new challenges arise. Consequently, my office has worked closely with NSF management to identify and begin to address issues that are important to the success of NSF achieving its mission in the future. I believe that the National Science Board and NSF should pay particular attention over the next year to three areas involving the management of NSF awards.

The first area involves basic award administration. NSF's mission is to promote the progress of science and advance the national health, prosperity, and welfare, which it carries out by funding science, engineering, and mathematics research and education. Assessing scientific progress and ensuring effective financial and administrative management are critical elements in administering NSF's grant programs. Program officers in each of NSF's seven science directorates are responsible for monitoring scientific progress, while staff within the Office of Budget, Finance, and Awards Management oversees the financial management.

At any given time, NSF is administering as many as 30,000 ongoing awards, relying on a staff of about 1,150 employees to carry out this oversight responsibility. This is in addition to the responsibility of soliciting approximately 10,000 grants and cooperative agreements annually, amounting to over $3.5 billion.

Given this sizable workload, NSF is challenged to adequately monitor its awards for scientific accomplishments and compliance with the award agreement and Federal laws and regulations. For the most part, NSF receives a variety of financial and programmatic reports from grantees to monitor progress that could lead to improved award administration.

Thus, it is important that NSF focus on the interactions between its program officers and its grant and contract officers. Better coordination between them should lead to more effective management. Consequently, NSF needs improved procedures with more staff targeting this focus.

As NSF extends its scope of research and education at the frontiers of science and engineering, some awards are made to institutions and organizations that increase the risks of compliance or performance. For example, NSF is making more and more awards to school districts, community colleges, and nonprofit organizations which may not be familiar with managing federally funded projects. Such awards should be identified early on and accorded closer oversight so that the intended outcomes can be achieved.

The second area focuses on NSF's management of large infrastructure projects. NSF is increasing its investments in projects such as accelerators, telescopes, research vessels, supercomputing databases, and earthquake simulators. Currently NSF spends approximately $1 billion per year for such cutting edge projects, some of which cost hundreds of millions of dollars. Many of these are large in scale, require complex instrumentation, and involve partnerships with other Federal agencies and international science organizations. Some, such as the new South Pole Station, present additional challenges because they are sited in harsh environments. Successful management of these projects and programs requires a more disciplined project management approach.

My office recently conducted an audit of NSF's oversight of one of these large projects and has made several recommendations for improvement. NSF has developed a corrective action plan to respond to our recommendations and we will be monitoring their progress toward meeting that plan. Further, as part of its plan for improved management, NSF is developing and implementing changes to its policies and procedures for managing all large infrastructure facilities and projects. We are pleased to have been given the opportunity to provide comments to NSF on these, and we expect to see implementation in the coming year.

Finally, NSF needs to focus on overseeing awards requiring cost sharing. In accordance with congressional requirements, all of NSF's grantees submitting unsolicited proposals must share in the cost of their research projects. In addition to the statutory requirement, NSF sometimes requires cost sharing on solicited proposals. This usually occurs when NSF believes there is a tangible benefit to its award recipient such as infrastructure development or the potential for income or profit. When cost sharing is required for a specific award, it is presumed that such resources are necessary to accomplish the objectives of the award. The commitment to share in the costs becomes a condition of the award and is subject to audit. If promised cost sharing is not realized, then the awardee has not fulfilled its obligation. In such cases, NSF should have at least a portion of its funds returned to it.

Our audits are increasingly finding awardees who are failing to meet their cost sharing obligations. Frequently we find that awardees lack adequate policies and procedures, they overvalue contributions or fail to report or certify cost sharing amounts.

We are now conducting more focused audits in this area, covering awards at numerous institutions. But post-awards audits should supplement, not substitute for, an appropriate compliance effort undertaken at NSF.

The challenge for NSF is to increase its oversight of cost sharing requirements during the life of the awards. Cost sharing is an important contribution from the research and education communities. Therefore, when it is not met, NSF program objectives may not be met. Consequently, improving its administration of awards requiring cost sharing is among the most important priorities for NSF management. We will continue through our audit efforts to work with NSF to address this challenge as well.

PREPARED STATEMENT

Madam Chairman, that concludes my statement. Thank you for the opportunity to share this information with you. I would be pleased to answer any questions that you may have.

[The statement follows:]

PREPARED STATEMENT OF DR. CHRISTINE C. BOESZ

Madame Chair, Senator Bond, and members of the Subcommittee, I appreciate the opportunity to appear before you today. The National Science Foundation (NSF) is an innovative agency dedicated to maintaining American leadership in discovery and the development of new technologies across the frontiers of scientific and engineering knowledge. As the scientific enterprise changes and research evolves, new challenges arise. Consequently, my office has worked closely with NSF management to identify and begin to address issues that are important to the success of NSF achieving its mission. I believe that the National Science Board and the NSF should pay particular attention over the next year to three areas involving the management of its awards.

BASIC AWARD ADMINISTRATION

The first area involves basic award administration. NSF's mission is to promote the progress of science and advance the national health, prosperity, and welfare, which it carries out by funding science, engineering and mathematics research and education. Assessing scientific progress and ensuring effective financial and administrative management are critical elements in administering NSF's grant programs. Program officers in each of NSF's seven science Directorates are responsible for monitoring scientific progress, while staff within the Office of Budget, Finance, and Award Management oversees awardees' financial management.

At any given time, NSF is administering as many as 30,000 ongoing awards. NSF relies on a staff of about 1,150 employees to carry out this oversight responsibility. This is in addition to their responsibility of soliciting and awarding approximately 10,000 grants and cooperative agreements annually amounting to over $3.5 billion. Given this sizable workload, NSF is challenged to adequately monitor its awards for scientific accomplishments and compliance with the award agreement and Federal laws and regulations. For the most part, NSF receives a variety of financial and programmatic reports from grantees to monitor progress that could be used to improve award administration. Thus, it is important that NSF focus on the interactions between its program officers and its grant and contract officers. Better coordination between them should lead to more effective management. Consequently, NSF needs improved procedures with more staff targeting this focus.

As NSF extends its scope of research and education at the frontiers of science and engineering, some awards are made to institutions and organizations that increase the risks of compliance or performance. For example, NSF is making more and more awards to school districts, community colleges and non-profit organizations, which may be unfamiliar with managing Federally funded projects. Such awards should be identified early on and accorded closer oversight so that the intended outcomes can be achieved. Moreover, in addition to the risks involved with new awardee organizations, some of NSF's awards have unique management issues.

MANAGEMENT OF LARGE INFRASTRUCTURE PROJECTS

The second area focuses on NSF's management of large infrastructure projects. NSF is increasing its investments in large infrastructure projects such as accelerators, telescopes, research vessels, supercomputing databases, and earthquake simulators. Currently, NSF spends approximately $1 billion per year for such cutting-edge projects, some of which cost hundreds of millions of dollars. Many of these projects are large in scale, require complex instrumentation, and involve partnerships with other Federal agencies and international science organizations. Some, such as the new South Pole Station, present additional challenges because they are sited in harsh environments. Successful management of these projects and programs requires a more disciplined project management approach.

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COST SHARING

Finally, NSF needs to focus on overseeing awards requiring cost sharing. In accordance with Congressional requirements, all of NSF's grantees submitting unsolicited proposals must share in the cost of NSF-funded research projects. In addition to this statutory requirement, NSF sometimes requires cost sharing on solicited proposals. This usually occurs when NSF believes there is tangible benefit to the award recipient, such as infrastructure development or the potential for income or profit. When cost sharing is required for a specific award, it is presumed such resources are necessary to accomplish the objectives of the award. The commitment to share in the costs becomes a condition of the award and is subject to audit. If promised cost sharing is not realized, then the awardee has not fulfilled its obligation. In such cases, NSF should have at least a portion of its funds returned to it.

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CONCLUSION

Madame Chair, that concludes my statement. Thank you for the opportunity to share this information with you. I would be pleased to answer any questions that you may have.

FUNDING NEEDS

Senator MIKULSKI. Thank you very much, Dr. Boesz.

Dr. Colwell, though the gavel has passed to a Democratic chair, we still have the same budget. I think there is an expectation, first of all, because of the tremendous support that Senator Bond and I both share for the National Science Foundation, that there is a tremendous cornucopia of opportunity out there. Really, our own resources are quite spartan as we look at the allocation we are going to get.

But let me get to my point. I was very concerned that this is the first NSF budget that cuts research, and it is the first time in 50 years that research has been cut.

Second, the increase is about $56 million. Now, that is not loose change, but as part of a doubling effort, it would have been $600 million, or 15 percent. We would need to be able to increase this at 15 percent. That would be $600 million.

So, here is my question. Number one, what do you really need? In other words, is this what you wanted or is this what you got?

Dr. COLWELL. Senator, I view this as a transition year budget. And our discussions with the administration have been very, very positive.

I have pointed out that there are four areas that really do need attention. Graduate student stipends. We must really address that. It is a very critical area. We do have $8 million in the budget to raise the stipend to $20,500, and I would hope that in the future we can raise it to $25,000. We are raising the stipend for our graduate research fellows, for our GK–12 fellows and for our——

Senator MIKULSKI. What are the other three areas?

Dr. COLWELL. The other areas would be to be able to address:

1. Mathematics investment. We have a $20 million investment, but I would hope that in the future that this could be significantly increased because mathematics is fundamental to our being able to maintain leadership in all of science and engineering.

2. I think we need to address grant size and duration, and the administration has requested that we look at that and we are in the process of doing a study.

Senator MIKULSKI. I am sorry. I could not hear you.

Dr. COLWELL. Grant size and duration, the size of the grants and how long they are in effect, because we have a feeling that our principal investigators are on a treadmill. And we have a study underway to look at that issue.

3. Then there are tools that we need to provide our investigators, the high performance aircraft is one that I think is badly needed, and there are other investments in tools.

So, there are areas that we are looking to the future, indeed, for investment.

NSF FUNDING NEEDS AND PRIORITIES

Senator MIKULSKI. Well, let me, though, ask the question. Do you think that the $56 million covers what you need to do? Are we running a shortfall? I am concerned again about the cut in research and development. I am concerned about the cuts in the research equipment grants. As you know, for many of our colleges, this is a very crucial program, particularly to modernize laboratories. Some are quite dated, some even built in the 1970's. You know that as a scientist. Again, I am talking about keeping to basics while we expand.

When you went to OMB, what did you think you needed to be able to do to be able to stay the course on these four priorities? Or do you not want to answer that? If you do not want to answer it— and I am not trying to make you feel awkward. I am trying to get a picture of what you need as the Director of the National Science Foundation.

Dr. KELLY. Madam Chair, I would be happy to take the——

Senator MIKULSKI. Dr. Kelly, maybe that is a better way.

Dr. KELLY (continuing). Opportunity to respond to your question. Both sides of the aisle have clearly come forward recommending a doubling of the NSF budget and our basic research budgets. Newt Gingrich publicly came out at an NSF symposium for tripling it.

Senator MIKULSKI. There you go.

Senator BOND. Can I sign you up as a Newt Gingrich devotee?

Senator MIKULSKI. Well, he is another one who has been fat and has been thin. And been in and been out.

IMPORTANCE OF BASIC RESEARCH

Dr. KELLY. But the fact of the matter, if you look at how important basic research and science is to the economy, to our medical life, to even solving of the social problems like the expansion in prisons and the way we can monitor prisoners with new scientific devices, the entire range, the most important investments this Government can make are in basic research. They have the highest single payoff. At the same time, we constantly underfund basic research because of the time lag and the lack of the immediate payoff.

FISCAL YEAR 2002 BUDGET GUIDANCE

Senator MIKULSKI. Doctor, we understand that. What was the recommendation? We are under a 15-minute rule.

Dr. KELLY. We really did not give a recommendation. But we are substantially underfunding all of the core disciplines, all of the priority areas, and several of the major facilities that we would have recommended were simply not feasible to recommend because of the guidance we had received. So, we did not try and come in above guidance. But that was the guidance we received. We lived within that, but it clearly does not meet this subcommittee's requirements of doubling or this Nation's requirement for investments in basic science.

Dr. COLWELL. Senator, as you know, doubling was important to us, remains important to us, and you can infer much from that.

BUDGET DOUBLING GOAL AND OVERSIGHT GOALS

Senator MIKULSKI. Well, Doctor, I think we can safely agree—and I think my colleague would agree—that it would be very hard to increase this by $600 million, which is part of the doubling. Doubling is a goal and that is why each year we need to be able to advance it.

I want to, first of all, acknowledge also the commentary of Dr. Boesz. As we increase funds, we also want to increase the infrastructure, make sure we have the proper infrastructure to make wise use of the funds and provide the administrative oversight. In her testimony, she indicated the great cooperation that has come from the NSF. So, let us stick to the basics, and I think that is what your four tools are.

We would like to have further conversations with you. My time has expired, but I am going to come back too. Let me just conclude with this. When we talk about the increase in research, because it has been cut, would you see that going in the areas of stipend increases, or is that in another area, or in grant sizes?

Dr. COLWELL. Senator, actually we are moving in the direction of both. The stipend increase generally increases the funding for the core disciplines because it is the students who are doing the work. But we are also, in the area of information technology, beginning to provide larger grants and longer periods of time. I think ultimately we are able to move in this direction.

But I do feel that, yes, graduate student stipends, attracting the best and brightest into the field is primary. Let me give some quick facts. In the last decade, 10 percent of all the patents in Silicon Valley were issued to citizens of India who graduated from one of the Indian institutes of technology. Another is that in Eli Lilly's main pharmaceutical research laboratory, Mandarin is the primary language. We are not educating American citizens, and we have got to attract students into science and engineering. We are only able to fund about 10 or 12 percent of deserving proposals that come in because of the demand.

We are very pleased with the support you and Senator Bond indicate for NSF.

Senator MIKULSKI. My time is expired.

Senator BOND. First, Dr. Colwell, I am very sorry to hear about your back injury. I know how painful those can be. I would tell you after hand surgery at the end of January, the first week of February I attended all the budget hearings under heavy sedation. You know, that is not a bad way to do it.

NSF'S VISION

It was about the least painful budget hearings I had ever been through. So, pop a few and you come in and, hey, sitting there all day is not that bad.

I would say on a very serious note that your table and this table strongly agree that the budget is inadequate. I have spoken to the Director of OMB and reemphasized to him again that when they have an opportunity to review the budget, as I do not believe they had an adequate time in the short transition to prepare a budget, I would hope to see an administration recommendation to put us back on the doubling path. If they do not, I will be much more critical then than I am now.

But I raised a point in my opening statement. It came essentially from the Inspector General. If we are to get back on this doubling path, we need to have the management skills, the staff, the resources, to make sure we know what we are getting, to make sure there is adequate review. That is very important.

But let me ask you and then Dr. Kelly a much more important question that we would ask back home if we were back in the heartland of Missouri. You want to double the amount of money you are spending. What do we get for it? What I need to hear more clearly from you is not a discussion of stipends and researchers and infrastructure, but what is your vision for what the Foundation can achieve in the long term? Can you give us some clear-cut policy goals? I want to have some goals, some standards, how can we measure. Before we give you that final blast in the fifth year to double it, we want to see progress, measurable, identifiable progress, on mutually agreed upon goals. I would like your and Dr. Kelly's views on what that vision is. What are those goals?

Dr. COLWELL. The vision includes being absolutely the leaders in high speed, high terascale computation, having our civilian scientists with access to the best and the fastest computing capacity in order to be able to solve problems of weather, the environment, understanding earthquakes.

I would like to see the future hold a rich promise fulfilled in biotechnology, in plant genomics——

Senator BOND. Good, good. I was hoping that might be in there.

Dr. COLWELL. And I would like to see us understanding the complexity of the environment so that we can make wise decisions and have science-based decisions on how we utilize our resources, whether it is locating a highway or whether it is locating a new city, or investing in the infrastructure of a city; in other words, bringing science and engineering to improve the health and welfare of the entire Nation and maintaining strong economic strength of the Nation and national security of our Nation.

I do agree with the report, National Security in the 21st Century, the Rudman-Hart report, which says, second only to warfare in an American city or an outbreak of strife, the greatest danger our Nation faces is losing leadership in science and math research and science and math education. I can go on, Senator, but I think you get the gist.

NANOTECHNOLOGY, INFORMATION TECHNOLOGY AND MATH AND SCIENCE EDUCATION

Senator BOND. Yes. And nanotechnology——

Dr. COLWELL. In nanotechnology we must be a leader. The Japanese are investing $400 million in nanotechnology alone, so we must really take leadership in this area.

Senator BOND. That is what I want to hear. But as we work along, I want to see some milestones and some guidelines. We would like to know from a management standpoint how we are getting there.

Dr. Kelly, would you care to expand upon that and maybe fill in some areas that you see?

Dr. KELLY. Yes, Senator. I think the Director has outlined them ably.

In the next 5 years, the world is going to change dramatically. Things as we know them now are not going to be the same, and the rate of change is going to increase even more rapidly in the future. Say, in information technology, we are looking at the equivalent of infinite bandwidth and infinite processing power within 10 years. I really believe it is going to be less than that. Nanotechnology will be state of the art in a few years, and we will be moving on to something brand new that we do not even understand now.

The miniaturization that is going to take place there is going to change the way we deliver medicine. It is going to change the way we deliver food. It is going to change the way we deliver information. It is going to change the nature of the world.

This process is going to continue. So, that is one point that we can deliver in terms of what is going to happen to society.

The second part is we as a society cannot in the long term rely on the scientific enterprise. Any field you take, 30 to 50 percent of the scientists in that field are from a different country. We have to provide graduate stipends to attract our best and brightest students into science. We have to attract minorities and women, especially given the changing demographic composition of the workforce, into science and engineering, and we are not doing that.

We also need to revitalize science and math education in public schools. There has to be a systemic change in all of public education.

In the future, all of the other countries of the world are moving in this direction. The important wars that are going to be won are not conventional wars, but they are the wars of infotech, nanotech, and education. The countries that win those wars are going to be the countries that will maintain leadership in the future. We are talking impacts of what we do today that will not be evident next year or 2 years from now but in 30 years.

But make no mistake about it. Right now we are eating our seed corn. We are not making those investments in people. We are not making those investments in basic research, and 30 years from now, our great, great grandchildren are going to pay a very high price for that.

Senator BOND. Thank you, Dr. Kelly, for a very compelling statement.

MATH AND SCIENCE PARTNERSHIPS

Senator MIKULSKI. This then, of course, brings us back to education. We talked about the farm team and the little leagues, acknowledging the validity of Dr. Kelly's comments. But I note in the request to the committee, there is a $200 million request for a new partnership in K through 12 math and science education to be run by NSF. This new program gives NSF $90 million in new funds, but redirects $110 million in existing NSF funds to start this program. Now, I understand that this is to make grants to State and local districts to join with institutions of higher education to strengthen K through 12 math and science education.

Now, that sounds good. I think we all agree on the goals. I am into not only what are the goals and the vision, but the how's, and is it really going to happen? From my observation, this is the latest in a long line of new programs to improve K through 12. With all due respect, just about every year I hear about a new program to improve K through 12, but K through 12 does not really improve.

We have just gone through a wrenching effort, very strongly bipartisan, to reauthorize the Elementary and Secondary Education Act. In that reauthorization, it was so clear that we are falling behind in science and math education and what could, and the need for certified teachers. I will not go through the laundry list, but ranging from Senator Pat Roberts of Kansas, a strong leader in armed services, decrying this to Senator Hillary Rodham Clinton both agreeing on how we could move to improve K through 12 science education and have the right teachers.

Now, here is my question to you, Dr. Colwell. Is this just yet one more rearrangement of funds, and are we going to be in exactly the same place next year as we are this year? And how will this make a difference? Because it seems that we have a lot of starts and stops in these areas. I do not know if you are conducting an internal evaluation of what really works, what are the lessons learned.

But quite frankly, I do not want to waste any more time on K through 12, and I really do not want to see more starts, more stops, and at the same time, we are still falling behind in the need to have not only the improvement of the students, but the single most important thing, Senator Bond, that we agreed upon was teacher recruitment and teacher training.

So, could you tell me why this is going to be different than the others?

BUILDING ON EDUCATION PROGRAM RESULTS

Dr. COLWELL. Yes, Madam Chair. We are building on the programs that we have been running, and we are building on what we are learning from them. The programs in the math and science partnerships are building on the K–12 programs that we have been funding.

The important point is bringing together higher education, the community, and the school system. The GK–12 program, which I described to you in a previous testimony here, is working. We are now getting some very good results, based on early returns and discussions with institutions where these efforts are in effect. We are linking higher education through graduate students who are working up to 20 hours a week teaching in primary, middle, and high schools.

We also need to focus on developing centers focused on the science of learning, centers that bring together the kinds of information that is being gathered in research laboratories at NIH on how children learn. In discussions with Secretary Paige just a few days ago, we both agreed that we need to work on how children learn about numbers, how they do mathematics. It is not yet understood how children learn mathematics. We need to bring the research, good research, directly into the classroom. We have talked about technology transfer for industry, but we need now to focus on the technology transfer from the research laboratory into the classroom.

Senator MIKULSKI. Dr. Colwell, are you telling me that has not been done?

Dr. COLWELL. Well, it needs to be done in a focused way that NSF can then provide transfer to math and science education.

Senator MIKULSKI. But this has not been done at NIH in its neuroscience area and in its particular area of child development?

Dr. COLWELL. But again, the area of child development is also a component of the research that I have mentioned we would bring together.

I think the best example would be our systemic reform efforts. We have had some successes in our urban, and rural, and inner city systemic reform programs that are underway.

REDIRECTION OF FUNDS AND EVOLUTION OF EDUCATION PROGRAMS

Senator MIKULSKI. I agree but in this new partnership, it cuts it by $50 million. It also redirects money. The $110 million comes out of cutting the programs for existing teacher training. So, you see?

Dr. COLWELL. Yes, but what we are trying to do is evolve from what we have learned in those programs and to shape them into more effective programs. We are in the process of evaluating the results of our systemic initiatives, learning what are the factors that correlate with success and those with not such good success, and go to the next step embodied in the No Child Left Behind partnerships.

Senator MIKULSKI. So, what are we saying here? Are we saying that we had these programs in the past and now President Bush in the No Child Left Behind—and, of course, I take the position no child left behind and no child left out of the appropriations process. Essentially where these programs existed, are they being cut, or are you now kind of mining them for lessons learned and incorporating them in the new program? In other words, it is like a rocket ship. This one kind of falls off, but it keeps the momentum going.

Dr. COLWELL. Those that are in place are being retained. We are just not making any new starts in the old programs, but we are taking what we have learned from them to shape the new programs, the new partnerships that the schools can participate in along with schools of higher education.

Senator MIKULSKI. Well, I really want to work with President Bush on this. I believe again looking at our work on the Education Committee, of which Senator Bond is a member—remember those exchanges and particularly Pat Roberts; you were an active participant—how can we really now operationalize these goals? I would like to have a more detailed description of what is this new program and what does it mean in terms of the other programs. Are they just being eliminated? Are they just being redirected? Or are they now evolving into this? If we could really get a picture of this. Again, it is not only the Appropriations Committee. When we go to the floor, we really have to demonstrate——

Dr. COLWELL. It is genuinely an evolving scenario; that is, we are taking that which we have learned from the programs that have worked and we are shaping them in the partnerships program.

Senator MIKULSKI. Senator Bond, I note that Senator Domenici is here. Would you like to go another round or defer to him?

Senator BOND. I would certainly defer to Senator Domenici.

Senator MIKULSKI. I think it is in our interest.

Senator BOND. I believe when he had a shot at it, he cut us a better deal than OMB did.

Senator MIKULSKI. Absolutely.

Senator BOND. We are looking for friends. Would you like some coffee, Senator Domenici?

Senator MIKULSKI. We are glad to see you.

Senator BOND. Can we fix you anything here?

VERY LARGE ARRAY TELESCOPE

Senator DOMENICI. I brought my own.

Incidentally, we did get about $7 billion more than the President for our kind of programs. There, obviously, are many who do not think it is enough, but we will see where it all comes out.

Thank you for permitting me to ask a few questions.

Dr. Colwell, I first want to thank you for responding to a question that has nothing to do with these hearings with reference to one of our rivers. You took of your time to go find out what the authentic answer was, and I appreciate knowing that. I was just hearing some rumbles and rumors, not something official.

It is my understanding and I am quite pleased by the fact that funding for the expansion efforts of the very large array has been included in the Foundation's budget for 2002, with continued support expected in the future. We are all very proud of that array, not just New Mexicans, but it is there as one of the truly magnificent science achievements. And it is time to spend some more money there.

What are we going to do? Do you have a quick summary of how we are going to spend this money?

Dr. COLWELL. The very large array is a very important part of the astronomy effort. What I would like to do is ask Bob Eisenstein to make some comments because I think this is really critical.

Senator DOMENICI. I think it would just take a minute. Could he testify please, Madam Chair?

Senator MIKULSKI. Certainly. Sir, would you come on up and take the microphone so we can hear and it also can be appropriately recorded?

Dr. EISENSTEIN. I'm Robert Eisenstein. I'm Assistant Director for Mathematical and Physical Sciences at NSF, and the Astronomy Division is one of the divisions in my directorate.

We have plans to expand the VLA, as you indicated, Senator. The first outlay will be for an R&D effort to do phase one, and upon successful conclusion of that R&D effort, we will entertain a proposal for the larger project under the major research equipment account at the due time.

Senator DOMENICI. So, even though portions of that have been there for a long time, it is still a very integral part of astronomy in the world. Is that correct?

Dr. EISENSTEIN. Absolutely. I would say that the VLA is the world's leading radio telescope.

ALMA

Senator DOMENICI. Maybe this next question is in your domain also. I only have one other.

Could you speak a moment about ALMA, the Atacama Large Millimeter Array? It is my understanding that something is happening with that also that affects New Mexico.

Dr. EISENSTEIN. Yes. The Atacama Large Millimeter Array currently is in its fourth year of R&D in 2001. We have entered what we think will be a very productive partnership with the Chilean government where the antennas will be hosted, also with several European nations operating through the European Southern Observatory. Now more recently we are entering negotiations with the Japanese, hoping to involve them in a full tripartite project to build what will be the world's first truly international radio telescope of unprecedented power.

Senator DOMENICI. Now, does the 2002 budget request funding specifically for the construction of this project? I do not think it does.

Dr. EISENSTEIN. No, it does not.

Senator DOMENICI. Does that mean we are still committed to it, or what would we be considering as a subcommittee?

Dr. EISENSTEIN. Well, we are committed to this project in the sense of continuing the research and development activity in 2002. As you know, the major research equipment account in the President's budget was not allowed any new starts for construction activity, and so we are waiting until 2003 to see what happens there.

Senator DOMENICI. But if we have the money, the project is on go?

Dr. EISENSTEIN. The project is prepared to commence construction, yes, sir.

WIPP VERSUS HOMESTAKE

Senator DOMENICI. My last one has to do with National Science Foundation and WIPP, the Waste Isolation Pilot Project, in New Mexico. I understand that the advisory committee which met in New Mexico and also met in the Majority Leader's State with reference to an underground mine versus using the Waste Isolation

Pilot Project underground mine. The decision was to go with the old marketplace mine rather than the Federal Government site. Are there other research activities of a similar type that might be considered for the Waste Isolation Pilot Project underground mine?

Dr. COLWELL. I would say yes, but I will again ask Dr. Eisenstein if there are any immediately under consideration. I am not sure that there are.

Dr. EISENSTEIN. I actually do not know what the Department of Energy's plans are with respect to that, sir.

Senator DOMENICI. So, there are no plans for any kind of projects from NSF.

Dr. COLWELL. Not at the moment.

Dr. EISENSTEIN. Not from the National Science Foundation, no.

Senator DOMENICI. I thank you very much. Thank you, Madam Chairman.

Senator MIKULSKI. Thank you.

Senator Bond.

PEER REVIEW SYSTEM

Senator BOND. Thank you very much, Madam Chair.

We are under an approaching deadline. There are supposed to be votes at 11:30. I would like to ask you four bullet questions in hopes of four bullet answers of perhaps 60 seconds with the promise and expectation that you can expand upon those in writing because I believe they are important. I want to bring them up but we do not have time fully to discuss them today.

Number one, the peer review system. I mentioned before NAPA recommended that NSF should broaden bringing in more participants, wider range of institutions, disciplines, including the "have nots" and under-represented minorities. How are you responding to NAPA's findings and recommendations?

Dr. COLWELL. In a word, we are responding. We are taking those recommendations into account and we are taking action to ensure the advisory committees include these individuals.

HIGH-TECH EDUCATION

Senator BOND. Thank you. We will look forward to seeing that information.

Number two, high tech workers. How is NSF working with the private sector to deal with this shortage? The question of how you educate is a broad one. Senator Mikulski has raised the question. What specifically are we doing, can we help the private sector meet its needs and get the students that the scientific community needs?

Dr. COLWELL. We have several programs—and I can give them in detail to you—that train students in 2-year colleges and 4-year colleges in advanced technology. We have programs in computer science and a variety of other programs, and I would be very happy to provide details, sir.

[The information follows:]

NSF PROGRAMS: HIGH TECH WORKFORCE

The National Science Foundation's (NSF's) GPRA Strategic Plan (2001–2006) indicates that "in pursuit of its mission, NSF invests in people to develop a diverse, internationally competitive and globally-engaged workforce of scientists, engineers and well-prepared citizens." Investments at the undergraduate level are critically important in the attainment of this outcome goal. NSF has a comprehensive suite of programs that prepare undergraduate students for entry into the workforce and entry into graduate programs. These programs are conducted via three strategies: (1) direct preparation of specific elements of the science and engineering workforce, (2) attention to broadening participation in the science and engineering workforce by groups that are currently underrepresented, and (3) strengthening the curricular and instructional infrastructure for providing high quality science, mathematics, engineering, and technology education to all students.

Across the set of NSF's programs for undergraduates, a balance is struck between providing students with the practical skills needed to perform at a high level in the workplace and providing the firm theoretical foundations in math and science required as preparation for study at more advanced levels.

The text which follows summarizes NSF's programs which either target or contribute to high quality education at the undergraduate level. Unless otherwise noted, all of the programs cited below are supported primarily by the Directorate for Education and Human Resources.

DIRECT PREPARATION OF SPECIFIC ELEMENTS OF THE SCIENCE AND ENGINEERING WORKFORCE

Advanced Technological Education

[In millions of dollars]

Fiscal Year 2001 Current Plan	39.16
Fiscal Year 2002 Request	39.16

The Advanced Technological Education (ATE) Program is managed jointly by the Division of Undergraduate Education (DUE) and the Division of Elementary, Secondary, and Informal Education. The program promotes improvement in the education of technicians in science- and engineering-related fields at the undergraduate and secondary school levels. It particularly targets two-year colleges and encourages collaboration among two-year colleges, four-year colleges, universities, secondary schools, business, industry, and government. Proposals are solicited in the following three tracks:

—*Projects*.—Activities may include the development of educational materials, courses, curricula, and laboratories; the preparation and professional development of college faculty and secondary school teachers; internships and field experiences for students and educators; or the dissemination of exemplary educational materials, curricula, and pedagogical practices designed by previously funded ATE centers and projects.

—*Centers*.—ATE centers are comprehensive national or regional resources that provide models and leadership for other projects and act as clearinghouses for educational materials and methods. National Centers of Excellence engage in the full range of activities described above for projects. Regional Centers for manufacturing or information technology education pursue comprehensive approaches that focus on reforming academic programs, departments, and systems to produce a highly qualified workforce to meet industry's needs within a particular geographic region.

—*Articulation Partnerships*.—These projects focus on enhancing either of two important educational pathways for students between two-year colleges and four-year colleges and universities. One type of Articulation Partnership focuses on strengthening the science, mathematics, and technology preparation of prospective K–12 teachers who are enrolled in pre-professional programs at two-year colleges. The other type of partnership targets two-year college programs for students to continue their education in four-year science, mathematics, engineering, and technology programs, especially programs that have a strong technological basis.

Proposals in all three tracks must evidence a coherent vision of technological education—a vision that recognizes the needs of the modern workplace, the needs of students as lifelong learners, and the need for articulation of educational programs at different levels. Whenever feasible, projects are expected to utilize and innovatively build from successful educational materials, courses, curricula, and methods that have been developed through other ATE grants, as well as other exemplary resources that can be adapted to technological education.

For More Information: http://www.ehr.nsf.gov/EHR/DUE/programs/ate/.

Federal Cyber Service: Scholarship for Service

[In millions of dollars]

Fiscal Year 2001 Current Plan	11.18
Fiscal Year 2002 Request	11.18

The Scholarship For Service (SFS) program seeks to increase the number of qualified students entering the fields of information assurance and computer security and to increase the capacity of the United States higher education enterprise to continue to produce professionals in these fields. The program consists of scholarship and capacity building tracks:

—The Scholarship Track provides funding to colleges and universities to award scholarships in information assurance and computer security fields. Scholarship recipients will become part of the Federal Cyber Service of information technology specialists who ensure the protection of the U.S. Government's information infrastructure. After their two-year scholarships, the recipients will be required to work for a federal agency for two years as their Federal Cyber Service commitment.

—The Capacity Building Track seeks to increase the national capacity for producing trained information assurance professionals by providing support to colleges and universities interested in building programs, individually or in partnership.

For More Information: http://www.ehr.nsf.gov/EHR/DUE/programs/sfs/

NSF Computer Science, Engineering, and Mathematics Scholarships

[In millions of dollars]

Fiscal Year 2001 Current Plan (est.)	71.95
Fiscal Year 2002 (est.)	85.68

Funds allocated from H–1B Visa petitioner fee receipts.

The NSF Computer Science, Engineering, and Mathematics Scholarships (CSEMS) Program provides institutions with funds to support scholarships for talented but financially disadvantaged students in computer science, computer technology, engineering, engineering technology, or mathematics degree programs. Through support from this program, grantee institutions establish scholarships that promote full-time enrollment and completion of degrees in higher education in the above fields. NSF established the program in accordance with the American Competitiveness and Workforce Improvement Act of 1998 (Public Law 105–277). The Act reflects the Nation's need to increase substantially the number of graduates from associate, baccalaureate, and graduate degree programs in these fields. The goals of this program are to:

—improve education for students in the stated disciplines;

—increase retention of students to degree completion;

—improve professional development, employment, and further higher education placement of participating students; and

—strengthen partnerships between institutions of higher education and related employment sectors.

The eligibility criteria for a CSEMS scholarship recipient include the following:

—status as a U.S. citizen, national, refugee alien, or permanent resident alien at the time of application;

—full-time enrollment in computer science, computer technology, engineering, engineering technology, and/or mathematics degree programs at the associate, baccalaureate, or graduate level;

—demonstrated academic potential or ability; and

—demonstrated financial need, defined for undergraduates as financial eligibility under U.S. Department of Education rules for Federal financial aid, and defined for graduate students as eligibility for Graduate Assistance in Areas of National Need.

CSEMS institutional proposers must be institutions of higher education that grant degrees in computer science, computer technology, engineering, engineering technology, or mathematics.

For More Information: http://www.ehr.nsf.gov/EHR/DUE/programs/csems/csems.htm.

Science, Technology, Engineering, and Mathematics Teacher Preparation

[In millions of dollars]

Fiscal Year 2001 Current Plan	14.52
Fiscal Year 2002 Request	6.52

The Science, Technology, Engineering, and Mathematics Teacher Preparation (STEMTP) Program supports efforts to develop exemplary science and mathematics pre-K–12 teacher preparation models through partnerships involving science, mathematics, engineering, technology, and education faculty at two- and four-year institutions of higher education and local school districts. The goals of the program are to:

—increase significantly the number of pre-K–12 teachers who are certified and well-qualified to teach mathematics and science, and

—improve the quality of preservice education, induction, and continued professional growth in mathematics and science for pre-K–12 teachers.

Projects must address local needs for increased numbers of teachers who are well qualified to teach mathematics and science by providing strategies for recruiting and retaining teachers in the workforce. The STEMTP program offers two areas of focus:

—*Baccalaureate and Five-Year Programs*.—Projects are expected to include strategies for ensuring that preservice students acquire SMET content and pedagogical knowledge and skills for successful teaching.

—*Alternative Pathways to Teaching*.—Projects design and implement alternative credentialing programs for SMET professionals and recent SMET graduates to facilitate their entry into the teaching profession.

For more information: http://www.ehr.nsf.gov/EHR/DUE/programs/stemtp/.

ATTENTION TO BROADENING PARTICIPATION IN THE SCIENCE AND ENGINEERING WORKFORCE BY GROUPS THAT ARE CURRENTLY UNDERREPRESENTED

Historically Black Colleges and Universities-Undergraduate Program

[In millions of dollars]

Fiscal Year 2001 Current Plan	[1] 14.97
Fiscal Year 2002 Request	[1] 14.97

[1] Includes $1M in support from the Research & Related Activities appropriation.

This program seeks to enhance the quality of undergraduate science, mathematics, engineering, and technology (SMET) education at Historically Black Colleges and Universities as a means to broaden participation in the Nation's SMET workforce. The program provides support for the implementation of comprehensive institutional strategies to strengthen SMET teaching and learning in ways that will improve the access and retention of underrepresented groups in SMET. Typical project implementation strategies include SMET course and curricular reform and enhancement; faculty professional development; supervised research and other active learning experiences for SMET undergraduates; student support; scientific instrumentation to improve SMET instruction; and other activities that meet institutional needs.

Eligibility Requirements

Historically Black Colleges and Universities that currently offer associate, baccalaureate or master's degrees in science, mathematics, engineering and technology (SMET) fields, but do not offer doctoral degrees in SMET disciplines.

For More Information: http://www.ehr.nsf.gov/EHR/HRD/hbcu.asp

Louis Stokes Alliances for Minority Participation

[In millions of dollars]

Fiscal Year 2001 Current Plan	26.78
Fiscal Year 2002 Request	26.53

The Louis Stokes Alliances for Minority Participation (LSAMP) Program is designed to develop the comprehensive strategies necessary to strengthen the preparation of minority students and increase the number of minority students who successfully complete baccalaureates in science, mathematics, engineering, and technology (SMET) fields. This objective facilitates the long-term goal of increasing the production of Ph.D.'s in SMET fields, with an emphasis on entry into faculty positions.

The LSAMP Program requires each awardee to establish meaningful partnerships among academic institutions, and encourages the inclusion of Government agencies and laboratories, industry, and professional organizations. It is expected that successful partnerships will enable the development of approaches tailored to the institutional setting for achievement of program goals in SMET undergraduate education. Activities supported include student enrichment, such as collaborative learning, skill development, and mentoring; academic enrichment, such as curricular and instructional improvement; and direct student support, such as summer activities.

Eligibility Requirements

Academic institutions with a track record of educating minority and other students in SMET disciplines are eligible to apply to the LSAMP Program. Nonprofit organizations serve as members of the alliance or partnership.

For More Information: http://www.ehr.nsf.gov/EHR/HRD/amp.asp

Alliances for Graduate Education and the Professoriate

[In millions of dollars]

Fiscal Year 2001 Current Plan	11.80
Fiscal Year 2002 Request	11.80

The Alliances for Graduate Education and the Professoriate (AGEP) Program seeks to significantly increase the number of American Indian/Alaskan Native (Native American), African American, Hispanic American, and Native Pacific Islander students receiving doctoral degrees in the physical and life sciences, mathematics, and engineering (SME). The lack of role models and mentors in the professoriate constitutes a significant barrier to producing minority SME doctoral graduates, and NSF is particularly interested in increasing the number of minorities who will enter the professoriate in these disciplines.

Specific objectives of the AGEP Program are (1) to develop and implement innovative models for recruiting, mentoring, and retaining minority students in SME doctoral programs; and (2) to develop effective strategies for identifying and supporting underrepresented minorities who want to pursue academic careers.

The AGEP Program also supports a research effort to identify major factors that promote the successful transition of minority students from (1) undergraduate through graduate study; (2) course-taking in the early years of the graduate experience to independent research required for completion of a dissertation; and (3) the academic environment to the SME workplace. To accomplish this objective, the research component will be informed by a portfolio of Federal and private efforts in this arena in order to identify factors underlying exemplary as well as unsuccessful efforts.

Eligibility Requirements for AGEP

Alliances consisting of SME doctoral degree-granting institutions are eligible to apply to the program. One institution must be designated as the lead institution for the project. Institutions in the United States and its territories that have documented success in graduating minority students at the Ph.D. level are strongly encouraged to participate. Alliances are encouraged to establish partnerships with minority serving undergraduate institutions to enhance recruitment efforts, where appropriate.

For More Information: http://www.ehr.nsf.gov/EHR/HRD/agep.asp

Centers of Research Excellence in Science and Technology

[In millions of dollars]

Fiscal Year 2001 Current Plan	8.88
Fiscal Year 2002 Request	8.88

NSF recognizes that academic institutions with significant minority student enrollments play a vital role in conducting the research that contributes to our knowledge base in all disciplines and in educating minority students who go on to careers in the fields of science, mathematics, engineering, and technology (SMET).

The Centers of Research Excellence in Science and Technology (CREST) Program makes substantial resources available to upgrade the capabilities of the most research-productive minority institutions. It develops outstanding research centers through the integration of education and research. Additionally, it serves to promote the production of new knowledge; increase the research productivity of individual faculty; and expand a diverse student presence in SMET disciplines. CREST centers enhance the effectiveness of related science and engineering activities within the project's area of research focus.

Eligibility Requirements for CREST

Institutions eligible to participate in CREST Research Infrastructure Improvement (RII) awards must have:

—Enrollments of 50 percent or more members of minority groups that are underrepresented among those holding advanced degrees in science and engineering, e.g., Alaskan Natives (Eskimo or Aleut), American Indian, African American, Native Pacific Islanders (Polynesian or Micronesian), Hispanic or Latino;

—Graduate programs in NSF-supported fields of science or engineering;

—Demonstrated strengths in NSF-supported fields, as evidenced by an existing or developing capacity to offer doctoral degrees in one or more science and engineering disciplines;

—A willingness and capacity to serve as a resource center in one or more research thrust areas;

—A demonstrated commitment and track record in enrolling and graduating minority scientists and engineers; and

—Strong collaborations in the proposed field of research.

For More Information: http://www.ehr.nsf.gov/EHR/HRD/crest.asp

Tribal Colleges and Universities Program (TCUP)

[In millions of dollars]

Fiscal Year 2001 Current Plan	9.98
Fiscal Year 2002 Request	9.98

This program provides awards to enhance the quality of science, mathematics, engineering and technology (SMET) instructional and outreach programs, with an emphasis on the leveraged use of information technologies at Tribal Colleges and Universities, Alaskan Native-serving Institutions and Native Hawaiian-serving institutions. Support is available for the implementation of comprehensive institutional approaches to strengthen SMET teaching and learning in ways that improve access to, retention within, and graduation from SMET programs, particularly those that have a strong technological foundation. Through this program, assistance is provided to eligible institutions in their efforts to bridge the digital divide and prepare students for careers in information technology, science, mathematics and engineering fields. Proposed activities should be the result of a careful analysis of institutional needs, address institutional and NSF goals, and have the potential to result in significant, sustainable improvements in SMET program offerings. Typical project implementation strategies include curriculum enhancement, faculty professional development, undergraduate research and community service, academic enrichment, infusion of technology to enhance SMET instruction, collaborations, and, other activities that meet institutional and community needs.

Eligibility Requirements for TCUP

Organizations eligible include Tribal Colleges and Universities, Alaskan Native-serving institutions and Native Hawaiian-serving institutions.

For More Information: http://www.ehr.nsf.gov/EHR/HRD/tcup.asp

Model Institutions for Excellence (MIE)

[In millions of dollars]

Fiscal Year 2001 Current Plan	[1] 10.02
Fiscal Year 2002 Request	[1] 10.02

[1] EHR funding is $2.52M.

This program, administered by the Office of Integrative Activities is a joint venture between the National Science Foundation, the National Aeronautics and Space Administration, and the U.S. Departments of Agriculture and Interior. The MIE Program aims to increase the number and quality of underrepresented minorities in science, engineering, and mathematics (SEM) education in the nation's higher education institutions and particularly targets institutions that have a history of awarding SEM degrees to African Americans, Hispanics, and Native Americans. The program provides funds and technical assistance to help improve institution facilities and provide technical support. MIE-awarded schools concentrate on recruiting and retaining SEM students; pay special attention to counseling and academic enrichment; offer research opportunities; and will encourage students to attend graduate school. The success of these institutions will serve as models for high-quality SEM education that can be replicated at colleges and universities nationwide.

Program for Gender Equity in Science, Mathematics, Engineering, and Technology

[In millions of dollars]

Fiscal Year 2001 Current Plan	11.19
Fiscal Year 2002 Request	11.19

The program supports research on focused interventions that are specifically directed toward increasing the number of women as full participants in the mainstream of the Nation's scientific and technological enterprise. The Program for Gender Equity in Science, Mathematics, Engineering, and Technology supports the following activities:

—*Research*.—This area seeks to enhance the multidisciplinary understanding of gender differences in human learning—behavioral, cognitive, affective and social aspects—through socio-psychological, ethnographic, statistical, anthropological, economic, and organizational studies. The efforts in this area provide a research foundation for educational approaches, curriculum materials, and technological tools that are already developed or can be developed in the future, bridging research and educational practice in settings such as classrooms, informal learning sites, and technological learning environments. The research aims to produce cumulative, reproducible, sustainable and scalable results, supporting sustained improvement in educational practice.

—*Demonstration or "Model" Projects*.—This area employs evaluation methods to determine the effectiveness of new learning tools, pedagogies, professional development programs, or student programs and services in order to produce outcomes. Demonstration projects apply research findings about girls' learning preferences in the design of new curriculum materials, services, pedagogy, or instructor development programs, which can be institutionalized and replicated if they are proven successful. In particular, teacher and faculty development demonstrations test new ways to integrate the understanding and awareness of gender-inclusive practices into pre-service and in-service professional development programs and into professional standards and policies. It is anticipated that direct participants in demonstration projects will benefit from the learning experience and assimilate new behaviors.

—*Information Dissemination Activities*.—This area supports projects that focus on the dissemination of research results or the dissemination of strategies for reducing the barriers for women and girls in these fields. Activities supported include media (e.g., videotapes and brochures), conferences, teleconferences, symposia, and workshops that bring together experts to discuss issues, projects, policies, and research related to the participation and achievement of women and girls in science, engineering, and mathematics. Dissemination projects take material or model approaches or information to a significant national audience.

For More Information: http://www.ehr.nsf.gov/EHR/HRD/pge.asp

Program for Persons with Disabilities

[In millions of dollars]

Fiscal Year 2001 Current Plan	5.28
Fiscal Year 2002 Request	5.28

This program is dedicated to increasing the number of people with disabilities employed in the nation's science, engineering, and technology work force. To accomplish this end, PPD supports projects designed to:

—bring about needed changes in academic and professional climates,

—increase the awareness and recognition of the needs and capabilities of students with disabilities,

—promote the accessibility and appropriateness of instructional materials, media, and educational technologies, and

—increase the availability of student enrichment resources including mentoring activities.

In short, efforts are dedicated to changing the factors wherein neglect, paucity, and indirection historically restricted the study of science and mathematics by students with disabilities, and impeded the advancement of these individuals as they prepared themselves for careers in SMET fields. In support of the goals, and in recognition of findings from past activities, PPD is initiating support for regional alliances.

For More Information: http://www.ehr.nsf.gov/ehr/hrd/ppd/.

Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring

[In millions of dollars]

Fiscal Year 2001 Current Plan	0.29
Fiscal Year 2002 Request	0.29

The White House established the Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM) to recognize the importance of role models and mentors in the academic, professional, and personal development of students from groups that are underrepresented in these fields. The PAESMEM Program identifies outstanding mentors and mentoring programs that enhance the experiences of underrepresented students in the sciences, mathematics, and engineering. At the individual and the institutional levels, recipients of the PAESMEM award have been exemplary in their demonstration of the idea that the Nation must develop its human resources in these disciplines to the fullest extent possible through supporting increased access by diverse populations.

STRENGTHENING THE CURRICULAR AND INSTRUCTIONAL INFRASTRUCTURE FOR PROVIDING HIGH QUALITY SCIENCE, MATHEMATICS, ENGINEERING, AND TECHNOLOGY EDUCATION TO ALL STUDENTS

Assessment of Student Achievement in Undergraduate Education (ASA)

[In millions of dollars]

Fiscal Year 2001 Current Plan	3.0
Fiscal Year 2002 Request	3.0

The Assessment of Student Achievement in Undergraduate Education (ASA) program supports the development and dissemination of assessment practices, materials (tools), and measures to guide efforts that improve the effectiveness of courses, curricula, programs of study, and academic institutions in promoting student learning in science, mathematics, engineering, and technology (SMET). ASA seeks to support the use of assessment practices by SMET faculty, SMET departments, and institutional administrators seeking to measure student achievement in courses, curricula, programs of study, and the cumulative undergraduate experience embodying some SMET learning.

To help ensure that project results will effectively serve the SMET community, at least one investigator (PI or co-PI) in a project must be a SMET faculty member.

Projects can focus on one or more of the following broad areas:

—Developing new and adapting extant assessment materials that can be used to improve SMET courses and curricula to achieve explicit learning objectives,

—Developing methods for assessing student achievement resulting from a group of courses constituting a minor or major field of study,

—Assessing the impact on student achievement of interdisciplinary learning experiences, student teams, co-curricular activities (e.g. service learning), increased laboratory and field experiences, and other forms of learning enrichment, and

—Developing indicators of student learning within certain domains, and measures of institutional program quality.

For More Information: http://www.ehr.nsf.gov/EHR/DUE/programs/asa/

Course, Curriculum, and Laboratory Improvement

[In millions of dollars]

Fiscal Year 2001 Current Plan	46.63
Fiscal Year 2002 Request	46.63

The Course, Curriculum, and Laboratory Improvement (CCLI) Program supports projects that are expected to improve undergraduate science, mathematics, engineering, and technology education (SMETE) by increasing the availability and use of high-quality educational materials and the employment of effective pedagogical strategies. Proposals that address all levels of undergraduate education are encouraged; proposals to improve introductory-level courses, curricula, and laboratories are especially welcome.

The CCLI Program invites proposals to improve undergraduate SMETE in a broad spectrum of institutions, including 2-year colleges, 4-year colleges, and universities. Projects may involve a single institution, a collaborative effort among several institutions, or a collaboration with business and industry partners. The CCLI Program has three major tracks:

—*Educational Materials Development*.—Projects are expected to produce innovative materials that incorporate effective educational practices to improve student learning of SMET. Projects to develop textbooks, software, or laboratory materials for commercial distribution are appropriate. Two types of projects will be supported: (1) those that intend to demonstrate the scientific and educational feasibility of an idea, a "proof of concept," or a prototype; and (2) those that are based on prior experience with a prototype that intend to fully develop the product or practice. Such materials are expected to be disseminated nationally for adoption and adaptation.

—*Adaptation and Implementation*.—Projects are expected to result in improved education in SMET at academic institutions through the adaptation and implementation of exemplary materials, laboratory experiences, and/or educational practices that have been developed and tested at other institutions. Proposers may request funds in any category normally supported by NSF, or funds only to purchase instrumentation.

—*National Dissemination*.—Projects are expected to provide faculty with professional development opportunities to enable them to introduce new content into undergraduate courses and laboratories; and to explore effective educational practices. Projects should be designed to offer workshops, short courses, or similar activities on a national scale in single or multiple disciplines.

For More Information: http://www.ehr.nsf.gov/EHR/DUE/programs/ccli/.

NSF Director's Award for Distinguished Teaching Scholars

[In millions of dollars]

Fiscal Year 2001 Current Plan	1.51
Fiscal Year 2002 Request	1.51

The purpose of the NSF Director's Award for Distinguished Teaching Scholars (DTS) Program is to recognize individuals with demonstrated excellence and promise of future success in both scientific research and the education of undergraduates in science, mathematics, engineering, and technology (SMET). The program promotes the continued and expanded efforts of individuals with a history of impact on both: (a) the research in a SMET discipline or on SMET educational research; and (b) the SMET education of undergraduates, including those who are not SMET majors. The Director's Award is the highest honor bestowed by the NSF for excellence in both teaching and research in SMET fields, or in educational research related to these disciplines.

For More Information: http://www.ehr.nsf.gov/EHR/DUE/programs/dts/

National Science, Mathematics, Engineering, and Technology Education Digital Library

[In millions of dollars]

Fiscal Year 2001 Current Plan	24.95
Fiscal Year 2002 Request	24.95

The goal of the National Science, Mathematics, Engineering, and Technology Education Digital Library (NSDL) Program is to support the creation and development of a national digital library for science, mathematics, engineering, and technology education (SMETE). The resulting virtual facility—learning environments and resources network for SMETE—is intended to meet the needs of students and teachers at all levels: K–12, undergraduate, graduate, and lifelong learning, in both individual and collaborative settings. The NSDL Program builds on work supported under the multi-agency Digital Libraries Initiative (see http://www.dli2.nsf.gov/) and represents a synergistic collaboration of research and education efforts.

The NSDL Program is currently supporting a Core Integration effort that coordinates and manages the digital library's holdings and services. To complement and further expand this Core Integration capacity the NSDL Program accepts proposals in the following tracks:

—*Collections*.—Projects are expected to aggregate and manage a subset of the library's content within a coherent theme or specialty.

—*Services*.—Projects are expected to develop services that will support users, collection providers, and the Core Integration effort, as well as enhance the impact, efficiency, and value of the library.

—*Targeted Research*.—Projects are expected to explore specific topics that have immediate applicability to one of the other two tracks, or the Core Integration effort above.

For More Information: http://www.ehr.nsf.gov/EHR/DUE/programs/nsdl/

TRAINING PROGRAMS—RESEARCH DIRECTORATES

Although most of the programs are within EHR, NSF does have investments in training in the Engineering (ENG) and Computer Information and Science Engineering Directorates (CISE). ENG's Engineering Research Centers which train graduate and undergraduate students in the latest cutting edge research areas plus prepare them for jobs which require ability to work in teams, on multidisciplinary topics. In addition, ENG's Engineering Education Coalitions stimulate reform of undergraduate engineering education to enhance the quality and quantity of students who earn engineering degrees. Both require matching funds from industry and active participation by companies to assure relevance.

ENG's Action Agenda for Engineering Curriculum Innovation Program supports the implementation of new approaches to educate engineers and encourage outstanding students—particularly from underrepresented groups—to enter the field. The Program builds on successful innovations from the NSF Engineering Education Coalitions and other new concepts for the reform and improvement of engineering education and seeks to involve research-active scholars more actively in education innovation.

Through its Educational Innovation program, CISE supports educational activities at the undergraduate level in computer and information science and engineering that transfer research results into the undergraduate curriculum. Projects supported are expected to show promise as a national model of excellence by acting as a prototype for use by a broader segment of the CISE community. Proposals may address a variety of educational activities, including the development of courses, instructional technologies, software, and other educational materials. A related program, Combined Research and Curriculum Development, in cooperation with the Engineering Directorate, supports multidisciplinary projects in upper level undergraduate and introductory graduate level curricula.

CISE and ENG cooperate in the Course, Curriculum, and Laboratory Improvement (CCLI) program that improves and adds excitement to engineering and CS education by transferring the results of research into curriculum—classes, books, simulations, web pages and other materials. CCLI targets upper division college and beginning graduate level courses and has an important element of involving industry.

The Information Technology Workforce program (http://www.nsf.gov/pubs/2001/nsf0133/nsf0133.htm) supports research to understand the reasons for low rates of participation in education and career paths in IT for under-represented groups, particularly women and minorities. This understanding will develop the basis for future actions to improve participation rates.

CISE's Minority Institutions Infrastructure program provides awards to aid efforts that might significantly expand the numbers of minority students attracted to and retained in computer and information science and engineering disciplines. Eligible institutions must be minority institutions (defined by significant percentages of minority students). The program considers a variety of activities, including research programs involving minority students, curriculum development projects, mentoring, and outreach. Both 1-year planning grants and continuing grants of up to 5 years in duration are awarded. Significant matching for the latter (usually 25 percent) is expected.

Also, NSF's Social, Behavioral and Economic Sciences Directorate grant to the Council on Competitiveness will form a new public-private partnership to encourage more young people, especially women and minorities to pursue science and engineering careers.

Senator BOND. Thank you very much.

Yes, Dr. Kelly.

Dr. KELLY. Let me just say there that there is a board task force working on this issue. It is chaired by Joe Miller, former Chief Technical Officer of DuPont. This is a longer-run study, but specifically on this subject.

NUCLEAR ENGINEERING EDUCATION

Senator BOND. Thank you.

Last year, Dr. Colwell, you will remember I raised concerns about the lack of Federal support for nuclear engineering education, and we asked NSF to review the academic interest in nuclear engineering. We just last week received the report, and the review of it was disappointing. There is a recognition that the demand for nuclear trained personnel is on the rise, but NSF has not provided any concrete recommendations on how it will respond.

What can be done in this particular area? I would ask you, Dr. Colwell.

Dr. COLWELL. We have had very, very recent discussions on just this subject. The engineering directorate is keenly aware of the lack of trained, skilled talent in this area, and we are looking to programs for workshops and for education, the kinds of programs as in the technological arena. That is, we need to find some way to fast forward the training of these kinds of people.

TOP 50 INSTITUTIONS VERSUS LOWER

Senator BOND. Finally, I do not want to be against prestigious institutions of higher education. I have had some association with them in the past. But NSF has been hung with the charge of favoring only the very well-known and well-established ones. At least we maintained flat funding for EPSCoR, but the administration eliminated funding for the Office of Innovation Partnerships, which is important to me, and it flat funded programs for minorities, such as HBCU's and the tribal colleges. Can you offer a rationale for that?

Dr. COLWELL. Well, I would like to point out first some of the successes that we have had. In the instrumentation program, we have, in fact, been able to fund $25 million. We had proposals for $50 million, so clearly there is an unmet need out there.

Also in the Partnerships for Innovation, we have found that 52 percent of the funds did go to the top 50, but 25 percent of the funds were awarded in the 51 to 150, and then 23 percent of the funds, $876 million, was awarded to institutions not in the top 150 receiving funds. So, obviously, this program is working.

The EPSCoR program is highly successful—$65 million. We are finding that the principal investigators in the institutions are now competing very successfully, going from 25 percent success rate in their applications to 28 percent. That means they are approaching 33 percent which is the average success rate for all principal investigators. We are making progress, sir.

Senator BOND. Dr. Kelly.

Dr. KELLY. But having to redirect $110 million of the education budget did not make the answers to your questions easier.

Senator BOND. What the administration has directed, it is possible for the legislature to undirect.

I thank you, Dr. Colwell, for your very quick and sharp and to-the-point responses.

Thank you, Madam Chair.

Senator MIKULSKI. Thank you, Senator Bond.

We are really going to bring the hearing to a close because the votes will begin. Senator Daschle has just assumed the responsibility and we want to be able to move to the floor.

Dr. Colwell, Dr. Kelly, and of course, Dr. Boesz, we want to thank you for your testimony. We want to reiterate many of the specific questions that both Senator Bond and I asked.

Know this. I do not believe we have a worker shortage in this country. I believe we have a skill shortage in this country. We have the people, but we need to really make sure that they have the skills or the passion to pursue this. See, I believe now that every career is a science career. If you are a fire fighter or you are a police officer, you are using technology. Right now there is someone who might not be getting the Nobel Prize in biomedicine, but she is giving the mammogram that is going to save lives. So, every job right now requires technology.

This is why we are very passionate about your educational initiatives. I would like to know from the National Science Foundation what they are doing to make sure we do not have a digital divide in the United States of America and your work with other agencies on this. Then we will be able to talk about some of these other issues. You know my very keen interest in the biotech and the nanotech and infotech initiatives.

ADDITIONAL COMMITTEE QUESTIONS

We really look forward, though, to very close collaboration between yourselves, the Department of Education. We have a lot of confidence in Secretary Paige. We have met with him and admire what he has done in Texas. We hope it goes to the Nation. We do believe education has to be as research driven as medicine. So, we really encourage the NSF to take the leadership in coordinating with Education and NIH so that what we do is really research based and we maximize our resources.

[The following questions were not asked at the hearing, but were submitted to the Foundation for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO THE NATIONAL SCIENCE FOUNDATION

QUESTIONS SUBMITTED BY SENATOR BARBARA A. MIKULSKI

SCIENCE BOARD VIEW ON THE BALANCE OF FEDERAL R&D

Question. On March 28 of this year the Board's committee released a draft report which has a number of recommendations directed at the way the Executive Branch can improve the quality of the budget allocations made for science and technology. Is this the kind of allocation the Board envisioned when it put out its priority setting report? What do you think of the balance in this R&D budget plan? Is it the kind of R&D plan that will keep this country moving ahead of our competitors? What level of investment in R&D does the Board believe is necessary to maintain the economic health of the Nation? Is the Board concerned that this Administration has yet to appoint a Presidential Science Advisor? What impact do you think it is having on the Administration's R&D process?

Answer. The report you mention has been revised following public comment and adopted by the Board as an Interim Report, Federal Research Resources: A Process for Setting Priorities (NSB 01–156). In this report the Board addresses the need for improving the process that produces the Federal portfolio for research in the Executive and Legislative branches. The Board makes several recommendations on improving advice and data to support a better process for managing the Federal portfolio of S&T investments, and in turn to achieve national goals for Federal research. The report does not take a position on level of funding or allocations for research within a specific budget.

A balanced Federal portfolio of investment in basic science is important for the health of U.S. science and technology. Balanced Federal investments in basic sciences are critical for both expanding the knowledge base and human resources for new applications in industrial and other sectors, and for enabling research applications to achieve Federal missions, including NIH research to find cures for deadly diseases.

To adequately address our role in sustaining a strong national science and technology enterprise we must significantly increase our investment in basic research. As I have testified before, we are seriously underfunding basic science across the frontiers of knowledge. The doubling strategy for civilian research by 2010, supported by the Senate under the Federal Research Investment Act, is an important contributor toward achieving sufficient Federal support. Even though our national investment in R&D has increased, the Federal share of that investment has been steadily declining from two-thirds to slightly above one quarter of the total. The Federal role in our national research enterprise is unique in many respects and cannot be taken over by the private sector. We must not only assure that the overall Federal budget for research is sufficient, but also that funds are allocated to research activities so as to serve national goals for Federal research investments.

It is critically important that decisions on Federal support for research be informed by the best science and technology review, evaluation and advice. A credible process for scientific input to funding decisions for research must include an effective role for the Science Advisor in the annual budget process, supported by adequate resources inthe Office of Science and Technology Policy. The Board is pleased that President Bush has nominated Dr. John Marburger to be director of the Office of Science and Technology Policy and we look forward to his confirmation by the Senate this fall.

SCIENCE BOARD ON NSF SUBMISSION TO OMB

Question. Dr. Kelly, it is my understanding that the Board normally reviews the budget proposal the Foundation intends to submit to the Office of Management and Budget at its August meeting. Then after Labor Day, the Foundation sends its proposal over to OMB. Is the budget we have before us anything like the budget proposal you presumably saw back in August? Can you give us a sense as to how it is different? Dr. Kelly, you said in your testimony the Board approves and supports this budget. Can you say the same about the Administration's outyear budgets for NSF which project it growing at about 2 percent per year for the next five years?

Answer. The National Science Board is kept well informed and plays an integral part in the budget development process. Normally at its March meeting, the NSB discusses and analyzes issues and offers guidance on establishing priorities. NSF incorporates Board discussions into a construct for the budget, which is discussed at the May Board meeting. NSF then incorporates these discussions from the May meeting into a budget call for detail information from the program officers. Finally the NSB approves the budget in August, prior to its submission to OMB in September. Because fiscal year 2001 was a Presidential transition year, the fiscal year 2002 NSF budget was not submitted to OMB until January 2001. Nevertheless, the National Science Board was kept informed as the budget advanced to its final presentation.

With very few exceptions, all discretionary programs are treated exactly the same concerning funding projections in the outyears.

NANOSCIENCE AND TECHNOLOGY

Question. I am very interested in the nanoscience and technology programs. For example, being to literally design systems or devices atom by atom—that could improve drug delivery or function as miniature sensors for early detection of cancer-is the kid of cutting edge research that will keep this Nation not only winning the Nobel Prizes, but also the new global markets of the future. Tell us how you see this program developing—where will you place your emphasis and how will you work with the other agencies like NASA and DOD who also are players in this program.

Answer. The NSF goals are: to create a vigorous, interdisciplinary activity for fundamental research in discovering novel phenomena, processes and tools in nanoscale science; to develop new synthesis methods, device concepts and system architecture appropriate to the unique features and demands of nanoscale science and engineering; to establish a balanced and flexible physical infrastructure; and to educate the workforce needed to exploit the opportunities presented by these new capabilities. NSF has been a pioneer at the national and international level in fostering the development of nanoscale science and engineering. NSF, in conjunction with other Federal agencies will be hosting a Nanotechnology event on September 13, 2001. This is another example of the high priority accorded by NSF to the nanoscale science and engineering arena.

In future years, the NSF investment will develop and strengthen research and education in nanobiotechnology, new structures and phenomena, system architecture, environment, modeling and societal implications. In brief, NSF seeks the following outcomes in the next five years:

Outcomes of the Investment	Targeted date
Fundamental discoveries addressing nanoscale structures, phenomena and quantum control; biosystems at nanoscale, novel device and system architecture, nanoscale processes in the environment, and multiscale-multiphenomena theory, modeling and simulation. Enhanced understanding of the distribution and behavior of nanoscale structures throughout the earth, atmosphere and oceans. Provide augmented research and development in fundamental research, grand challenges, infrastructure, education and nanotechnology societal impacts in response to open competitive solicitations and regular program reviews.	Fiscal year 2002–06
Establish ten new centers and a national network with full range of nanoscale measurement and fabrication facilities. In collaboration with other agencies, establish ‘‘vertical centers’’ where fundamental research applied research, technology development, and prototype construction or clinical evaluations can be pursued concurrently.	Fiscal year 2002–04
Foundations for major long-term challenges: nanostructured materials by design, nanoscale electronics, optoelectronics and magnetics, nanoscale-based manufacturing, catalysts, chemical manufacturing, environment and healthcare. Fiscal year 2002–06 Begin focused research on nanoscale experimental tools and manufacturing at the nanoscale level. Fiscal year 2002 Support for instrumentation and facilities for processing, characterization and manipulation at nanoscale, and for equipment and software for modeling and simulation. Nanotechnology Experimentation and Testing Facility (NEXT) will address scale-up of synthesis of nanostructures, characterization facilities with new instrumentation beyond the state-of-the art, new models and simulation techniques, device fabrication and testing for manufacturing methods.	Fiscal year 2003–06
Foster the development of an education, training and information system and databases specifically for nanoscience and engineering, which will be available to the community at large to serve rapid development of research education in the field.	Fiscal year 2003–06
Regional centers of universities, government laboratories, and industry to cultivate exploratory research, shared research in critical areas, education, and information flow.	Fiscal year 2003–06
Develop quantitative measurement methods for nanodevices, nanomanipulation, nanocharacterization and nanomagnetics. Develop three-dimensional measurement methods for the analysis of physical and chemical at or near atomic spatial resolution.	Fiscal year 2004
Ensure that 50 percent of research institutions’ faculty and students have access to full range of nanoscale research facilities.	Fiscal year 2005
Enable access to nanoscience and engineering education for students in at least 30 percent of research universities.	Fiscal year 2005
Catalyze creation of several new commercial markets that depend on three-dimensional nanostructures.	Fiscal year 2005
Develop three-dimensional modeling of nanostructures with increased speed/accuracy that allows practical system and architecture design. Fiscal year 2005 Nanoelectronics: first terabit psi memory chip demonstrated in the laboratory.	Fiscal year 2006
Enable manufacturing at nanoscale for three new technologies. Fiscal year 2006 Monitoring contaminants in air, water, soils with increased accuracy for improving environmental quality and reduce emissions.	Fiscal year 2006
Address societal implications of nanotechnology	Fiscal year 2006
Prototypes for biomimetic thinking is probably the derivation of artificial neural networks as an outgrowth of studying the cellular organization of the brain. After 2006 Prototypes for incorporation of biological molecules into otherwise electronic devices, mimicking biological structures in fabricated devices, and the incorporation of lessons learned from biological signal processing into the logic of electronic systems.	After 2006

Outcomes of the Investment	Targeted date
Nanoscale measurements on microsecond time scales to provide a blueprint for the development of nanomachines and synthetic molecular processors that carry out complex functions.	After 2006
Improve human performance by combining molecular based technologies	After 2006
Photovoltaic proteins in plants that extract electronic energy from light energy, or insect hearing organs 1 mm apart that have highly directional sound source localization sensitivity, as models for, or components of nanosystems that accomplish other functions.	After 2006

Another major goal is developing synergism through partnerships. NSF will collaborate with other agencies in reaching its goals, according to the mission and interest in nanotechnology of each agency:

Agency (in order of fiscal year 2001 investment)	NSF	DOD	DOE	NIH	NASA	NIST	EPA	Agencies [1]
Fundamental research	x	x	x	x	x			
Nanostructured materials	x	x	x	x	x	x	x	x
Nanoscale processing and manufacturing (Ex: chemical fabrication, devices, systems, lab-on-a-chip, measurements and standards; manufacturing user facilities)	x	x	x	x	x	x		x
Electronics and computer technology (Ex: molecular electronics, spin electronics, quantum computing)	x	x	x		x	x		x
Flight and space crafts (Ex: unmanned missions, nanorobotics, safe materials)	x	x	x		x			
Energy conversion and storage (Ex: efficient solar energy, hydrogen storage)	x	x	x		x			x
Biotechnology and agriculture (Ex: biosensors, bioinformatics, bioengineering)	x		x				x	x
Medicine and health (Ex: disease detection, drug delivery, organ replacement)	x	x	x	x	x			
Environment and sustainable development (Ex: water, energy, food, env. management	x		x		x		x	x
Nanoscale theory, modeling and simulation	x	x	x		x			x
Education, training and societal implications	x	x		x				
Technology transfer, global trade and national security	x	x	x	x	x	x	x	x

[1] Agencies with <$5M/y in fiscal year 2001: DOA, DOJ, DOT, DOTreas, DOS, NRC.

ASTRONOMY REVIEW

Question. We understand the President has called for a blue ribbon panel to review Federal support for astronomy and astrophysics. Specifically the panel will be asked to consider the pros and cons of transferring NSF's astronomy programs over to NASA. What caused the Administration to call for such a blue ribbon panel and when is the panel expected to release its recommendations? Has there ever been a case in NSF's history before where the Administration has given this much thought to transferring an entire scientific discipline away from the NSF to another agency?

Answer. In the President's fiscal year 2002 budget to Congress for the National Science Foundation, the Administration identified "three management reform opportunities that will help fulfill the President's promise to make Government more results-oriented." One of those areas for reform is titled "Reorganize Research in Astronomy and Astrophysics".

Historically, NASA has funded space-based astronomy and NSF has funded ground-based astronomy facilities, as well as astronomy research proposals. Over the past decade there have been significant changes in the funding from each agency as reported in "Federal Funding of Astronomical Research" from the National Research Council (National Academy Press, 2000). The National Research Council also recently released the latest decadal survey of the state of the field and recommendations for the first decade of the 21st century: "Astronomy and Astrophysics in the New Millennium" (National Academy Press, 2001). With these reports in hand, the Administration concluded that now is the time to assess the Federal government's management and organization of astronomical research.

Thus NSF and NASA requested that the National Academy of Sciences convene a Blue Ribbon Panel to assess the organizational effectiveness of Federal support of astronomical sciences and, specifically, the pros and cons of transferring NSF's astronomy responsibility to NASA. In response, the National Research Council established the Committee on Organization and Management of Research in Astronomy and Astrophysics. The Committee is directed to report by September 1, 2001.

To our knowledge there has never before been a case where an Administration has given such high level attention to transferring an entire scientific discipline away from the NSF to another agency.

Question. Dr. Kelly, the Science Board has in recent years sought to take on science policy issues that were not just limited to the Science Foundation. This astronomy matter would seem to fit that category. What role do you expect the Board to play in this review?

Answer. In response to the Administration's request for an external review, a National Research Council committee has been charged with evaluation of Federal support for astronomy and astrophysics and to consider the pros and cons of transferring NSF's astronomy program over to NASA. It would be inappropriate for the Board to comment prior to the issuance of the report by the Blue Ribbon Panel appointed to undertake the review, scheduled for September 1, 2001. The Board will work with the Director on any action necessitated by the findings of the Blue Ribbon Panel, within the guidance provided by Congress and the President.

DECADAL STUDY IN ASTRONOMY AND ASTROPHYSICS

Question. Recently the National Academy of Sciences released a report entitled, Astronomy and Astrophysics in the New Millennium. Would you outline the major recommendations made in the study and NSF's plan and budget plan for responding to the report's recommendations and priorities. Assume, for the sake of this question, that NSF will retain its current responsibilities with respect to supporting astronomical research.

Answer.

Survey Recommendations

The most recent decadal report made a number of major recommendations that impact directly on NSF's investment in astronomy. These are:

1. The recommendation of the previous decadal survey to construct ALMA is reaffirmed.

2. In order to achieve the full scientific potential of new facilities, it is essential to identify prior to construction, funds for full instrumentation, for operations, for the timely renewal of its instrumentation, and for the support of its user base.

3. New initiatives should not be undertaken at the expense of individual research grants.

4. U.S. ground-based optical/infrared, radio, and solar facilities should each be viewed by NSF and the astronomy community as single, integrated systems. Each should be managed by NSF as a unit and coordinated by NSF's national centers in partnership with university and independent observatories, with cross-disciplinary reviews held at approximately 5-year intervals.

5. Integrate one or more "theory challenges" into most major or moderately sized new initiatives.

6. Because astronomy is among the most observationally oriented sciences, it is essential to pursue a set of new instrumentation investments for the field. Prioritized within investment-scale categories, the ground-based instruments in the largest two categories are as follows:

Major Investments.—Giant segmented mirror telescope (GSMT); Expanded Very Large Array (EVLA); Large-aperture Synoptic Survey Telescope (LSST).

Medium Investments.—Telescope System Instrumentation Program (TSIP); Advanced Technology Solar Telescope (ATST); Square Kilometer Array (SKA) technology development; Combined Array for research in Millimeter-wave Astronomy (CARMA); Very Energetic Radiation Imaging Telescope Array System (VERITAS); Frequency Agile Solar Radio telescope (FASR); South Pole Submillimeter Telescope (SPST).

NSF Response and Planning

1. ALMA Construction: The fiscal year 2002 budget requests an additional year of ALMA design and development at a level of $9M.

2. The requirement that sources of operating funds be identified in advance for new instruments has been a part of NSF's Major Research Equipment (MRE) account planning process for the better part of a decade. The MRE Guidelines will be available on the NSF website in the near future.

3. We are aware that concerns exist in the U.S. astronomical community that individual grant resources have not grown adequately over the past decade. As a re-

sult, NSF's budget proposals for the past few years have reflected a determination to enhance support in this area in all disciplines, including astronomy. The fiscal year 2001 budget of the Division of Astronomical Sciences (AST) was especially aggressive in addressing this issue, and the fiscal year 2002 budget request for astronomy also emphasizes individual research grants.

4. AST is already organized along unit-structure lines in radio and optical-infrared astronomy, and the Division's radio astronomy facilities in particular have been managed as a coherent unit since 1993. The reorganization of the National Optical Astronomy Observatory into separate solar and nighttime astronomy components, now underway, will permit a full implementation of this plan in the areas of solar and optical/infrared astronomy. Timely cross-disciplinary reviews in each area are also to be implemented.

5. Enhanced support for theoretical work connected with and helping to drive major new instrumentation projects will be included as part of the instrument-specific support which AST is planning to bring to all new facilities.

6. Of the major instrumentation investments proposed by the decadal survey in astronomy, only Phase I of the EVLA project is underway, supported by internal funding within the Division of Astronomical Sciences. Within the medium investment category, technology development for the ATST is already underway, and at least partial support of CARMA and LOFAR will likely be forthcoming.

The Division of Astronomical Sciences is examining the funding that would be required between fiscal year 2002 and fiscal year 2010 to implement the instrumentation initiatives recommended by the decadal survey.

TELESCOPE SYSTEM INSTRUMENTATION PROGRAM

Question. The highest priority in the modern cost category of the decadal study in astronomy and astrophysics is for NSF to support a telescope system instrumentation program (TSIP). The decadal study suggests that for a modest amount of support, the TSIP will provide the instrumentation and the telescope time that will enable both national and private observatories to work together as a system to maximize the research potential of these observatories within the astronomy community. Does NSF view the TSIP as a potentially effective way to maximize our public and private astronomy observatories?

Answer. Yes, NSF believes that TSIP is potentially of great value to the U.S. astronomical community. The objective of the program is to provide modest NSF investments in new instrumentation or other improvements for large new telescopes built with non-Federal funds. In return, some observing time on these telescopes would be made available to any U.S. astronomer, regardless of institutional affiliation, based on peer-reviewed observing proposals. The net result would greatly enhance the productivity of these new telescopes while making them an integral part of assets available for the entire community. This would add new capabilities to the U.S. observing "system" to supplement capabilities provided by the national observatories.

BUDGET REQUEST PROVIDES $1.5B FOR NEW AWARDS WITH ONLY A 1 PERCENT INCREASE?

Question. In the Administration's blueprint document it says the budget provides approximately $1.5B for new research and education awards in 2002. Could you explain what you mean by that particularly since the increase you are requesting is only a little more than 1 percent.

Answer. The National Science Foundation funds approximately 20,000 science, engineering, and education awards in a given year. These awards are a mix of multiyear awards that were made in previous years and new awards in the current year. Each year approximately one third of the awards made in previous years are closed, and the annual support required for the closed awards becomes available for new awards.

Question. Would you provide for the record a breakout by directorate of the amount of each year's budget that is available for new awards as well as prior year awards from fiscal year 1998 to fiscal year 2002. If there are notable differences between directorates, please explain the reasons behind such differences.

Tables containing data for fiscal year 1988 through fiscal year 2000 are shown below. Data for fiscal year 2001 and fiscal year 2002 will not be available until after the close of each fiscal year.

Directorates	Actual obligations	New obligations	Prior year obligations	Percent of new obligations
Fiscal year 1998 obligations:				
BIO	355.70	228.00	127.70	64
CISE	269.09	127.23	141.86	47
EHR	633.16	252.06	381.10	40
ENG	343.14	234.06	109.08	68
GEO	438.02	140.47	297.55	32
MPS	687.24	251.41	435.83	37
OPP	223.01	24.74	198.27	11
IA	129.84	12.03	127.81	2
SBE	126.58	77.90	48.68	62
Grand Total	3,205.78	1,337.90	1,867.88	42
Fiscal year 1999 Obligations:				
BIO	392.10	281.12	110.98	72
CISE	298.55	133.48	165.07	45
EHR	662.48	293.00	369.48	44
ENG	370.13	240.61	129.52	65
GEO	478.02	169.05	308.97	35
MPS	733.65	255.00	478.65	35
OPP	245.57	39.95	205.62	16
IA	161.55	3.20	158.35	2
SBE	142.02	84.75	57.27	60
Grand Total	3,484.07	1,500.16	1,983.91	43
Fiscal year 2000 Obligations:				
BIO	418.29	271.40	146.89	65
CISE	388.57	206.24	182.33	53
EHR	683.58	315.72	367.86	46
ENG	379.82	265.27	114.55	70
GEO	487.64	178.74	308.90	37
MPS	755.88	319.47	436.41	42
OPP	258.33	40.00	218.33	15
IA	129.25	22.53	106.72	17
SBE	162.12	74.32	87.80	46
Grand total	3,663.48	1,693.69	1,969.79	46

The majority of NSF awards are made through the utilization of either standard or continuing grants. Standard grants are those under which NSF agrees to fully fund the award in a single fiscal year. Standard grants normally have a duration of 6 to 60 months. Continuing grants are those under which NSF agrees to fund the award in increments over more than one fiscal year, pending the availability of funds. Continuing grants normally have a duration of 18 to 60 months.

There are some notable differences between the directorates. The reasons behind these differences lie primarily in directorate priorities and policies. NSF Assistant Directors are given some flexibility in deciding the appropriate mix of standard and continuing grants. NSF management regularly considers this issue and periodically receives input from NSF advisory committees concerning this topic.

SUPPORT FOR MINORITIES IN SCIENCE AND ENGINEERING IS FROZEN

Question. The budget emphasizes support for people as your “most important product”. And the “cross cut” and numbers seem to back that up with an increase of nearly 13 percent over the fiscal year 2001 level. Yet, when we look at the support for minority programs within this particular area of the budget, the funding is frozen with last year. That would seem to say that the Administration does not believe this part of the human resource crosscut is a high priority. What is behind this particular proposal?

Answer. The NSF Budget for fiscal year 2002 attempts to balance various competing priorities, with the Math and Science Partnerships Initiative and graduate student stipends receiving the highest priority within the EHR account. Implementing these priorities required a modest reduction in the Human Resource Development (HRD) subactivity. We limited that reduction to only 0.3 percent ($0.25 million) in reflection of the strong Congressional support expressed for programs in this area.

Partnerships represent a significant part of NSF's strategy. A major goal of Partnerships will be to close K–12 achievement gaps between minority and other students, so that minority students can go to college ready to participate fully as science, mathematics, engineering and technology (SMET) majors. Partnerships build on NSF's systemic programs, which have had great success.

Administrative changes within HRD will result in greater leveraging of funds and more effective allocation of funds to increase significantly the measurable impact of programs. The Historically Black Colleges and Universities—Undergraduate Program (HBCU–UP) has been re-focused to devote attention to those institutions most in need of assistance, to strengthen the quality of their academic programs and enhance the ability of their faculty to offer high quality instruction. The Alliances for Graduate Education and the Professorate (AGEP) program now supports only graduate education alliances of university consortia or entire university systems, rather than individual institutions, significantly increasing the impact of programmatic activities. And plans are underway to re-structure the Centers for Research Excellence in Science and Technology (CREST) program to emulate the successful Experimental Program to Stimulate Competitive Research (EPSCoR) strategy of combining core support with active co-funding of proposals submitted to NSF's other research programs.

DIGITAL DIVIDE AND HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

Question. According to a new report from the Thurgood Marshall Scholarship Fund (entitled "Historically Black Public Colleges and Universities: An Assessment of Current Information Technology Usage" released on April 10, 2001), historically black public colleges and universities are going to need about $700 million over the next five years to meet their information technology goals. According to the study, the real "digital divide" here is the way information technology is provided—or not provided, as the case maybe—to the students as a part of their education. What can the Foundation do to help these institutions strengthen their programs so that the students would gain better access and experience with the information technology skills they will need in today's global marketplace?

Answer. NSF's Directorate for Computer and Information Science and Engineering (CISE) is uniquely positioned through its history of support for minority institutions, its role as the lead agency in the Information Technology Research effort, and its history of computational and communication infrastructure support for all fields of science and engineering. CISE can provide leadership in developing programs that will ensure not only access to state-of-the-art information technology, but also that the IT infrastructure is a centerpiece of new curriculum developments, workforce, and outreach programs. Currently CISE is developing a cyberinfrastructure initiative to address the needs of education and society, as well as researchers, for access to advanced computing, communication and data resources. A primary goal of the cyberinfrastructure initiative is to increase the capacity for IT research and education at colleges and universities, with particular attention paid to minority serving, women's and EPSCoR institutions.

As an example of current CISE efforts, two programs are aimed at providing research and educational infrastructure and increasing the number of students exposed to and pursuing degrees in information technology fields. Both are relatively modest programs; one is new and one has existed for over ten years. The existing program, the CISE Minority Institutions Infrastructure (MII) Program, provides awards to aid efforts to expand significantly the numbers of minority students attracted to and retained in computer and information science and engineering disciplines. The MII program supports the purchase of instrumentation, software, systems and other resources required for research and education in CISE related fields. It also provides support for faculty to develop new programs and curriculum, for students, for mentoring and outreach programs, and other activities that help improve recruiting and retention. Among the institutions supported are many HBCU institutions as well as other minority-serving institutions. Current grantees include Bowie State University; Clark Atlanta University; Tuskegee University; Florida A&M University and North Caroline A&T University. Previous grantees included Fisk College; Morgan State College; the University of Maryland-Eastern Shore, and many others. MII provides planning grants as well as five-year major awards. The new CISE Research Resources program is open to all colleges and universities, but strongly encourages proposals from women, minorities, persons with disabilities, minority institutions and researchers in EPSCoR jurisdictions.

The Historically Black Colleges and Universities—Undergraduate Program (HBCU–UP) led by the Directorate for Education and Human Resources (EHR) supports efforts by the Nation's HBCUs to implement a plan of action to address under-representation in the science, mathematics, engineering and technology (SMET) disciplines and workforce. HBCU–UP provides support for the implementation of comprehensive institutional approaches to strengthen SMET teaching and learning in ways that improve access to, retention within, and graduation from, SMET academic programs.

In order to increase knowledge of and facility with advanced technologies in HBCUs, the Foundation will incorporate within HBCU–UP lessons learned this year in making the first set of awards under the Tribal Colleges and Universities Program (TCUP). A key component of TCUP is the development of a strong technological foundation for high quality SMET education. The TCUP program provides assistance to eligible institutions to bridge the digital divide and prepare students for careers in information technology and SMET. Applications for grant support under the HBCU–UP program may now also reflect this emphasis.

The Foundation will also strengthen coordination of activities that provide technologically focused assistance to HBCUs and other Minority Serving Institutions. These include grants by the Foundation to:

—the Council on Competitiveness (0110028) to initiate implementation of the recommendations of the Congressionally chartered Commission on the Advancement of Women and Minorities in Science, Engineering, and Technology;
—EDUCAUSE (9980537) in support of Advanced Networking at Minority Serving Institutions; and
—the Information Technology Association of America (0128850) to assist in the development and implementation of customized campus technology development plans and provide knowledge enhancements to faculty, students, and administrators.

The National Science Foundation has a number of other programs that address the IT infrastructure needs of minority serving institutions. Examples include: the NSF-wide Major Research Instrumentation Program; the Centers of Research Excellence in Science and Technology (CREST) and the Louis Stokes Alliances for Minority Participation (LSAMP) programs in the Directorate for Education and Human Resources (EHR); and the Collaborative Integration of Research and Education (CIRE) program in the Office of Integrative Activities (OIA).

ELIMINATION OF INNOVATION PROGRAM FOR SMALLER INSTITUTIONS

Question. In the fiscal year 2001 appropriation, this subcommittee provided NSF with $10 million to support a program NSF is calling partnerships for innovation. One of its objectives is to help in the transfer of research results into innovations that create new wealth in the local and regional economy. Recently, the Council on Competitiveness released a report assessing the Nation's competitiveness. Once of the issue the Council raised was a call to strengthen "regional clusters of innovation". What role do you think the Foundation could play in this regional innovation effort?

Answer. The results from the projects supported through the two competitions under the Partnerships for Innovation Program will certainly contribute to the utilization of new scientific knowledge by regional clusters of innovation. For example, the Microelectronics and Photonics Innovation Incubator in Arkansas, established under the award to the University of Arkansas, and that includes as partners several venture capital firms and the Arkansas Science and Technology Authority, will facilitate the utilization by industry of new knowledge generated at the University. However, NSF also has a variety of other programs that could contribute substantially to the regional innovation effort.

An Integrative Graduate Education and Training (IGERT) grant, also at the University of Arkansas, is providing for the multidisciplinary education of Ph.D.s in the area of microelectronics and photonics, with many of the graduate students having come from industry and intending to return to new jobs there. A new Materials Research Science and Engineering Center at the University of Arkansas (in partnership with the University of Oklahoma) features an interdisciplinary research program on semiconductor nanostructure science and applications, an area of substantial interest to industry.

The Advanced Technological Education (ATE) Program is improving the education of the technicians who are so essential to the high technology industry; and the ATE centers involve close collaborations with local and national industry. For example, the Maricopa ATE Center in Tempe, AZ works closely with SEMATECH and the Semiconductor Industry Association in workforce development for the electronics industry, and also has programs for high schools to encourage a more diverse population to seek employment in the semiconductor and supporting industries.

The Industry/University Cooperative Research Centers (I/UCRC) Program contributes very substantially to the translation of research results into products and supports centers across a very broad range of institutions. One I/UCRC at a smaller university is the Center for Lasers and Plasmas for Advanced Manufacturing at Old Dominion University. NSF's Science and Technology Centers also contribute to innovation clusters.

One of the existing clusters of innovation that will be studied by the Council of Competitiveness is the Research Triangle area of North Carolina, where NSF's Science & Technology Center for Environmentally Responsible Solvents & Processes is located. The center, which involves the University of North Carolina, North Carolina State, and North Carolina A&T University as well as a number of industrial partners, is producing technological advances absolutely critical to the future of the chemical industry.

NEW SCIENCE BOARD COMMITTEE ON BUDGET AND STRATEGY

Question. Dr. Kelly, I understand that earlier this year the Board had its annual retreat and one of the items growing out of the process is the establishment of a new Board committee on budget and strategy. Can you tell us how you expect that committee to operate and how it dovetails with the budget responsibility of the Director?

Answer. Among NSB's most important responsibilities are the provision of budget guidance to the Foundation and the approval of the annual NSF budget submission to OMB. The NSB Standing Committee on Strategy and Budget (CSB) was established on May 23, 2001 with the objective of improving the Board's effectiveness in the NSF strategic budget process. The CSB is charged with making recommendations to the full NSB for the approval of strategic NSF budget directions and for the approval of the NSF budget submission to OMB. The CSB will analyze the Foundation's budget with respect to progress and consistency against strategic directions for the Foundation; identify strategic, long term issues that are critical to NSF's future; review the budget from the perspective of balance between initiatives and core programs; and take a multi-year view of strategy implementation. The Board with the assistance of CSB, under the leadership of Dr. Anita Jones, Vice Chair of the National Science Board, works closely and cooperatively with the Director, NSF to ensure these important objectives are met. The Committee is in the process of establishing its work processes.

MATH/SCIENCE SYSTEM REFORM PROGRAM EVALUATION

Question. It is my understanding that over the last year or two, there has been a pretty extensive evaluation of the NSF's systemic reform programs. Can you highlight briefly what those evaluations have concluded about the effectiveness of the systemic reform programs? Dr. Kelly, what is the Board's view with respect to these NSF systemic reform programs?

Answer. Preliminary findings from the most thorough evaluative study to date of the Urban Systemic Initiatives (USI) covering the initial five years (1993–98) were just released this summer. The report is entitled Academic Excellence for All Urban Students: Their Accomplishment in Science and Mathematics (Systemic Research, Inc., April 2001). This report presents preliminary findings related to improved student outcomes and system change among 22 large urban school districts. Findings related to improved student outcomes include: (1) substantial increases in enrollment rates in mathematics and science gate-keeping and higher-level courses; (2) greater enrollment gains for underrepresented minority students than their peers; (3) achievement test gains; and (4) increased numbers of students taking college entrance examinations (AP, SAT, and ACT). The general conclusion is that education reform is a complex, long-term process that requires simultaneous changes in expectations, policies, curriculum, assessment, professional development, student support systems, data use, and the allocation of resources. The Executive Summary and a downloadable version of this report are available at http://www.systemic.com/usi/booklet.htm.

A second report was released last fall detailing the lessons that have been learned from Statewide Systemic Initiatives (SSI). The report was entitled Summary of Findings from SSI and Recommendations for NSF's Role with States: How NSF Can Encourage State Leadership in Improvement of Science and Mathematics Education (Council of Chief State School Officers—CCSSO, December 2000). The report indicates that half of the states showed impacts on classroom practice, with the highest gains in achievement occurring in states with intensive professional development linked to curriculum. A PDF copy of this report is available at http://www.ccsso.org/pdfs/SSIReport.pdf.

Question. Dr. Kelly, what is the Board's view with respect to these NSF systemic reform programs?

Answer. The process of evaluation of our systemic reform programs is ongoing, with the most recent report, Academic Excellence for All Urban Students: Their Accomplishment in Science and Mathematics, published in April 2001. The evaluation is finding a rich array of evidence on positive impacts of NSF's systemic programs. NSF has had considerable success in fostering improved teaching and learning of mathematics and science because it promotes various models that support diverse populations and schools. In Detroit, El Paso, Memphis, Chicago, and other cities, there are dramatic signs of improvement in student performance (as measured, for example, by proficiency levels in state science and mathematics assessments). I believe we are beginning to see light at the end of the tunnel of public education and NSF, together with many public and private sector partners, is helping to make this happen system-wide and for all children. However, it is important to understand that the process is slow and complex. The political and public expectations for change may be somewhat unrealistic. Impatience, as well as a flawed design, can undermine the course of steady reform. The Board has concluded that systemic reform programs have been very effective and should be further encouraged, and that efforts should be taken to educate the public on the complexity and long-term commitment required for success of such reforms.

IMPACT OF NEW MATH/SCIENCE PARTNERSHIP PROGRAM ON CURRENT NSF PROGRAMS

Question. The budget requests $200 million to start a new Partnership program in math and science education though you will have to redirect $110 million of your existing education budget from on going education programs to fund this initiative. For the record, list all the currently active awards being funded by the subactivities that will be reduced to fund the new Partnership program. For each award include how much the project expected to receive in fiscal year 2002 based on the NSF award agreement and how much it will actually receive based on the current fiscal year 2002 budget proposal.

Answer. To fund the Math and Science Partnerships Initiative (MSPI), funds will be redirected within the PreK–12 subactivity. All awards made in fiscal year 2001 and earlier in this subactivity will be funded in accordance with the original award agreements, and no funds will be cut from these awards (either from the initial award amount or from future continuing increments). The only funding redirected for MSPI was that set aside for new awards in fiscal year 2002.

Question. Your budget proposal suggests that in addition to the funds requested, NSF will have access to an estimated $144 million, courtesy of the fees levied by the Federal Government for H1B visas. Of the $144M, $58.38 million is reserved for Private-Public Partnerships in K–12 education. How does this relate to the new Presidential Partnership Program? Are these funds in addition to the request for $200 million request for this new program?

Answer. The Private-Public Partnership in K–12 Education component of the H–1B funds, established by the American Competitiveness in the 21st Century Act (Public Law 106–313), supports K–12 activities in areas such as materials development, student externships, and math and science teacher professional development. These activities complement those anticipated for the Math and Science Partnership Initiative (MSPI). There is a fundamental difference in focus, however, between the two programs. Private-Public Partnerships will emphasize schools joining forces with the private sector to ensure that curricula and materials meet the needs of the workplace. MSPI, on the other hand, is a research-based program that is centered at the state and local school district level, in partnership with institutions of higher education. MSPI will mobilize the participation of mathematicians, scientists and engineers from institutions of higher education to address issues such as: raising math and science standards; providing rigorous math and science training for teachers; and creating innovative ways to reach underserved schools and students. The H–1B funds are in addition to funds requested for MSPI. The estimate of $144 million in H–1B receipts for fiscal year 2002 and 2003 appears to have been overly optimistic. The initial estimate for fiscal year 2001, $121 million, has since been revised downward to $94 million, and the actual receipts may fall short of that mark. H–1B receipts are scheduled to end in fiscal year 2003.

MATH AND SCIENCE PARTNERSHIP PROGRAMS IN THE ELEMENTARY AND SECONDARY EDUCATION ACT

Question. The Senate has passed a bill to reauthorize the elementary and secondary education programs at the Department of Education. Title II of the bill includes an authorization for the Department to improve the performance of students in the areas of mathematics and science by encouraging States, institutions of higher education, elementary schools, and secondary schools to participate in partnership programs. This is remarkably similar to the NSF new partnerships proposal. Does the NSF proposal duplicate the program being authorized for the Education Department and what is NSF's position with respect to this part of the legislation?

Answer. The Administration's Statement of Position with respect to the bills referenced above includes the following language:

Math-Science Partnerships.—The President's Budget provides funds for this program within the National Science Foundation (NSF). NSF has effectively administered other activities related to this initiative and the Administration believes that NSF's expertise will be invaluable in ensuring a successful program. The Administration therefore urges the Senate to amend S. 1 to eliminate this authority from the ESEA, enabling NSF to administer this initiative.

This accurately reflects NSF's position with respect to the legislation.

NEW MATH AND SCIENCE PARTNERSHIP PROGRAM-ROLE OF THE SCIENCE BOARD

Question. Dr. Kelly, the Board has spent considerable time on the issue of math and science education. For example, the Board held a number of field hearings last year and recently published its own report on math and science education called "Preparing Our Children: Math and Science Education in the National Interest". To what extent was the Board involved in the development of this new partnership program and how does it dovetail with the work the Board has been doing on K–12 math and science education?

Answer. The National Science Board fully supports the objectives of the new partnership initiative. The Math and Science Partnership initiative is in complete accord with the work we have been doing on K–16 math and science education policy, and with the long-term NSF investment in state, rural, and urban systemic initiatives to reform math and science education at the K–12 level. As you note, the NSB has undertaken a study of the appropriate NSF role in K–16 education, which has included field hearings and the issuance of our report, Preparing Our Children. In that report, we focus on partnerships across sectors at the state and local levels to achieve a continuum of excellence in K–16 education. Based on these efforts, the Board is developing, through its Committee on Education and Human Resources, a set of principles that will guide us in identifying appropriate activities to be included in the Math and Science Partnership initiative.

TEACHER TRAINING EFFORTS

Question. The National Commission on Mathematics and Science Teaching chaired by Senator John Glenn focused on the need to upgrade the number and quality of K–12 teachers of math and science. With the redirection of some $110 million to the new Math and Science Partnership program, according to data in the Justification of Estimates, the Foundation will support 2,000 few teachers in fiscal year 2002. Why should we start a new K–12 science education program that supports less teachers?

Answer. The need to upgrade the number and quality of K–12 teachers of math and science is well documented. Equally well documented is the need to enhance the capacity of the system to provide high quality pre-service and in-service teacher education in these fields. The anticipated drop in the number of teachers participating in NSF programs in fiscal year 2002 results from our efforts to intensify professional development for those participating in NSF programs so as to develop teacher leaders for future professional development efforts, thus enhancing the overall capacity of the system. NSF's emphasis on upgrading the capabilities of K–12 teachers of math and science continues to be strong.

GRANT SIZE AND DURATION

Question. I understand that the President has called on NSF to complete a study to determine whether increasing the average NSF grant size and duration would produce greater efficiency in the research process. When do you expect that study to be completed? What is the current size of the average grant at NSF and how has it changed over the last 10 years? How does the average NSF grant compare in size with those of other research agencies who also support university research?

Answer. The study on grant size and duration should be complete in the spring of fiscal year 2002. In fiscal year 2000 the average annual size of NSF research grants was $105,500, up from $70,500 in 1991. The average NIH grant, comparable in many ways to the NSF research grant averaged $250,000 per year in fiscal year 2000. We are in the process of collecting information on other agencies' research grants, but an initial review of other agencies involved in funding academic research indicated that in many cases the grants may be at least twice the size of grants provided by the National Science Foundation.

FUNDING RATES

Question. NSF funds about one third of the proposals it receives in a given fiscal year—that is 10,000 awards based on 30,000 proposals. Foundation-wide what percentage of the proposals you receive each year are judged of sufficient quality to be funded and of that amount, how much excellent science goes unfunded each year?

Answer. About two thirds of the proposals received each year are of sufficient quality to be funded. About $1 billion worth of high quality proposals goes unfunded each year.

REBUILD OF THE SOUTH POLE STATION

Question. Can you give us a status report on the work going on at the South Pole. I see the budget requests no new funds for the project in fiscal year 2002. The most recent quarterly report by the NSF Inspector General says that NSF and its Office of Polar Programs is updating and refining the estimate of the cost to completion. Provide the committee with the most up to date estimate and compare and contrast that new estimate with the estimate provided to the committee and contained in the so-called "Augustine Report". Where are we with respect to the schedule and budget?

Answer. There are two projects for rebuilding South Pole Station: South Pole Safety and Environment Upgrades (SPSE) and South Pole Station Modernization (SPSM). SPSE was funded for $25 million in fiscal year 1997 and includes new fuel storage, garage/shops, and power plant facilities. All three facilities are operational, and SPSE is complete except for minor punch list items, which are scheduled for completion by January 2002. Approximately $24.7 million has been spent and the cost to complete is estimated at another $300,000. This will put the project on budget at a completed cost of $25 million.

The second component of rebuilding South Pole Station is South Pole Station Modernization (SPSM). Congress appropriated $127.9 million from fiscal year 1998 through fiscal year 2001 for SPSM. The project includes new science, living, operations, and communications facilities. Approximately $54 million has been obligated to date. Because of unusually bad weather during the fiscal year 2001 operational season, only about 60 percent of the scheduled air logistics support for SPSM were completed. The project is approximately one million pounds behind schedule in delivering material from McMurdo Station to the South Pole. The construction and logistics schedule has been revised to spread the logistic shortfall and related construction activities over the next four years. This rescheduling has resulted in extension of the project by one year. The project is now scheduled for final acceptance and dedication in January 2006, instead of January 2005. A detailed analysis of all remaining activities (design, procurement, logistics and construction) to complete the project is 95 percent complete. Minor adjustments to the construction and logistics schedule are still required to fully identify the impacts of the cargo delivery shortage. The cost-to-complete estimate will factor in the one year delay, increases on fuel cost, changes in inflation rates, and all other known factors. Based on the 95 percent level of completeness of the analysis, we are anticipating a small increase in the total project cost. That remains an unknown until all adjustments are made to the construction and logistics schedule. We will inform the Committee of the results of the cost-to-complete analysis as soon as it is completed, possibly in early fall.

The "Augustine Report" recommended a budget of $120M (FY 1997 dollars) for the SPSM project with completion in 2005. When inflated the $120M is approximately equal to the $127.9M budget. As stated above, because of poor weather in fiscal year 2001 the completion date has been delayed by one year to 2006.

IG AND WHITE HOUSE CRITICAL OF NSF MANAGEMENT OF CONSTRUCTION PROJECTS

Question. I understand the Inspector General has been reviewing the situation with respect to the management of large-scale construction projects at NSF. A key recommendation they have made called on NSF to develop policies and procedures specifically focused at managing these large-scale projects. It seems that the White

House shares this same concern. In recent years, the number of construction research projects have grown and the resources going for these kinds of projects is quite substantial. What is the timing on the completion of this new construction management regime and what role is the Board playing in this oversight area?

Answer. Currently, NSF invests over $1 billion annually in facilities and other infrastructure projects. Over time, the portfolio of facilities has grown and diversified to include distributed projects that challenge traditional management and oversight approaches. Emerging multidisciplinary science and engineering (S&E) opportunities have resulted in NSF moving towards a greater number of large projects that are increasingly complex and present challenging technical and management issues. Given the increasing complexity and scope of its facilities, NSF recognizes the need to mitigate attendant risks by ensuring that management and oversight benefit from contemporary best practices. Improving coordination, collaboration and learning among NSF staff and external partners enables this. To this end, and to comply with instructions in A Blueprint for New Beginnings: A Responsible Budget for America's Priorities (February 2001), NSF has developed a plan for the management and oversight of large facility projects.

The plan outlines NSF's goals and strategies for integrating its current procedures and processes into a next-generation system for selecting, managing and overseeing large facility projects. It addresses improvements in four critical areas:

—Enhance organizational and staff capabilities and improve coordination, collaboration and learning among NSF staff and external partners.
—Implement comprehensive guidelines and procedures for all aspects of facilities planning, management, and oversight.
—Improve the process for reviewing and approving large facility projects.
—Practice coordinated and pro-active oversight of facility projects to ensure success.

The Plan has been reviewed by OMB, NSF's Assistant Directors, the Office of Inspector General, and the National Science Board (NSB). On August 9, the NSB Committee on Programs and Plans heard an updated and revised report from the Deputy Director. The Committee was pleased with the framework and the elements set forth in that presentation and encouraged NSF Management to proceed with its development.

NSF recognizes the importance of improving its systems for selecting, managing and overseeing its large facility projects and has devised an aggressive schedule for developing and implementing each of the major components of an improved system, some aspects of which are already underway. The NSB will assess NSF's progress in implementing the elements of the plan.

The National Science Board has an extensive process for the oversight of facilities and the Board is well positioned to exercise this responsibility. Members of the National Science Board include executives from industry and presidents of universities, individuals who have extensive experience in managing large, cutting edge research facilities and instrumentation. The NSB exercises oversight of large facilities primarily through two standing committees that make recommendations to the full Board. The Committee on Programs and Plans (CPP) reviews MRE projects at various stages of their development. It makes recommendations to the Board for approval of a candidate list for inclusion in future budgets, for approval of specific projects, and finally, for awards to fund those projects. The Board receives regular status reports on major facilities projects. Through its committee on Audit & Oversight (A&O), NSB reviews specific management issues related to large projects. Also through the A&O Committee, NSB supervises the Inspector General and maintains oversight of management policy and management concerns through this mechanism.

MRE STATUS REPORTS

Question. Provide for the record a status report on the ongoing projects that are either in or have been funded through the Major Research Equipment account. For each project include the cost estimate projected by the Foundation at the inception of the project as well as the most recent cost estimate. Also include the original implementation schedule along with the actual achievement of key project milestones and other pertinent information. In addition, describe the NSF management structure and process used for the implementation of each project. Include a status report and cost estimate for those potential major research equipment projects that have been the subject of substantive discussion by NSF senior management.

Answer. The table below shows the projected or actual completion dates, the original and current schedule estimates and the original and current cost estimates for each project funded through the MRE Acount.

Current and past projects:	Completion Date (projected or actual)	Original Schedule Estimate (in months)	Current Schedule Estimate or Actual (in months)	(Dollars in Millions) Original Cost Estimate	Current Cost Estimate	Total project cost, to date
ALMA Phase I	2002	36	60 [1]	26.0	41.0	32.0
Gemini	2001	126	132	176.0	184.0 *	177.0
HIAPER	2006	50	70 [1]	66.0	81.5	1.0
LHC	2006	60	72	81.0	81.0	54.0
LIGO	1999	60	58	292.0	292.0	292.0
NEES	2004	60	60	81.8	81.8	35.8
Polar Aircraft	2002	22	29	32.0	32.8	32.0
South Pole Safety & Health	2001	60	48	25.0	25.0	24.8
SPSM	2006	96	108	127.9	127.9	54.0
Terascale	2003	36	36	136.0	136.0	4.0

[1] Delay in appropriation of required funds resulted in stretchout of project schedule.

ALMA Phase I: funded in the MRE account from FY 1998 - FY 2001. In FY 2002, funding was requested in the R&RA account.

* Gemini: total construction cost was originally set at $176 million in 1991. In 1997, the project was increased to $184 million. This does not indicate an overrun, the project was re-scoped. The total U.S. contribution for the project is $92 million.

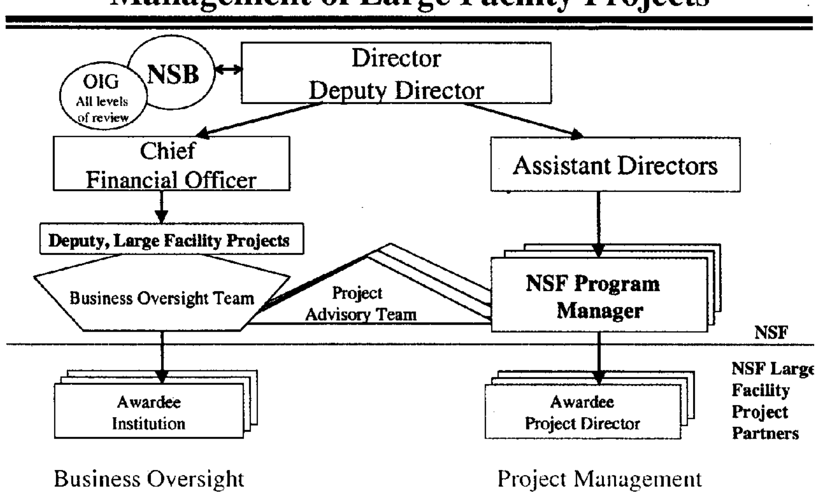
LHC: The completion date and schedule estimates are for the overall international detector completion. The money includes only the funding in MRE, which will be completed in FY 2003.

NEES: The total project cost to date includes FY 2001 funding that will be obligated by September 1, 2001.

SPSM: Cost estimates could go up 3%. All schedule overruns are due to the recent year's severe weather in the Antarctic, which has constrained delivery and construction.

The figure below depicts clear lines of authority, responsibility and communication from the NSF Director to the NSF Program Manager to the awardee Project Director. In every large facility project, the NSF Program Manager exercises primary responsibility for all aspects of project management, managing the project through either a cooperative agreement or a contract. Working closely with the NSF Program Manager, the awardee designates one person—with strong management experience—to be the Project Director, with overall control and responsibility for the project in the awardee organization.

Management of Large Facility Projects



NSF vests responsibility for monitoring business operations of large facility projects in the Chief Financial Officer (CFO). NSF personnel reporting to the CFO ensure that all policies, guidelines and procedures are followed and that the awardee is in compliance with business operations, legal and financial requirements.

Through Project Advisory Teams (PATs), individuals from the project management and business oversight branches work together. For every large facility project, the NSF Program Manager will convene a PAT (a practice required for all MRE projects) to provide advice and assistance on planning, review and management of the project to assure the establishment of realistic cost, schedule and performance goals and to develop terms and conditions of awards for constructing, acquiring and/or operating the facility. Each PAT will be comprised of professionals with critical expertise in the relevant science and engineering fields, as well as management, business and legal aspects associated with the project.

To enable the efficient and effective evolution of NSF's large facility projects from their pre-formulation through operations, NSF will establish a new position, Deputy, Large Facility Projects. The LFP Deputy will report directly to the Chief Financial Officer and will have extensive project management experience, including building, management, and oversight of large scientific and engineering facilities. The LFP Deputy will be supported by several permanent NSF staff with a mix of skills, qualifications, and extensive experience in project management, planning and budgeting, cost analysis and oversight. These personnel will represent a centralized resource to assist (but not supplant) NSF Program Managers with management and oversight responsibilities and to develop and conduct comprehensive post-award oversight of business operations, financial and internal control systems, and cost and schedule performance. They and experts from other NSF Divisions and Offices (e.g., Office of General Counsel; Budget Division; Division of Contracts, Policy and Oversight; and Division of Grants and Agreements) will form the LFP Business Oversight Team. This flexible, responsive team will work with NSF Program Managers to ensure that awardees are performing to the terms and conditions of their awards and that they are attaining cost and schedule goals.

The LFP Deputy and the Business Oversight Team will facilitate interactions and learning across projects and PATs and, in so doing, will institutionalize a process for large facility projects oversight. To ensure that project and business teams contain the skill mix essential for success of large facility projects, NSF will draw upon its new Administration & Management plan both to provide comprehensive training and to recruit additional personnel, as needs arise.

INTEGRATED GRADUATE RESEARCH AND EDUCATION TRAINEESHIP PROGRAM

Question. This program has been going on since 1997. Tell us a little about its purpose and how it is managed at NSF? What is your view with respect to the effectiveness of this program? Do you think that with a little modification it could also be used as a way to encourage more students to pursue undergraduate degrees in science and engineering?

Answer. The purpose of the Integrative Graduate Education and Research Traineeship (IGERT) program is to facilitate a change in the graduate education paradigm in the United States. Through IGERT grants, which were first made in 1998, universities are provided the opportunity to experiment with graduate education within the context of a multidisciplinary research environment. IGERT faculty educate and train graduate students to have a broader perspective on a significant problem-based research topic, embark on new and innovative mechanisms of education, provide courses and experience for personal and professional skills development, and provide international experiences that will enable graduates to be more globally aware.

The program is managed by a coordinating committee that is composed of NSF program officers from each Directorate and the Office of Polar Programs. Daily activities, project monitoring, and follow-up evaluations are managed by the Division of Graduate Education within the Directorate for Education and Human Resources.

Although it is too early to assess outcomes, anecdotal evidence from two years of annual reports and principal investigator meetings indicates that the program is having far more significant effects than envisioned. Faculty and students from disparate disciplines are collaborating in exciting and effective ways such as in writing multidisciplinary publications and grant proposals. The few students who have graduated report that they have a distinct advantage over their peers in the breadth of their knowledge base and perspective and in their experience in collaborating across disciplines. Grantees are overcoming the hurdles within their universities and are demonstrating that the resulting research is valued by funding agencies and that graduates are sought by employers. As a result, we see sustained and enormous proposal pressure for these awards. This strong and continued interest is made more remarkable by the fact that IGERT grants do not directly support faculty or their research.

The IGERT model could be used in at least three ways to encourage undergraduates to pursue science and engineering degrees. First and simplest would be for current IGERT projects to be expanded in scope and level of support to include more undergraduate students. Such students could be actively recruited to receive support for a summer or a term in order to join an existing IGERT team of faculty and graduate students on the interdisciplinary research problem. It is widely believed that undergraduates involved in the research enterprise as early as the sophomore year are often exhilarated by the experience, and they may be more likely to choose an academic major or a career path to build on the research experience. Second, when faculty have become comfortable with a new model of graduate education, they may adopt some of their approaches and techniques in their undergraduate teaching. Some faculty have reported this sort of transformation, but it has been a serendipitous byproduct of IGERT and NSF is only just beginning to encourage this sort of "ripple effect." A third possibility is to develop an Undergraduate IGERT program that would stimulate faculty and undergraduates to embark on new multidisciplinary activities and curriculum at the bachelor's level. We believe that one of the attractions of IGERT projects for students is that the problem being studied is often set in a "real world" context, and students grasp the concepts and become excited about solving a problem with somewhat immediate application. The excitement of this sort of experience might be particularly effective at the undergraduate level, when people are still formulating their career goals.

UNDERGRADUATE STUDENT SUPPORT

Question. Dr. Colwell, in your testimony you say "If we do not boost the number of skilled U.S. workers the Nation will surely suffer". One way to increase the number of U.S. students pursuing degrees in science and engineering is to focus on the undergraduate level of education. We continue to hear reports that it is at the undergraduate level where the real drop-off occurs. If we need to focus more on undergraduate science education—including the two year and community colleges—why is NSF cutting support for undergraduate programs by 6 percent, or $8.4 million, freezing the community college program, and reducing by 9000 the number of undergraduates supported by your research programs?

Answer. Achieving an adequate number of skilled U.S. workers will require the delivery of high quality education in science, mathematics, engineering, and technology along the entire educational continuum. Within the continuum, the undergraduate sector is central. It is the sector to which the pre-Kindergarten through grade 12 (preK–12) sector delivers its students and from which the preK–12 sector receives its teachers. Similarly, the undergraduate sector delivers its graduates to graduate education and receives from the graduate sector faculty who teach undergraduates. Along all the major transition points—preK–12 to undergraduate, undergraduate to graduate, and post-graduate there is entry into the workforce, with the most significant entrance occurring after completion of undergraduate study after two or four years of study.

The NSF Budget for fiscal year 2002 attempts to balance various competing priorities, with the Math and Science Partnerships Initiative and graduate student stipends receiving the highest priority within the EHR account. Implementing these priorities required a modest reduction in the Division of Undergraduate Education (DUE). We limited that reduction to only 5.9 percent or $8.4 million. Of this reduction $8.0 million represents a re-direction of funds from Teacher Preparation in support of similar activities within the President's Math and Science Partnerships Initiative. The National Science, Mathematics, Engineering, and Technology Education Digital Library is reduced by $350,000, consistent with a planned phase-down of support under this activity toward a steady-state level of support for the final system.

With respect to the number of undergraduates supported by our programs, our current estimates indicate that NSF will support about 31,840 undergraduates in fiscal year 2002, an increase of about 800 students over fiscal year 2001. These numbers refer to "direct" financial support only.

We expect to pursue highly leveraged partnership activities that will increase the measurable impact of our undergraduate programs. For example, the EHR Division of Undergraduate Education co-sponsored a workshop on technology with the Directorate for Mathematical and Physical Sciences. Collaborations with the Directorates of Geosciences and Engineering have also provided valuable investments in undergraduate education. This year, NSF engaged in a pilot collaboration with the Department of Energy (DOE) in order to provide research experiences in ten national laboratories to student participants in five NSF grant programs.

EMERGENCY MEDICAL EVALUATION FROM THE ANTARCTIC

Question. What kind of medical screening procedures do you have in place and how does NSF enforce the screening procedures? Do you think any changes need to be made in the screening procedures or in the medical facilities and personnel in the Antarctic?

Answer. We operate and maintain medical clinics at all of our year-round stations in Antarctica. These clinics are comparable to ambulatory care facilities in rural areas in the U.S., with capabilities supplemented with tele-medicine technologies.

Every person traveling to Antarctica under the auspices of NSF's United States Antarctic Program undergoes a medical screening process prior to deployment. Specific medical screening criteria are utilized to identify individuals with existing medical conditions that require care beyond the capabilities of our medical clinics, conditions that would be exacerbated by the unusually harsh environment, or conditions that would otherwise put them at risk in Antarctica. Those screening criteria have evolved over the program's 40+ years of operational experience and are refined periodically using the experiences of other groups sending personnel to remote locations (e.g., U.S. Navy submariners, Peace Corps volunteers, Department of State Foreign Service Officers, NASA astronauts). The medical screening criteria are reviewed annually by a panel of physicians to ensure currency and relevancy and are modified accordingly. However, they are only as sensitive and selective as current medical science allows. As our recent experiences at South Pole demonstrate, that screening program is not foolproof.

After our experience two years ago at the South Pole Station, we expanded our medical capabilities at our medical clinics at McMurdo and South Pole Stations by introducing ultrasound equipment and improving telecommunications capabilities to leverage our on-ice medical staff with medical specialists back in the United States (i.e., "tele-medicine"). In addition, this past year we added an additional mid-level health care provider to complement the physician on-station at the South Pole. Those improvements were instrumental in our ability to diagnose the medical problem experienced by the South Pole individual in April of this year, and allowed us to assess the risks to the individual if he remained on-site for the duration of the austral winter.

Even with appropriate screening, improved medical facilities, and expanded diagnostics, medical emergencies do arise. To deal with these situations, we intend to continue investing in telecommunications infrastructure to further leverage our on-ice capabilities with medical specialists in the U.S. At the present time, the South Pole Station wide-bandwidth communications capability adequate for tele-medicine consultations is only available six to seven hours each day. We consider it essential to increase that coverage to 24-hours per day, seven days per week at all three stations. Similar limitations are also present at Palmer Station. We believe that the leveraging of our on-continent medical care staff with specialists in the U.S. via increased telecommunications and tele-medicine is a cost-effective approach and should be expanded.

GRADUATE STUDENT STIPENDS

Question. Dr. Colwell, you make a passionate case that we have to attract more U.S. students into graduate science and engineering programs. Part of this budget includes an increase in the stipend levels for graduate fellowships and traineeships as a first step in that effort. NSF supports 5 times as many graduate students through its research grants (20,000) as it does through its fellowship and traineeship programs (5,000). What is NSF doing in the research programs to increase graduate stipend levels so that they too can be used to attract and retain more U.S. students into graduate education in science and engineering. What constrains the Foundation from setting a minimum level of graduate student and post-doc stipend support within research awards?

Answer. Approximately 20 percent of graduate students supported by NSF are supported through the agency's Graduate Research Fellows (GRF), Integrative Graduate Education and Research Traineeships (IGERT) and NSF Graduate Teaching Fellows in K–12 Education (GK–12) programs. By increasing stipends in these programs, NSF seeks to attract and retain a larger, more diverse group of talented U.S. students to graduate education in science and engineering.

Historically, the agency has allowed stipend levels for graduate students supported on other NSF-funded awards to be determined locally by our grantee institutions. This provides our partner institutions with the flexibility to accommodate local cost of living differences and differences by field of study.

Nonetheless, the agency does anticipate that raising stipends in the GRF, IGERT and GK–12 programs will have systemic impact on graduate student stipends around the country, since stipend levels for students on other NSF-supported projects have generally tracked NSF Fellow and Trainee stipend levels.

UNEXPECTED ENERGY COSTS

Question. In light of surging energy prices in the country today, are their any particular programs or projects supported by NSF that have—or are likely to—encounter major unanticipated energy costs now and in the future? Examples of such high energy consuming projects might include the U.S. Antarctic Program, ship operations for the academic fleet, the operations of national facilities such as the National Center for Atmospheric Research, the National High Magnetic Field Laboratory, and others. Assess the potential impact on each of those programs that require significant levels of energy use to fulfill their missions and provide the Committee with these energy estimates for each program for fiscal year 2001 and fiscal year 2002.

Answer. Economic factors including energy prices has and will continue to have an impact on a number of NSF programs and activities in fiscal year 2001 and fiscal year 2002; these include:

—Even with current efforts at conservation and alternative energy sources, rising fuel prices are impacting and will continue to impact the U.S. Antarctic Program. Fuel costs have risen $5 million over fiscal year 2000/01. The USAP currently utilizes a number of methods to reduce fuel costs by use of alternative energy sources and reduction of fuel consumption, including wind turbines, photovoltaic arrays, solar heating panels, and waste heat utilization. Waste heat utilization in particular has proven to be extremely successful in saving fuel. The McMurdo Station waste heat recovery project captures radiator waste heat for use as space heat in nearby buildings. Annual savings have grown to 300,000 gallons of fuel (approximately $378,000). Plans are in progress to expand the system and save an additional 200,000 gallons, and waste heat utilization is included in planning for the new South Pole Station. The other methods are used to a lesser extent, but given the improving technology, the USAP hopes to expand the use of wind turbines in the future—especially at the new South Pole Station. Additional efficiencies in fuel usage could be achieved but would require substantial investments. Fiscal year 2001 fuel consumption by the USAP totaled over 10 million gallons; consumption in fiscal year 2002 will be comparable. Increased fuel costs have also influenced the rates we pay the Air Force for C–141, C–5, and C–17 aircraft support and the rate we pay the Military Sealift Command for our annual cargo ship.

—Two areas in the NSF Arctic Sciences Program very susceptible to fuel cost variations are costs of airlift and sealift. The U.S. Coast Guard Cutter Healy is likely to experience a similar increase in operating costs over the planned reimbursement rate. Aviation in Alaska also will be affected. The total increase in Arctic operations from all of these areas has totaled approximately $0.5 million between fiscal year 2000 and fiscal year 2001.

—Ocean Drilling Program—Operating the JOIDES Resolution, the ship used for the Ocean Drilling Program, requires about 8,000 metric tons of fuel per year. Historically, the cost of that fuel has been around $205/MT. The average quotes this fiscal year have been running closer to $320/MT or an increase of about $1,000,000 above original estimates.

—Academic Research Fleet—Operating the Academic Research Fleet has also become more costly. There was roughly a 50 percent increase in fuel cost/day between 1999 and 2000, with prices seemingly stabilized at this new higher level. For the large ships, which consume on average, between 2,500 and 3,000 gallons of fuel per day, the increase in price per day is between $750–$900. With most of the large ships operating 300+ days per year, the increased cost due to fuel prices is expected to be between $2.5 and $4.5 million this year and next.

—Increased fuel cost is not expected to be a significant factor at the National Center for Atmospheric Research in fiscal year 2001, but is expected to add approximately $200,000 to the cost of operations at that facility in 2002.

—The National High Magnetic Field Laboratory projected energy usage and cost is increasing at a rate of 2.5 percent per year. For 2001 the projected cost was $1.9 million while the actual cost is estimated to be $2.5 million, which reflects an increase of $587,000 or 30.3 percent. For 2002, the original projected cost was nearly $2 million while the new projected cost is $2.5 million, or 25 percent higher. In 2001, the cost per megawatt hour increased from $31 to $44 and the fuel adjustment charge increased from almost nothing to nearly $13 per megawatt hour.

—Power costs for the NSF Physics Programs at the CESR, MSU/NSCL, and LIGO facilities are expected to increase in fiscal year 2002 over fiscal year 2001. The fiscal year 2001 power costs were $3.3 million for these facilities and estimated fiscal year 2002 power costs is anticipated to be $3.9 million, an increase of

$580,000, or 17.7 percent. The unexpected increase in program operations due to power costs is $180,000.

—The power costs at the Cornell Electron Storage Ring (CESR) in New York appear stable for the moment, while at the National Superconducting Cyclotron Laboratory (NSCL) in Michigan costs are estimated to increase 10 percent in fiscal year 2002 due largely to a 50 percent increase in the cost of coal over fiscal year 2001. The power costs in Hanford, Washington are also going up by 50 percent. The power costs in Livingston are anticipated to be about flat in fiscal year 2002. While their power costs are state-regulated, the surcharge that covers fuel represents 50 percent of the total cost, and fuel cost fluctuations by 15 percent have occurred in the past year. The net result for Livingston power costs could easily be a 10 percent increase over the next several years, but not in fiscal year 2002.

—Other facilities, such as observatories, have observed little or no increase in energy costs. In some cases the cost for energy is imbedded within the annual lease costs for buildings and is difficult to break out.

SENIOR NSF VACANCIES

Question. In September 2000 NSF announced it was initiating a search for a new Assistant Director for Education and Human Resources. The stated intent was to fill the position by January 1, 2001. What is the current status of the search for the Assistant Director for Education and Human Resources and when do you expect to be able to announce the results of the search process? Please provide the status of all other NSF Assistant Director vacancies including the length of time they have been vacant, when the search process for a successor was started and when you expect to fill the vacant position.

Answer. On July 12, NSF named Judith A. Ramaley as the Foundation's new Assistant Director for Education and Human Resources (EHR). The appointment was effective August 1, 2001. Dr. Ramaley is a biologist who served most recently as president of the University of Vermont.

The positions of Assistant Director for Computer and Information Science and Engineering and Assistant Director for Engineering will become vacant on August 31st and September 4th, respectively. National searches are currently in process for both positions.

EDUCATION AND HUMAN RESOURCES

Question. Provide the record the NSF fiscal year 2002 budget request for the Education and Human Resources (EHR) account that was submitted to OMB in January 2001. Include a breakout of that request by subactivity and program element within each subactivity along with a brief description of what each program element was going to focus upon in fiscal year 2002. Also include similar data for fiscal years 2000 and 2001 for each EHR subactivity and program element.

Answer. The Foundation's budget is based on a number of factors. The early part of the planning process is largely science-driven, with the participation of the research and education communities and other interested groups. Content of this phase of planning is shaped primarily by advice and information from the external community. This period results in the identification of many program opportunities and provides useful guidance about priorities within programmatic fields and scientific disciplines. NSF senior management reviews these spending plans and determines the dollar amounts to be requested based on resource limitations, policy concerns, long range strategic plans, and balance across a broad and expanding science and engineering frontier.

The second part of the process occurs within the Executive Branch. It is at this point that resource limitation and policy considerations, as well as the Government Performance and Results Act requirements, are overlaid on the many possible budget options which have been produced by the earlier planning. These priority decisions are shaped by many considerations such as scientific readiness, technical feasibility, response to national needs, affordability, performance goals and results, and balance with other programs of NSF and other agencies.

OMB's role is to hold discussions on our proposed plans, review opportunities across all Federal agencies, and determine the appropriate budget request funding levels for the Foundation in the context of the President's overall budget. The final choices are made by NSF staff and management, the National Science Board, and OMB, and are then presented to the Congress.

EHR Subactivity	Fiscal year 2000 Request	Fiscal year 2001 Request	Fiscal year 2002 Request
Educational System Reform	114.20	109.51	45.25
Office of Innovation Partnerships	48.41	48.41	74.81
Elementary, Secondary and Informal Education	193.72	191.50	165.61
Undergraduate Education	116.60	140.56	132.60
Graduate Education	69.65	89.45	95.50
Human Resource Development	73.68	81.88	90.44
Research, Evaluation and Communication	61.74	67.70	68.20
Math and Science Partnerships	....	....	200.00
Total, EHR Request	678.00	729.01	872.41

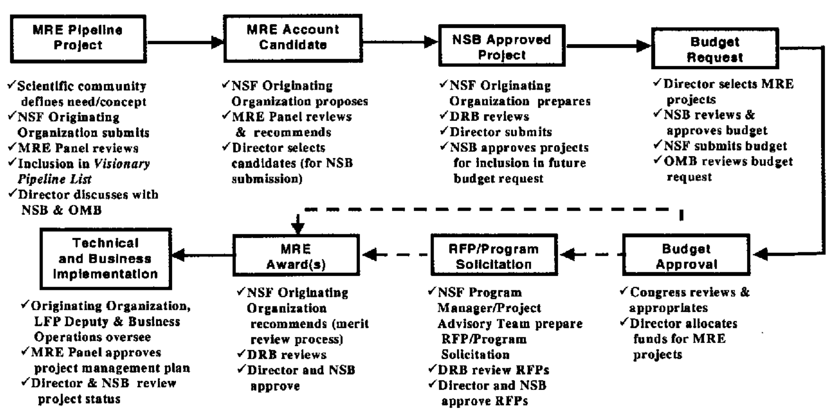
REDUCTION IN "CORE" DISCIPLINES

Question. Provide for the record a quantitative and qualitative analysis of the $45.5 million reduction to the "core" contained in the fiscal year 2002 request for the science and engineering research directorates—by activity, subactivity, and program element within each subactivity. Include the number of awards that won't be made, the number of scientific personnel (senior scientists, post docs, graduate and undergraduate students) who won't be supported as a result of this reduction.

Answer. NSF's fiscal year 2002 Request for Research and Related Activities (R&RA), which funds the science and engineering research directorates, is $3.33 billion. Of this amount, over $300M supports People, $2.1 billion supports Ideas, and over $900 million supports Tools. The $45.5 million reduction identified by this question is for a category described as Disciplinary Research. Disciplinary Research is within Ideas, which overall decreases by $31 million. Therefore, the $45.5 million reduction is offset by other increases in basic research and does not truly represent a reduction to the "core". "Core" research also takes place within the Education and Human Resources appropriations account.

The following table shows Disciplinary Research by R&RA activity.

MRE Review and Approval Cycle



For the agency in total, it is estimated that in fiscal year 2002, NSF-supported programs and activities—funded at a total level of $4.47 billion—will support 20,770 awards and directly involve 192,900 senior researchers, postdoctoral associates, graduate and undergraduate students, and K–12 students and teachers. Compared to fiscal year 2001, it is estimated that in fiscal year 2002 NSF will make 180 fewer awards and the number of people involved in NSF-supported activities will be approximately 800 fewer.

COST SHARING

Question. The NSF Inspector General reported in its October 2000 semi-annual report that cost sharing commitments are often not met by grantees. A few years ago, NSF and the Board acted to clarify cost sharing requirements to grantees. Outline NSF's cost sharing policy as it now stands, what efforts are being made to be sure that NSF grantees, principal investigators, and NSF staff all understand the cost sharing policy and requirements and what is NSF doing to enforce cost sharing requirements among NSF grantees?

Answer. In June 1999, an "Important Notice" was sent to Presidents of Universities and Colleges and Heads of other National Science Foundation Grantee Organizations, which transmitted the "National Science Foundation Policy Statement on Cost Sharing", approved by the Board. In addition to providing a definition of cost sharing, the policy statement sets forth that (1) NSF-required cost sharing is considered an eligibility rather than review criterion; (2) NSF cost sharing requirements beyond the statutory requirement (1 percent) will be clearly stated in the program announcement, solicitation or other mechanism which generates proposals; (3) for unsolicited research and education projects, only statutory cost sharing will be required; and, (4) any negotiation regarding cost sharing will occur within NSF stated parameters. This "Important Notice" was also distributed to appropriate NSF staff. During the past year, NSF has held several training sessions on cost sharing for NSF staff and conducted sessions on cost sharing for NSF clientele at regional conferences, seminars and workshops.

In fiscal year 2000, almost 75 percent of cost sharing were on awards made through the NSF Directorate of Engineering (ENG) and the Directorate for Education and Human Resources (EHR). "Outreach" sessions are being conducted with program staff in these directorates to ensure they are aware of NSF policy and what is expected of grantees when cost sharing is made a condition of an award.

The Foundation recently conducted an analysis of grantee audits, which contain findings related to cost sharing. The problem seems to be more that grantees do not have financial and accounting systems which can "readily" identify cost sharing realized rather than the fact that grantees are not actually providing required cost sharing. To ensure that grantees are able to appropriately document cost sharing in their financial and accounting systems, NSF is conducting more pre-award reviews of grantee financial and accounting systems to assess grantee's capability to support cost sharing prior to award. NSF has also instituted a policy requiring cost sharing certification when cost sharing is in excess of $500,000.

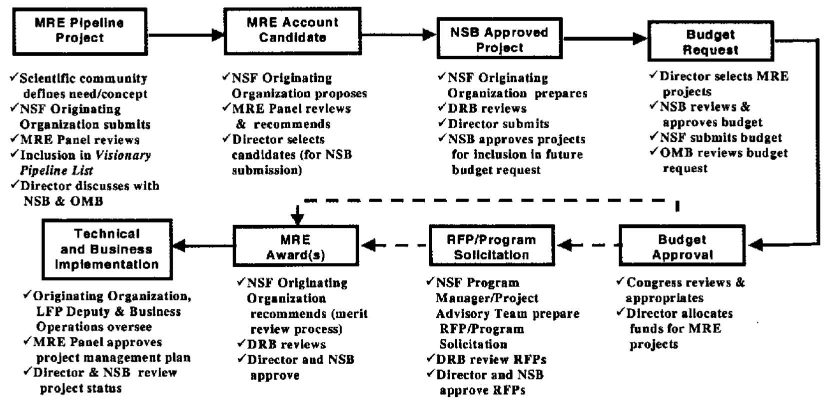
The NSF Inspector General first reported cost sharing findings in their semi-annual report to Congress for the period ended March 31, 1997. Over half of the cost sharing findings reported (both in number of audit reports and dollar amount of findings cited) up to the last semiannual period, were for grantee organizations which are not the "traditional" NSF type grantee (i.e., city board of education, public school systems, state governments, etc.). NSF is currently developing an appropriate strategy for reviewing cost sharing proposed by these type of grantee organizations, effectively evaluating their systems and providing outreach and instruction as necessary.

CANDIDATES FOR THE MAJOR RESEARCH EQUIPMENT ACCOUNT

Question. Provide for the record documentation that describes the process the Foundation goes through to consider and select projects to be funded out of the Major Research Equipment account. Provide a time line on the decision-making process, the criteria used to make decisions—particularly among and between competing proposals, the roles and responsibilities of the program staff, the relevant Assistant Director, the Office of the Director, the National Science Board and the OMB. Document the way projects are developed, planned, executed and managed by NSF once construction or acquisition begins. Document the management structure within the Foundation used during the construction, commissioning, and operational phases of the project.

Answer.

MRE Review and Approval Cycle



This chart describes NSF's process for the review and approval of large facility projects considered for funding through the MRE account. The first step in the process is the early identification of an MRE Pipeline Project as such. These potential projects are conceived of in the science and engineering community, often as a result of emerging science and engineering opportunities, and are often many years in development following initial conceptualization.

Developed projects are then proposed by an NSF Originating Organization(s) for consideration by the MRE Panel. These projects may be based on a proposal already submitted and evaluated using NSF's merit review process. The MRE Panel considers the projects on the basis of the review criteria specified earlier and makes recommendations to the Director. Using the review criteria, the Director selects candidates for NSB consideration. The NSB then approves, or not, projects for inclusion in future budget requests. The Director then selects from the group of NSB-approved projects those appropriate for inclusion in a budget request to OMB, and after discussion with OMB, to the Congress.

Following the appropriations process, the Director allocates funds to the relevant projects. If necessary, a program solicitation or RFP is prepared and, following receipt and merit review of the proposals, one or more awards are made.

NSF INSPECTOR GENERAL REVIEW OF THE EPSCOR PROGRAM

Question. The EPSCoR program was recently reviewed by the Inspector General. Provide a summary of the IG's findings and what, if any, NSF response is required to improve the management of the program.

Answer. The Office of the Inspector General (OIG) reviewed EPSCoR to assess the program's compliance with selected NSF requirements and NSF-wide and program-specific goals. The OIG review included consideration of program administration at NSF and project administration in two states, Mississippi and Maine. A general report was published on March 12, 2001 and is available at the OIG web site (http://www.oig.nsf.gov/oig012002.pdf). The report found that EPSCoR: played a role in building a "research culture" at universities that lack the physical facilities and institutional practices that facilitate research. Many such universities build research infrastructure by funding groups composed of a critical mass of researchers with similar interests. Institutional leadership plays a crucial role in identifying and developing promising niches.

The report also examined how NSF's EPSCoR Office administered its large infrastructure awards and found "widespread agreement that NSF project monitoring was reasonable, that proposal review had been constructive, and that more NSF site visits could improve project performance."

OIG Findings—The OIG report contained seven recommendations to improve performance, three of which specifically referred to NSF's management of the program. The OIG recommendations and the NSF responses to the three specific program issues are shown below.

OIG Programmatic Recommendations

EHR and the EPSCoR Office, in conjunction with higher levels of NSF management and NSF's research directorates, should develop an administrative mechanism to ensure that EPSCoR co-funding dollars are targeted at their original purpose and do not support, either directly or indirectly, researchers who have moved to non-EPSCoR states. (OIG 01–2002, p. 23).

—*NSF Action.*—EPSCoR staff have met with state Project Directors and discussed this issue, and have their agreement to strongly encourage support of the Inspector General's position, unless constrained by broader institutional policies. The EPSCoR staff is also meeting with the Directorate co-funding coordinators to explain this issue.

EHR and the EPSCoR Office should decide whether, as part of future infrastructure awards, NSF should require broader or more formal participation in Mississippi's EPSCoR committee by representatives of the private sector and public sector organizations outside higher education. (OIG 01–2002, p. 28)

—*NSF Action.*—EPSCoR has met with the Mississippi State EPSCoR Committee and strongly supported the Inspector General's position. Mississippi EPSCoR has indicated that they will strengthen their Committee membership.

EHR and the EPSCoR Office should decide whether to adopt general criteria to determine EPSCoR eligibility, rather than merely publishing a list of eligible states. (OIG 01–2002, p. 37)

—*NSF Action.*—EPSCoR has operated in five states for 20 years and in the other states for from 1 to 15 years. During fiscal year 2001, two additional states (Hawaii and New Mexico) became EPSCoR participants. In response to recommendations made in the reports issued by the fiscal year 2000 Committee of Visitors and the fiscal year 2001 report of the Office of the Inspector General, EPSCoR has established criteria governing participation in the program. These criteria were approved by NSF Director Dr. Rita Colwell and will be incorporated into a new EPSCoR program solicitation that will describe the July 2002 Research Infrastructure Improvement (RII) grant competition, for which awards are scheduled to begin in February 2003. The EPSCoR staff have reviewed these eligibility criteria with the state EPSCoR Project Directors and received their comments and suggestions before finalizing the language that will appear in the solicitation. The proposed eligibility criteria are given below.

—Eligibility to participate in EPSCoR competitions will be based on the level of NSF research funding. Each year, the EPSCoR Office will compile and publish summary data for the preceding 3 years of NSF research funding by state.

—Eligibility to participate in EPSCoR competitions would be restricted to those jurisdictions that received 0.7 percent or less of the total NSF research funds to all sources within a state averaged over the three-year period. In the few cases where a single large NSF-funded facility skews the data, an adjustment will be made. For example, West Virginia's funding data will be adjusted so that the Greenbank Observatory is not included in the state NSF research funding data used to calculate EPSCoR eligibility.

—Any current EPSCoR state that did not meet the eligibility criteria would continue to be eligible for EPSCoR co-funding and EPSCoR Outreach for a period of three years. In these cases, the EPSCoR Office would also exercise flexibility with respect to the support of the state's EPSCoR administration. Quite often, the state office supports multi-agency EPSCoR efforts; some of these agencies do not provide administrative support.

Any state that becomes eligible for the first time would be required to follow the existing process for entering the program. A suitable state committee would have to be created before a state could first request an EPSCoR Planning Grant to determine research barriers, areas of focus, areas of opportunity, etc. These steps are consistent with activities that other EPSCoR states have been required to undertake prior to competing in EPSCoR competitions.

DIGITAL DIVIDE

Question. What is NSF doing to help bridge the digital divide that exists in our inner city schools when it comes to access to the internet and other new educational technologies? How does the NSF urban and rural education reform programs help local communities acquire computers and internet access for use in K–12 math and science education? How does NSF integrate the training of teachers in science and math with the use of new technologies and what special efforts are being made for those school districts confronting high levels of poverty? How does NSF work with the Department of Education to help bridge the digital divide when it comes to the use of advanced technologies in K–12 education?

Answer. NSF helps to bridge the digital divide primarily through the development of curricula materials that utilize the new technologies and through the training of teachers to use the curricula materials effectively. NSF does not generally provide support for the purchase of computers or internet access for local communities, but instead provides the content for science and mathematics courses and the teacher training, so that the technologies can be effectively used. NSF seeks to maximize its investment in education technology research by ensuring that every child can benefit from its investments. The applications of technology to underserved populations and plans for teacher training are critical components in the evaluation of every proposal dealing with educational technologies. NSF works with the Department of Education and the National Institutes of Health in the management of an interagency education research initiative addressing the effective use of technology in K–12 reading, mathematics, and science instruction.

PUBLIC UNDERSTANDING OF SCIENCE

Question. Both the National Science Board and the Public Affairs Advisory Committee have provided the Foundation with advice and recommendations concerning its outreach and public affairs activities. Provide a copy of each of these reports for the record and summarize the various recommendations each report provided the Foundation. What effort is the Foundation making to respond to these recommendations? How much does the fiscal year 2002 budget request for implementing the recommendations? Please provide a detailed listing by NSF office and directorate of each activity being carried out in response to these reports and the resources budgeted, by account, for each activity. Describe the process by which these activities will be evaluated in terms of benchmarks and outcomes over the next 3 to 5 years.

Answer. In August 2000 the National Science Board approved its report, Communicating Science and Technology In the Public Interest (NSB–00–99), enclosed. It includes three recommendations and associated actions to be taken by the Foundation. The NSB identifies specific actions for implementing each recommendation.

Recommendation #1.—The NSB directs NSF to regularly provide requested information to public information groups to support their outreach efforts. NSF's Office of Legislative and Public Affairs (OLPA) responds to information requests from the public and Congress on an ongoing basis.

Recommendation #2.—The NSB requests that NSF pursue a coordinated, agency-wide effort to assess the effectiveness of new communication technologies in reaching broader audiences, identify best practices in communicating science and engineering, increase exchange of information with higher education organizations, support training in science communication, and develop metrics for assessing the effectiveness of NSF public understanding and outreach activities. The NSB requests that NSF develop programmatic responses to these suggestions and report progress to the Board.

Recommendation #3.—The NSB requested that NSF provide NSB members with materials about key issues in science and engineering research and education, including selected speeches and visual presentations by the Director and Deputy Director. Speeches and visual presentations are posted to the NSF Web site, together with new releases and media advisories on NSF-funded research.

The Public Affairs Advisory Group (PAAG) was established by the NSF Director to provide guidance and suggest broad strategies for improving NSF communications and outreach to its major constituents—the public and Congress. The members of the PAAG drew on their broad and diverse professional experience—in journalism, television, public affairs, business, and academia—to recommend broad strategies to improve the effectiveness of NSF communications and outreach efforts.

The PAAG report to the Director, completed in January 2001, notes the increasing dependence of U.S. economic and social prosperity on fundamental research and education in science and engineering, and technological innovation. Improving public awareness of these links can contribute to increasing public support for improved science and mathematics education, encouraging more young people to choose science and engineering careers, and creating a citizenry knowledgeable about science and technology and capable of making informed decisions about civic issues.

The PAAG recommended five strategies to accomplish these objectives.

—Educating the public and government leaders about the important connections among scientific and engineering research, technological innovation, and our ability to prosper as a ation.
—Strengthening NSF's relationship with the traditional broadcast and print media in order to establish NSF as a leading resource for science and engineering information, news, and expertise.
—Outreach to the Nation's opinion leaders to enlist their help in raising awareness of the importance of science, engineering, and technology.
—Focus on the relevance of science and engineering to the well being of the U.S. public, and the practical value of investments in fundamental research.
—Build and sustain an effective communications and outreach program, including a significantly improved Internet presence, and consolidate its many, often uncoordinated, efforts into a coherent and efficient public information strategy.

Within the limitations imposed by the annual budget cycle, $400,000 in additional funding for communications and outreach activities was allocated to the Office of Legislative and Public Affairs (OLPA) in June for fiscal year 2001. No NSF Directorates will receive additional funds for these activities. Within OLPA a full time staff person has been assigned to develop a program of outreach to state and local government officials. NSF has published an RFP for an external audit and analysis of OLPA staff and activities. The audit will provide advice on the mix of skills and effective structures needed to accomplish OLPA objectives.

NSF has established a working group to identify strategies, assess needs, and develop a work plan preparatory to improving and expanding the delivery of science and engineering information to the public on the Internet. Appropriate metrics for assessing the impact of these various activities on both the public and Congress will also be considered. The first in a series of daylong forums designed to provide the media and interested public with accessible information on cutting-edge science and engineering research is scheduled for September 2001. The forum will survey nanoscale science and technology.

PLANNING AND EVALUATION

Question. What activities are being supported in fiscal year 2001 within the planning and evaluation function? Please describe each distinct activity and the level of funding for each activity in fiscal year 2001. Provide similar information for fiscal year 2000 and 1999. Also, provide a breakdown of planning and evaluation activities—including the funding by activity—for fiscal year 2002. Why doesn't the Justification of Estimates include information on the planning and evaluation function?

Answer. The planning and evaluation function provides funding to several recurring activities. Items funded consist of activities of the National Science Board (NSB) Office, the Office of Legislative and Public Affairs (OLPA), the Office of Integrative Activities (OIA) as well as other NSF staff offices. Total funding for this function is as follows: fiscal year 1999—$5.9 million, fiscal year 2000—$8.6 million, and fiscal year 2001 (estimate)—$10.0 million. The estimate for fiscal year 2002 will be developed over the next few months. Specific examples of recurring activities include OLPA's support of National Science and Technology Week and the Bayer/NSF Award for Community Innovation; the NSB Offices' support of activities related to the Medal of Science; the Waterman award; the Vannevar Bush award; and development costs associated with NSF externally focused information technology projects, such as FastLane. Non-recurring activities include funding for the congressionally mandated Commission on the Advancement of Women and Minorities in Science and Engineering Technology, NSF's 50th Anniversary activities, and evaluation contracts for NSF initiatives and large programs.

Prior to fiscal year 1985, planning and evaluation funds were included in the budget justification in the Scientific, Technological and International Affairs (STIA) activity, within the Research Initiation and Improvement Subactivity. In fiscal year 1985 the STIA activity was reorganized, and as stated in the fiscal year 1985 Justification of Estimates, ". . . funds for Foundation-wide activities in planning and evaluation will be provided as needed from the discipline-oriented research activities . . ." In addition, the Presidential Young Investigators Research Awards, the Undergraduate College Research Support, and EPSCoR were also to be provided from the discipline-oriented research activities.

In fiscal year 1985, Planning and Evaluation provided ". . . information and analyses on matters of concern to NSF management and the National Science Board, including national scientific and engineering needs, opportunities and problems; budgeting, planning and program management; and program evaluation."

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

FUNDING PRIORITIES

Question. What did the Clinton Administration propose for NSF's fiscal year 2002 budget and what areas of research did it highlight?

Answer. The Clinton Administration did not develop a fiscal year 2002 budget. Instead, OMB calculated a current services baseline for fiscal year 2002, based on a set of economic assumptions approved by the Administration and baseline calculations defined in law. This current services baseline budget did not contain any new policies or programs.

Question. If we are able to increase the Foundation's budget by $675 million, or even $200 million, how would you allocate these funds and how would allocate these funds and how would you prioritize the funding? Could you specify what particular areas of research such as IT or nano and what new major research equipment projects you would support funding? Lastly, do you support putting additional resources into programs that broaden participation of underrepresented groups such as the Partnerships for Innovation, EPSCoR, and HBCU programs?

Answer. NSF's fiscal year 2002 Request represents an overall increase of 1.3 percent over fiscal year 2001 and funds all our most significant priorities. The fiscal year 2002 Budget Request:

—Increases NSF's investments in education by 11 percent over fiscal year 2001. The request includes $200 million in fiscal year 2002, and $1 billion over five years, to begin the President's Math and Science Partnerships Initiative to establish partnership agreements between States and institutions of higher education, with the goal of strengthening math and science education in grades K–12. I believe the Administration is making an important statement as to the value of what NSF brings to the larger education reform effort.

—Increases graduate stipends by nearly 15 percent in the Graduate Research Fellowship, the Graduate Teaching Fellowships in K–12 Education, and the Integrative Graduate Education and Research Traineeships programs to help attract the best students to pursue careers in science and engineering.

—Provides a $20 million, or 17 percent, increase in mathematical sciences to initiate an effort in multidisciplinary mathematics research to enhance America's preeminence in this important area.

—Increases NSF priority areas of Information Technology Research by $13 million, or 5 percent, to $273 million and Nanoscale Science and Engineering by $24 million, or 16 percent, to $174 million.

STAFFING RESOURCES

Question. Has NSF reviewed its short- and long-term staffing needs based on its growing workload? Do you believe this is a serious concern?

Answer. NSF management shares that concern and initiated the process to prepare its workforce for the significant changes in NSF business practices. These result from technological changes along with the increasing complexity of science and engineering opportunities and challenges.

NSF is developing a five-year workforce plan to reflect the agency's short-term and long-term workforce needs. The plan's objectives include the implementation of a complete workforce restructuring study to review workforce position requirements and competencies. The centerpiece of the agency's strategic workforce development activity is the development of the NSF Academy. Underpinned by the agency's strategic plan, the Academy will provide a comprehensive suite of education, training and career development opportunities. Succession planning is being built into the skill development curriculum, to provide all employees with the opportunity to gain the skills and knowledge necessary to operate effectively and efficiently in a state-of-the-art electronic business environment, and to compete for leadership and management roles both within and outside NSF. These activities are expected to ensure the agency is well positioned to meet its growing opportunities and challenges.

HIGH-TECH WORKERS

Question. I am concerned about the decline of American students and workers in the physical sciences and engineering. Could you lay out how the Foundation is responding to the shortage of U.S.-born engineers and scientists? I would also like to hear how NSF is working with the academic community to encourage more students to pursue science and engineering degrees and how NSF is working with the private sector to ensure that these students develop the necessary skills to meet the needs of the high-tech industry.

Answer. NSF has a comprehensive suite of programs that prepare undergraduate students for entry into the workforce and into graduate programs. These programs utilize three strategies: (1) direct preparation of specific elements of the science and engineering workforce (e.g., Advanced Technological Education, Computer Science, Engineering, and Mathematics Scholarships); (2) attention to broadening participation in the science and engineering workforce by groups that are currently underrepresented (e.g., Historically Black Colleges and Universities-Undergraduate Program, Louis Stokes Alliances for Minority Participation, Tribal Colleges and Universities Program); and (3) strengthening the curricular and instructional infrastructure for providing high quality science, mathematics, engineering, and technology education to all students (e.g., Course, Curriculum, and Laboratory Improvement, Graduate Teaching Fellows in K–12 Education, National Science, Mathematics, Engineering, and Technology Education (SMETE) Digital Library).

Across the set of NSF's programs for undergraduates, a balance is struck between providing students with the practical skills needed to perform at a high level in the workplace and providing the firm theoretical foundations in math and science required as preparation for study at more advanced levels.

PLANT GENOME

Question. Recent advances in technology have made it economically feasible and technically possible, finally, to survey sequence the gene rich regions of large, complex plants, such as corn. However, projects to survey sequence the gene rich regions of large, complex plants could be accommodated with the current funding level of the plant genome program without eliminating all other research despite the support from the Interagency Working Group on Plant Genomes and the Maize Genetics Community.

First of all, do you support additional funding for the plant genome program and would NSF be able to utilize fully additional funds if the increase were focused, primarily, on new initiative to provide sequences and draft sequences of the gene rich regions in plants and to provide other focused, high throughput genome sequencing efforts?

Answer. NSF is prepared to support proposals that address a new strategy for survey sequencing of large plant genomes, if quality proposals were received and recommended for funding by reviewers.

INFORMATION TECHNOLOGY

Question. Could you give us an update on the information technology research initiative? Specifically, can you describe the type of proposals being submitted for the IT initiative? To what extent are you providing awards to proposals that are risky and innovative?

Answer. In fiscal year 2000, the NSF ITR program stressed fundamental research in information technology. In fiscal year 2001 an additional focus area was applications in all disciplines. In fiscal year 2002 focus will expand to include research in multidisciplinary areas.

In fiscal year 2001, ITR received a large number of proposals. These proposals cover areas such as software design, use and reliability, human-computer interaction, information management, large scale networking, educational and social effects of IT, and many more. All reviews have been completed, and fiscal year 2001 ITR awards are in process.

Both mail and panel reviews for proposals were used. Around 25 percent of the proposals were co-reviewed in more than one panel, each representing information technology research in a broad scientific discipline. NSF program managers assessed proposals for risk and innovation and funded high risk, high payoff efforts, where appropriate. Program managers are able to assess the risk of an entire portfolio of research investment and accept a degree of higher risk.

Awards from fiscal year 2000 are listed on web site http://www.itr.nsf.gov. Awards from fiscal year 2001 will also be listed there upon completion of the awards process. Of the fiscal year 2000 awards one particularly exciting award was made to the University of Colorado to research how interaction with intelligent agents can teach deaf children how to speak. At Stanford University researchers are working on how to make on-line information far more effective and efficient to use than it is currently by data mining and knowledge synthesis. Other innovative and risky projects include an effort to rewrite the air traffic control software; building a tactile display for the blind; computing with optical devices; and computer networks based on biological models.

Many of the ambitious projects involve the combination of IT with other sciences. For example, one researcher wants to study the way humans recognize objects with electrodes sensing brain activity, and then build computer vision systems that work the same way. Health care experts are combining with computer scientists to design robotic assistants to help the elderly. Finally, in a combination of three widely separated intellectual areas, researchers in computer graphics are using ideas from art and psychology to create new kinds of displays to help medical experts visualize and understand blood flow and neuron diseases.

PEER REVIEW SYSTEM

Question. At the Subcommittee's request, NAPA recently completed a review of NSF's peer review system. NAPA found that NSF is unable to assess the criteria to encourage a broader range of institutions or greater participation of underrepresented minority researchers. In other words, while NSF claims to be making efforts to assist smaller research institutions and minorities, in practice, this does not occur. NAPA recommended that NSF should institute broader-based review panels-this means brining in participants from a wider range of institutions, disciplines, and underrepresented minorities. It appears that NAPA's finding supports the belief that the peer review system is still a "good old boys" network and hampers the ability of smaller research institutions from participating in NSF programs.

How is NSF responding to the NAPA findings and will it follow NAPA's recommendations?

Answer. NSF agrees with the principal finding of the NAPA report; i.e. that it is too soon to make valid judgments about the impact and effectiveness of the review criteria. Hence, we do not believe that NAPA's finding supports the assertion that the peer review system is still a "good old boys" network.

The NAPA report also highlighted the need to (1) improve the conceptual clarity of the criteria, (2) better communicate with proposers, reviewers and NSF staff about how the criteria are to be used, and (3) improve quantitative measures and performance indicators to track the objectives and implementation of the review criteria. We have already taken some steps to address these recommendations and we intend to pursue other actions suggested in the report.

At the May 2001 meeting of the National Science Board (NSB), the Committee on Programs and Plans, along with the Education and Human Resources Committee, discussed the NAPA report and the implementation of the merit review criteria. Three action items were identified and are currently being implemented:

—An NSB resolution on the importance of both merit review criteria may be prepared and issued to the science and engineering community;

—NSF will develop a set of examples to illustrate the application of the broader impacts criterion (the second criterion). These examples will be placed on the NSF website and made easily available to the proposers and reviewers.

—NSF will prepare and implement a plan for better communicating the importance and use of both of the merit review criteria to the S&E community.

In fiscal year 2000, NSF added new language to its program solicitations and announcements, and its Grant Proposal Guide. This language requires the Principal Investigators (PIs) to specifically address each of the merit review criterion in their proposals to NSF. For fiscal year 2001, different on-screen pages have been provided in FastLane, NSF's electronic data system, so reviewers can address each merit-review criterion separately. This responds to NAPA's recommendation that NSF improve performance indicators to permit better tracking of the impact of the review criteria. Thus far, over 75 percent of proposal reviews submitted to NSF in fiscal year 2001 have addressed the broader impacts criterion. This demonstrates that NSF is continuing to improve on the implementation of its criteria.

The NAPA report compared proposal reviews conducted in fiscal year 1997 and fiscal year 1999 (i.e., before and after the implementation of the new review criteria). NSF has and will continue to make improvements in the implementation of the review criteria but the impacts of these improvements will not be measurable for at least another year. The NAPA assessment can help NSF establish a baseline for the next assessment of our performance in this area.

NUCLEAR TECHNOLOGIES

Question. Last year, I raised concerns about the lack of Federal support for nuclear engineering education. In response, as directed by the fiscal year 2001 Senate VA, HUD appropriations report, NSF was directed to review the academic interest in nuclear engineering education and to provide recommendations on how NSF can support this area. Last week, I received your report and frankly, I was a bit disappointed by the response. Your report even recognizes the need for nuclear engineers by stating that the demand for nuclear-trained personnel is on the rise, yet, NSF provides no concrete recommendations on how it will respond to this problems.

Do you have any specific recommendations where NSF can be more directly involved in addressing the need for increased Federal support for nuclear engineering education?

Answer. We are supporting a planning grant to Dr. James Duderstadt at the University of Michigan to engage the leading industry representatives, faculty and chairs of nuclear engineering departments. The project will include:

—A market survey to better understand the interests of prospective employers, the attractiveness of study to potential students, the perspectives of colleges and universities;

—The preliminary design of new curriculum in nuclear engineering by a national team of faculty and industrial experts;

—A needs assessment for supporting resources;

—The design of a summer practicum experience for students;

—The development of financial estimates for the development, distribution, and ongoing support of the new curriculum;

—The development of contacts with credentialling bodies, practicum sites and other potential sponsors for the planned activities.

NSF will work closely with Dr. Duderstadt and his colleagues as the planning proceeds. Through these cooperative outreach efforts, we hope that faculty at nuclear engineering departments will better understand the NSF programs and vice-versa with the result that we receive a larger number of proposals which are competitive in the merit review process.

NANOTECHNOLOGY

Question. Last year, the Congress provided a significant sum of money to jump-start the new nanotechnology initiative.

Could you give us a status on how the new program is being implemented? I would especially like to know how this program is being coordinated across the various participating agencies.

Answer. *Implementation.*—The fiscal year 2001 Nanoscale science and engineering program was implemented for single investigators through the core programs and by a NSF-wide solicitation for integrative activities including interdisciplinary teams, exploratory research, and nanoscale science and engineering centers. New topics were supported in six research and education themes: Biotechnology, Nanostructure by design and novel phenomena, Device and system architecture, Environmental Processes, Multiscale and multiphenomena modeling, Societal implications and Improving human performance. A balance and flexible infrastructure was developed by supporting: 6 new centers and 10 existing centers, 4 large facilities, multidisciplinary teams, and over 700 individual projects. Over 3,000 students and teachers were supported.

Coordination.—NNI coordination is achieved though the NSTC's Nanoscale Science, Engineering and Technology Subcommittee, direct interactions among program officers within the participating agencies, periodic management meetings and program reviews, and joint science and engineering workshops. The NSET Subcommittee will coordinate joint activities among agencies that create synergies or complement the individual agencies' activities to further NNI goals. Communication and collaborative activities are also facilitated by the NNI website (http://www.nano.gov/) as well as by the agencies' sites dedicated to NNI. Examples of NNI coordination include identification of the most promising research directions, encouraging funding of complementary fields of research across agencies that are critical for the advancement of the nanoscience and engineering field, education and training of the necessary workforce, and establishing a process by which centers and networks of excellence are selected.

The NNI coordination process began in 1999 with the organization of a widely-attended exploratory conference and subsequent preparation of the report: "Nanotechnology Research Directions: IWGN Workshop Report." In the spring of 2000, NSET Subcommittee (formerly IWGN) members took part in planning activities at each agency. In addition, a survey is being conducted in all agencies participating in the NNI to identify opportunities for collaboration and areas where duplication can be avoided. Discussions are being held regarding joint exploratory workshops (such as those on molecular electronics, quantum computing, and nano-biotechnology) and agreements on specific interagency funding programs. Improved internal coordination in large agencies, concurrent with interagency collaboration, has also been noteworthy in the planning process.

Examples of major collaborative NNI activities planned by the participating agencies are (DOS is contributing to international aspects on all topics):

TABLE 1.—AGENCY INTERESTS IN NANOTECHNOLOGY

Agency (in order of fiscal year 2001 investment)	NSF	DOD	DOE	NIH	NASA	NIST	EPA	Agencies [1]
Fundamental research	x	x	x	x	x			
Nanostructured materials	x	x	x	x	x	x	x	x
Nanoscale processing and manufacturing (Ex: chemical fabrication, devices, systems, lab-on-a-chip, measurements and standards; manufacturing user facilities)	x	x	x	x	x	x		x
Electronics and computer technology (Ex: molecular electronics, spin electronics, quantum computing)	x	x	x		x	x		x
Flight and space crafts (Ex: unmanned missions, nanorobotics, safe materials)	x	x	x		x			
Energy conversion and storage (Ex: efficient solar energy, hydrogen storage)	x	x	x		x			x
Biotechnology and agriculture (Ex: biosensors, bioinformatics, bioengineering)	x		x				x	x
Medicine and health (Ex: disease detection, drug delivery, organ replacement)	x	x	x	x	x			
Environment and sustainable development	x		x		x		x	x
Nanoscale theory, modeling and simulation	x	x	x		x			x
Education, training and societal implications	x	x		x				
Technology transfer, global trade and national security	x	x	x	x	x	x	x	x

[1] Agencies with <$5M/y in fiscal year 2001: DOA, DOJ, DOT, DOTreas, DOS, NRC.

MATH AND SCIENCE EDUCATION

Question. I remain concerned about math and science education in this country. Our high school students are performing poorly in math and science as reported by the Third International Mathematics and Science Study. Also, there has been a significant decline in bachelor degrees awarded in engineering, math, and computer science degrees. Further, the U.S. is now lagging behind other countries in the percentages of undergraduates earning degrees in natural sciences and engineering. Lastly, the Board reported recently that enrollment in graduate school science programs are declining. Can you lay out for me how the Foundation is responding to these troubling facts? Please specify what you are doing to improve K–12 math and science education, undergraduate education, and graduate school education.

Answer. We share your concern that individual indicators of science, math, engineering and technology (SMET) education are not as positive as we would want them to be. By the same token, we see various positive signs that progress is being made, and that strategies developed under NSF programs can be transported to a wide range of institutions to provide real opportunities for improvement. The centerpiece of NSF's strategy to improve SMET education is to examine whole systems rather than individual components. This research-based approach has been shown to be effective in identifying promising system-wide strategies that can make a real difference. The evaluation of the systemic initiatives makes it clear that this approach is effective in raising achievement levels and creating system-wide improvements that affect all students.

In PreK–12 education, a recent evaluation of the Urban Systemic Program found improved student outcomes and system change among 22 large urban school districts, especially among minority students. Findings related to improved student outcomes include: (1) substantial increases in enrollment rates in mathematics and science gate-keeping and higher-level courses; (2) greater enrollment gains for underrepresented minority students than their peers; (3) achievement test gains; and (4) increased numbers of students taking college entrance examinations (AP, SAT, and ACT). In an evaluation of the Statewide Systemic Initiatives, half of the states showed impacts on classroom practice, with the highest gains in achievement occurring in states with intensive professional development linked to curriculum. The National Science Board has concluded that systemic reform programs have been very effective and should be further encouraged, and that efforts should be taken to educate the public on the complexity and long-term commitment required for success of such reforms. The President's new Math and Science Partnerships Initiative (MSPI) will also add resources and focus to improving PreK–12 SMET education.

At the undergraduate level, NSF has a comprehensive suite of programs that prepare SMET undergraduate students for entry into the workforce and into graduate programs. These programs utilize three strategies: (1) direct preparation of specific elements of the SMET workforce; (2) attention to broadening participation in the

SMET workforce by groups that are currently under-represented; and (3) strengthening the curricular and instructional infrastructure for providing high quality SMET education to all students.

Across the set of NSF's programs for undergraduates, a balance is struck between providing students with the practical skills needed to perform at a high level in the workplace and providing the firm theoretical foundations in math and science required as preparation for study at more advanced levels.

The methods used to strengthen undergraduate SMET education include inquiry-based learning, integration of learning technologies, faculty development, teacher preparation, and curricula reform. A new emphasis on strengthening student outcomes, focusing on educational "end results," is being explored. NSF also plans to explore the coupling of undergraduate activities with the Centers for Learning and Teaching (CLT) Program (a PreK–12 program), which partners universities, school districts, state education agencies, and business and industry. Joining the CLT to undergraduate activities is another example in which real improvement can occur when synergies are created between educational levels.

At the graduate level, NSF support consists of fellowships awarded to individual students, traineeships awarded to institutions, and support for graduate students on research grants. A major priority in the fiscal year 2002 budget is to increase student stipends to make SMET graduate study more attractive.

MULTI-YEAR BUDGETING

Question. In our Senate Committee Report on the fiscal year 2001 appropriations, NSF was required to provide multi-year budgets for major multi-disciplinary initiatives such as ITR, biocomplexity, and nanotechnology. NSF's fiscal year 2002 Budget Justification, however, does not contain multi-year funding data. Please submit this information.

Answer. The following table shows the multi-year budgets for the selected priority areas in the NSF fiscal year 2002 Budget Justification.

	Fiscal year—						
	2000	2001 plan	2002 request	2003	2004	2005	2006
Biocomplexity in the Environment	$50.00	$54.88	$58.10	$70.57	$83.31	....	....
Information Technology Research	126.00	259.43	272.53	285.00	297.74	....	....
Nanoscale Science and Engineering	....	149.68	173.71	186.18	198.92	224.98	....
Learning for the 21st Century	....	121.46	125.51	137.98	150.72	176.78	....

POST-DOCS

Question. What is NSF doing in response to complaints by some postdocs that they spend too much time in postdoc positions because there is insufficient funding and/or employment opportunities for new researchers who want to begin their careers independently?

Answer. The transition from postdoc to researcher is often difficult for science, engineering and mathematics postdocs. Outreach efforts aimed at reaching the most talented young members of the SMET research to promote awareness of NSF research opportunities are continually advanced by program staff at scientific meetings, conferences and conventions. These efforts, along with frequent workshops on proposal preparation, provide the Foundation with the opportunity to recruit and encourage creative and innovative proposals from new investigators.

NSF also offers substantial opportunities to new investigators through its Faculty Early Career Development (CAREER) program. CAREER is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards for new faculty members. The CAREER program recognizes and supports the early career-development activities of those teacher-scholars who are most likely to become the academic leaders of the 21st century. CAREER awardees will be selected on the basis of creative, career-development plans that effectively integrate research and education within the context of the mission of their institution. NSF encourages submission of CAREER proposals from new faculty at all CAREER eligible institutions. Such plans should build a firm foundation for a lifetime of integrated contributions to research and education.

ASTRONOMY

Question. The National Research Council (NRC) recently issued a study called Astronomy and Astrophysics in the New Millennium, which provided a number of recommendations to strengthen ground-based astronomy programs. For example, NRC recommended that NSF set up a procedure to obtain "regular expert advice" for its AST program. Other recommendations included: (1) improving coordination between NSF and NASA and (2) requiring NSF to develop management plans for large astronomy projects. How is NSF responding to these recommendations?

Answer. NSF conducts its science-driven planning activities in a highly collaborative manner, seeking advice from a rich diversity of NSF stakeholders. Of course, the astronomy community has set an excellent stakeholder example, demonstrating an ability to prioritize its compelling scientific needs and opportunities through the Decadal Survey, as the referenced NRC study is called. NSF gives very serious consideration to the recommendations in the Decadal Survey. The community's recommendations are considered within the context of the agency's overall responsibility for advancing frontiers across the science and engineering enterprise.

Scientific opportunities demand the forging of new partnerships, to include public and private, domestic and international, ground- and space-based partners. Future facilities of unprecedented scale and power will call for new linkages between resources, enabled by the enormous potential of computer and information science and engineering technologies to collect, communicate, store and analyze vast amounts of information. To meet these opportunities, NSF will increase its interaction with NASA and with the Department of Energy—to better coordinate, plan and assess research and education activities of common interest. The goals also include sharing programmatic information and technology, and to develop and implement a scientific planning process that defines areas of opportunity and associated infrastructure needs.

Over the past 50 years, NSF has enjoyed a successful track record of providing large-scale, state-of-the-art facilities for the astronomical sciences. At the Foundation-level, we now invest over $1 billion annually in large-scale facilities and infrastructure projects. Our portfolio has recently grown and diversified to meet emerging science and engineering opportunities, and it now includes shared-use research platforms and distributed user facilities that challenge traditional management approaches. To accommodate these new approaches, the agency is currently developing a Facilities Management and Oversight Plan that will be submitted to OMB in September of this year.

Question. The Administration is considering the consolidation of NSF and NASA astronomy programs. Why do you believe this that this proposal was made?

Answer. In the President's fiscal year 2002 budget to Congress for the National Science Foundation, the Administration identified "three management reform opportunities that will help fulfill the President's promise to make Government more results-oriented." One of those areas for reform is titled "Reorganize Research in Astronomy and Astrophysics".

Historically, NASA has funded space-based astronomy and NSF has funded ground-based astronomy facilities, as well as astronomy research proposals. Over the past decade there have been significant changes in the funding from each agency as reported in "Federal Funding of Astronomical Research" from the National Research Council (National Academy Press, 2000). The National Research Council also recently released the latest decadal survey of the state of the field and recommendations for the first decade of the 21st century: "Astronomy and Astrophysics in the New Millennium" (National Academy Press, 2001). With these reports in hand, the Administration concluded that now is the time to assess the Federal Government's management and organization of astronomical research.

Thus NSF and NASA requested that the National Academy of Sciences convene a Blue Ribbon Panel to assess the organizational effectiveness of Federal support of astronomical sciences and, specifically, the pros and cons of transferring NSF's astronomy responsibility to NASA. In response, the National Research Council established the Committee on Organization and Management of Research in Astronomy and Astrophysics. The Committee is directed to report by September 1, 2001.

EPSCOR

Question. The NSF Office of Inspector General recently released a report on the Experimental Program to Stimulate Competitive Research (EPSCoR). The OIG questioned the rationale of EPSCoR-funded researchers taking their funding with them when they move to institutions in non-EPSCoR states.

What is NSF doing to satisfy this concern and other criticism raised by the OIG?

Answer. In its review of the EPSCoR program, the Office of the Inspector General (OIG) recommended that EHR and the EPSCoR Office, in conjunction with higher levels of NSF management and NSF's research directorates, develop an administrative mechanism to ensure that EPSCoR co-funding dollars are targeted at their original purpose and do not support, either directly or indirectly, researchers who have moved to non-EPSCoR states. (OIG 01–2002, p. 23) In response, EPSCoR staff have met with state Project Directors and discussed this issue, and have their agreement to strongly encourage support of the Inspector General's position, unless constrained by broader institutional policies. For example, the principal investigator's institution generally acts as the fiscal agent on NSF awards. Thus the award is governed by institutional policies regarding capital equipment and intellectual property. The EPSCoR staff is also meeting with the Directorate Co-funding coordinators to explain this issue.

Of the seven recommendations contained in the OIG report, two other recommendations specifically referred to NSF's conduct of the program:

EHR and the EPSCoR Office should decide whether, as part of future infrastructure awards, NSF should require broader or more formal participation in Mississippi's EPSCoR committee by representatives of the private sector and public sector organizations outside higher education. (OIG 01–2002, p. 28)

—*NSF Action.*—EPSCoR has met with the Mississippi State EPSCoR Committee and strongly supported the Inspector General's position. Mississippi EPSCoR has indicated that they will strengthen their Committee membership.

EHR and the EPSCoR Office should decide whether to adopt general criteria to determine EPSCoR eligibility, rather than merely publishing a list of eligible states. (OIG 01–2002, p. 37)

—*NSF Action.*—EPSCoR has operated in five states for 20 years and in the other states for from 1 to 15 years. During fiscal year 2001 two additional states (Hawaii and New Mexico) became EPSCoR participants. In response to recommendations made in the reports issued by the fiscal year 2000 Committee of Visitors and the fiscal year 2001 report of the Office of the Inspector General, EPSCoR has established criteria governing participation in the program. These criteria were approved by Director Colwell and will be incorporated into a new EPSCoR program solicitation that will describe the July 2002 RII grant competition, for which awards are scheduled to begin in February 2003. The EPSCoR staff have reviewed these "eligibility criteria" with the state EPSCoR Project Directors and received their comments and suggestions before finalizing the language that will appear in the solicitation. The proposed eligibility criteria are given below.

—Eligibility to participate in EPSCoR competitions will be based on the level of NSF research funding. Each year, the EPSCoR Office will compile and publish summary data for the preceding 3 years of NSF research funding by state.

—Eligibility to participate in EPSCoR competitions would be restricted to those jurisdictions that received 0.7 percent or less of the total NSF research funds to all sources within a state averaged over the three-year period. In the few cases where a single large NSF-funded facility skews the data, an adjustment will be made. For example, West Virginia's funding data will be adjusted so that the Greenbank Observatory is not included in the state NSF research funding data used to calculate EPSCoR eligibility.

—Any current EPSCoR state that did not meet the eligibility criteria would continue to be eligible for EPSCoR co-funding and EPSCoR Outreach for a period of three years. In these cases, the EPSCoR Office would also exercise flexibility with respect to the support of the state's EPSCoR administration. Quite often, the state office supports multi-agency EPSCoR efforts; some of these agencies do not provide administrative support.

Any state that becomes eligible for the first time would be required to follow the existing process for entering the program. A suitable state committee would have to be created before a state could first request an EPSCoR Planning Grant to determine research barriers, areas of focus, areas of opportunity, etc. These steps are consistent with activities that other EPSCoR states have been required to undertake prior to competing in EPSCoR competitions.

H1–B VISA FUNDS

Question. The H1–B non-immigrant petitioner receipts are projected to be about $144 million in fiscal year 2002. How are these funds utilized at NSF? Has NSF evaluated the effectiveness of the use of these funds in addressing the shortage of U.S.-born high-tech workers?

Answer. Prior to October 16, 2000, H–1B funds, in accordance with the American Competitiveness and Workforce Improvement Act of 1998 (Public Law 105–277), were used for:

—Computer Science, Engineering, and Mathematics Scholarships (CSEMS)—annual, merit-based scholarships of up to $2,500 for up to two years for low-income individuals pursuing associate, undergraduate, or graduate degrees in the specified disciplines at institutions of higher education;
—Grants for Mathematics, Engineering, or Science Enrichment Courses (ASCEND)—opportunities for students to enroll in year-round academic enrichment courses in the specified disciplines; and
—Systemic Reform Activities—supplement rural systemic reform activities.

After October 16, 2000, in accordance with the American Competitiveness in the 21st Century Act (Public Law 106–313), H–1B funds were to be used for:
—CSEMS—maximum scholarship duration was extended to four years, and annual stipend was raised to $3,125; and
—Private-Public Partnerships in K–12—establishes private-public partnerships in such areas as materials development, student externships, and math and science teacher professional development.

To date, no formal evaluation (either by evaluation report or Committee of Visitors) has been performed.

The projected total of $144 million of H–1B funds in fiscal year 2002 appears to have been optimistic. The initial estimate for fiscal year 2001 of $121 million has been reduced to $94 million, and actual receipts may fall short of that mark. H–1B funds are scheduled to end in fiscal year 2003.

NSB STRATEGIC PLAN

Question. When we met briefly a couple of weeks ago, you mentioned an effort by the National Science Board to develop a strategic plan on the allocation of scientific resources and you recently held a symposium with a number of experts from academia, industry, and the Federal government. Where is this plan going and what are your next steps with this plan?

Answer. The Board has approved an Interim Report, Federal Research Resources: A Process for Setting Priorities, which includes its recommendations on improving the process for setting priorities for the Federal portfolio of research investments. Its recommendations address the need for evaluation of the portfolio in light of national goals for Federal research and for improvements in data and analytical techniques to monitor the Federal portfolio and understand and communicate the benefits of Federal investments to society. It identifies the need for an improved process for research budget coordination and priority setting in both the White House and Congress, and suggests how an improved process might be implemented. The Committee is preparing a final report for consideration by the Board for approval at the October 10–11 NSB meeting, after which it will be released to the public, disseminated to Congress, the White House, and the scientific and science policy communities, and followed up with formal discussions on the NSB recommendations.

HIGH-TECH WORKERS

Question. I am concerned about the decline of American students and workers in the physical sciences and engineering. Could you lie out how the Foundation is responding to the shortage of U.S.-born engineers and scientists? I would also like to hear how NSF is working with the academic community to encourage more students to pursue science and engineering degrees and how NSF is working with the private sector to ensure that these students develop the necessary skills to meet the needs of the high-tech industry.

Answer. NSF has a comprehensive suite of programs that prepare undergraduate students for entry into the workforce and into graduate programs. These programs utilize three strategies: (1) direct preparation of specific elements of the science and engineering workforce (e.g., Advanced Technological Education, Computer Science, Engineering, and Mathematics Scholarships); (2) attention to broadening participation in the science and engineering workforce by groups that are currently underrepresented (e.g., Historically Black Colleges and Universities—Undergraduate Program, Louis Stokes Alliances for Minority Participation, Tribal Colleges and Universities Program); and (3) strengthening the curricular and instructional infrastructure for providing high quality science, mathematics, engineering, and technology education to all students (e.g., Course, Curriculum, and Laboratory Improvement, Graduate Teaching Fellows in K–12 Education, National Science, Mathematics, Engineering, and Technology Education (SMETE) Digital Library).

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Do you have any specific recommendations where NSF can be more directly involved in addressing the need for increased Federal support for nuclear engineering education?

Answer. We are supporting a planning grant to Dr. James Duderstadt at the University of Michigan to engage the leading industry representatives, faculty and chairs of nuclear engineering departments. The project will include:

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—The development of financial estimates for the development, distribution, and ongoing support of the new curriculum.
—The development of contacts with credentialling bodies, practicum sites and other potential sponsors for the planned activities.

NSF will work closely with Dr. Duderstadt and his colleagues as the planning proceeds. Through these cooperative outreach efforts, we hope that faculty at nuclear engineering departments will better understand the NSF programs and vice-versa with the result that we receive a larger number of proposals which are competitive in the merit review process.

MATH AND SCIENCE EDUCATION

Question. I remain concerned about math and science education in this country. Our high school students are performing poorly in math and science as reported by the Third International Mathematics and Science Study. Also, there has been a significant decline in bachelor degrees awarded in engineering, math, and computer science degrees. Further, the U.S. is now lagging behind other countries in the percentage of undergraduates earning degrees in natural sciences and engineering. Lastly, the Board reported recently that enrollment in graduate school science programs are declining.

Can you lay out for me how the Foundation is responding to these troubling facts? Please specify what you are doing to improve K–12 math and science education, undergraduate education, and graduate school education.

Answer. We share your concern that individual indicators of science, math, engineering and technology (SMET) education are not as positive as we would want them to be. By the same token, we see various positive signs that progress is being made, and that strategies developed under NSF programs can be ported to a wide range of institutions to provide real opportunities for improvement.

In PreK–12 education, a recent evaluation of the Urban Systemic Program found improved student outcomes and system change among 22 large urban school districts, especially among minority students. Findings related to improved student outcomes include: (1) substantial increases in enrollment rates in mathematics and science gate-keeping and higher-level courses; (2) greater enrollment gains for underrepresented minority students than their peers; (3) achievement test gains; and (4) increased numbers of students taking college entrance examinations (AP, SAT, and ACT). In an evaluation of the Statewide Systemic Initiatives, half of the states showed impacts on classroom practice, with the highest gains in achievement occurring in states with intensive professional development linked to curriculum. The National Science Board has concluded that systemic reform programs have been very effective and should be further encouraged, and that efforts should be taken to educate the public on the complexity and long-term commitment required for success of such reforms.

The President's new Math and Science Partnerships Initiative (MSPI) also promises to add resources and focus to improving PreK–12 SMET education.

At the undergraduate level, NSF has a comprehensive suite of programs that prepare undergraduate students for entry into the workforce and into graduate programs. These programs utilize three strategies: (1) direct preparation of specific elements of the SMET workforce; (2) attention to broadening participation in the SMET workforce by groups that are currently underrepresented; and (3) strengthening the curricular and instructional infrastructure for providing high quality SMET education to all students.

Across the set of NSF's programs for undergraduates, a balance is struck between providing students with the practical skills needed to perform at a high level in the workplace and providing the firm theoretical foundations in math and science required as preparation for study at more advanced levels.

The methods used to strengthen undergraduate SMET education include inquiry-based learning, integration of learning technologies, faculty development, teacher preparation, and curricula reform. A new emphasis on strengthening student outcomes, focusing on educational "end results," is being explored. NSF also plans to explore the coupling of undergraduate activities with the Centers for Learning and Teaching (CLT) Program (a PreK–12 program), which partners universities, school districts, state education agencies, and business and industry.

At the graduate level, NSF support consists mainly in fellowships awarded to individual students. A major priority in the fiscal year 2002 budget is to increase student stipends to make SMET graduate study more attractive.

The centerpiece of NSF's strategy to improve SMET education is to examine whole systems rather than individual components. This research-based approach has been shown to be effective in identifying promising system-wide strategies that can make a real difference. The evaluation of the systemic initiatives makes it clear that this approach is effective in raising achievement levels and creating system-wide improvements that affect all students. Joining the CLT to undergraduate activities is another example in which real improvement can occur when synergies are created between educational levels.

LONG-TERM VISION FOR NSF

Question. Dr. Colwell, you have stated publicly that you supported our effort to double NSF's budget in five years. I have heard you discuss the importance of increasing the grant size and duration of NSF awards and I am personally sympathetic to that goal. But it is still unclear to me what scientific goals or vision you would like the Foundation to achieve in the long-term.

Could you give me some sense of what policy goals you would like the Foundation to pursue? I would especially like to hear what specific research areas and education and human resource development goals you envision for the Foundation.

After Dr. Colwell's response, I would also like to hear Dr. Kelly provide some comments.

Answer—Dr. Colwell. The drivers of NSF's investments—training the next generation of scientists and engineers, strengthening core activities, exploiting new opportunities, building human and physical infrastructure—all focus on strengthening U.S. leadership in today's global, information-driven economy.

The U.S. devotes only about 2.7 percent of its GDP to research and development—which ranks only sixth among major industrialized Nations. The Federal share of that total investment has shrunk, raising additional concerns. This lack of public investment in the basic sciences and engineering could erode the Nation's leadership position. Similarly, the latest results of international testing confirm that we need to strengthen math and science education at all levels. Securing U.S. world leadership in science and technology has never been more important to the future of the Nation.

The NSF budget request identifies four priority areas for fiscal year 2002 funding: Information Technology Research, Biocomplexity and the Environment, Nanoscale Science and Engineering, Learning for the 21st Century. Other priorities in the fiscal year 2002 include the President's Math and Science Partnership Initative, as well as increased investment in NSF's core, notably in mathematics.

These investment priorities are vital to growth and innovation in key industrial sectors and across society. In the automotive and aeronautics industries, we can foresee nanoparticle reinforced materials for lighter bodies, external painting that does not need washing, cheap non-flammable plastics, and self-repairing coatings and textiles. Terascale computing systems offer similar promise: in biotechnology, terascale systems will reduce the processor time required to simulate protein folding from 40 months to one day. New insights into complex systems are essential to such areas as weather forecasting, economic modeling, and environmental regulation. NSF's investments in education and human resource development—such as the Math and Science Partnerships, ADVANCE, CAREER, and the Science of Learning Centers—focus directly on broadening participation in science and engineering and achieving excellence at all levels of education.

Public investments in scientific research and education, combined with native intellectual talent and the resourcefulness of the private sector, have made the U.S. science and technology enterprise the most envied in the world. Yet there is ample evidence that the U.S. is not keeping pace with expanding opportunities for scientific progress. Nor are we doing enough to develop the talent that will keep this Nation at the forefront of science and technology well into the future. Doing both requires a level of public investment that reflects the increased importance of science and engineering to economic prosperity and social well being.

Answer—Dr. KelIy. I agree completely with the objectives noted above by Dr. Colwell. NSF is critical to development of human resources for science and engineering and for support of transforming research. The Board is strongly supportive of the Foundation's special interests in Nanotechnology, Biocomplexity and the Environment, Information Technology, Learning for the 21st Century, and the President's Math and Science Partnership. The Board is committed to adequate support for people and a robust agenda for scientific discovery, both of which are essential to the advancing the U.S. economy and quality of life in the future.

FUNDING PRIORITIES

Question. The Administration's budget request for fiscal year 2002 falls short of our goal of increasing NSF's budget by at least 15 percent in order to keep us on pace for doubling NSF's budget by 2005. Depending on our final allocation, it my strong hope and desire that we will be able to increase significantly NSF's budget.

Assuming for a moment that we were able to increase the Foundation's budget by $675 million, or even $200 million, how would you allocate these funds and how would you prioritize the funding? Could you specify what particular areas of research such as IT or nano and what new major research equipment projects you would support funding? Lastly, do you support putting additional resources into programs that broaden participation of underrepresented groups such as the Partnerships for Innovation, EPSCoR, and HBCU programs?

Answer—Dr. Colwell. NSF's fiscal year 2002 Request represents an overall increase of 1.3 percent over fiscal year 2001 and funds all our most significant priorities. The fiscal year 2002 Budget Request:

—Increases NSF's investments in education by 11 percent over fiscal year 2001. The request includes $200 million in fiscal year 2002, and $1 billion over five years, to begin the President's Math and Science Partnerships Initiative to establish partnership agreements between States and institutions of higher education, with the goal of strengthening math and science education in grades K–12. I believe the Administration is making an important statement as to the value of what NSF brings to the larger Education Reform effort.

—Increases graduate stipends by nearly 15 percent in the Graduate Research Fellowship, the Graduate Teaching Fellowships in K–12 Education, and the Integrative Graduate Education and Research Traineeships programs to help attract the best students to pursue careers in science and engineering.

—Provides a $20 million, or 17 percent, increase in mathematical sciences to initiate an effort in multidisciplinary mathematics research to enhance America's preeminence in this important area.

—Increases NSF priority areas of Information Technology Research by $13 million, or 5 percent, to $273 million and Nanoscale Science and Engineering by $24 million, or 16 percent, to $174 million.

Answer—Dr. Kelly. NSF provides the core, broad-based support for science and engineering that enables advances in science and technology in many areas critical to the Nation's future. It is imperative that we continue to work together to significantly increase the NSF budget to address more adequately our priorities in research and education. Right now we are eating our seed corn. We are not making the investments in people and in basic research that we need for the future. There has been a bipartisan effort to double the Federal funding for basic science and science budgets over a five-year period, which I support, to sustain the Nation's long-term economic health, quality of life, and security. I concur with the priorities for the Foundation identified by Dr. Colwell. Increased funding for Nanoscale Science and Engineering and Information Technology Research is especially critical, as is our investment in people. With regard to programs to broaden participation of underrepresented groups, the Board strongly supports the Foundation's statutory responsibility to encourage diversity in participation in science and engineering research and education at all levels to promote the full use of human resources in science and engineering and to insure the full development and use of the scientific and engineering talents and skills of our population.

STAFFING RESOURCES

Question. With the growing program responsibilities, I am concerned about whether NSF has the necessary resources to manage its programs.

Has NSF reviewed its short- and long-term staffing needs based on its growing workload? Dr. Boesz, do you believe this is a serious concern?

Answer. Yes, it is a serious concern for NSF for several reasons. First, I believe NSF has stretched its existing management and support services close to the limit, and any increases in funding for science and engineering research and infrastructure projects will require proportionate increases in staffing resources to ensure that the grant award process and other program initiatives are managed in an efficient and timely manner. Like other organizations, NSF has benefited from increased productivity due to technology advancements over the past decade, and NSF should be commended for its efforts in applying those advancements to keep overhead costs to a minimum. I believe, however, that the current level of management and support staffing is approaching the breaking point, and additional staffing will certainly be required to handle expanded funding responsibilities.

Second, any objective assessment of the skill mix of NSF's staff is likely to identify important deficiencies. Recent audits conducted by my office, for example, found inadequate oversight of large projects and a corresponding need for staff with training and experience in managing such efforts. NSF is currently assessing its workforce needs, and my office is planning a review of NSF's human resource management and planning early in the next fiscal year. We will focus on the business risks confronting NSF and whether its workforce planning adequately addresses those risks. As the size and number of capital projects grow and the amounts and duration of grants are increased, the need for appropriate management and monitoring skills becomes even more urgent.

Third, NSF faces many of the same problems other agencies will confront in the anticipated wave of baby-boomer retirements and the potential loss of valuable expertise and institutional knowledge. The problem may be mitigated to some extent for NSF by its substantial use of the Intergovernmental Personnel Act to rotate staff from the academic and private sectors, as well as by the fact that scientists and researchers often continue to work to a later age. Nevertheless, in an agency that has already spread its management and support staff very thin, it does not take many departures of key personnel to seriously disrupt operations. In the absence of staffing depth, the efficient transfer of knowledge from departing employees also becomes critical. A rapid growth in NSF's workload as its budget increases in coming years will intensify NSF's need to attract and retain the right skills, provide the training necessary to sustain productivity, and strengthen its staffing levels to meet the requirements of prudent management and oversight.

ASSISTING SMALLER RESEARCH INSTITUTIONS

Question. Dr. Colwell, I remain troubled by the Foundation's response to my concern about broadening NSF's participation to smaller research institutions. Some of my fellow policymakers in the Senate still believe that NSF is an agency for the elite schools such as Stanford, Michigan, and MIT. While I appreciate your efforts to at least maintain flat funding for EPSCoR, I am troubled by the Administration's decision to eliminate funding for the Office of Innovation Partnerships, which is an important initiative to me, and flat fund programs for minorities such as the HBCUs and the Tribal Colleges program.

Dr. Colwell, could you please explain the rationale behind this?

Answer. In determining its budget request, NSF attempts to balance various competing priorities. In fiscal year 2002, the Math and Science Partnerships Initiative (MSPI) and graduate student stipends were the Foundation's highest priorities. Implementing these priorities, unfortunately, often requires reductions in other programs. Eliminating fiscal year 2002 funding for the Partnerships for Innovation program (PFI) was viewed as a funding pause during which we could assess how the program should be focused for optimum results. Overall, PFI was viewed as a lesser priority than MSPI, student stipends, and maintaining near level funding for important programs such as the NSF diversity portfolio.

Our concern for maintaining a strong portfolio of programs for underrepresented groups is reflected in administrative changes within NSF that will result in greater leveraging of funds and more effective allocation of funds to increase the measurable impact of programs. The Historically Black Colleges and Universities—Undergraduate Program (HBCU–UP) has been re-focused to devote attention to those institutions most in need of assistance to strengthen the quality of their academic programs and enhance the ability of their faculty to offer high quality instruction. The Alliances for Graduate Education and the Professoriate (AGEP) program now supports only graduate education alliances of university consortia or entire university systems, rather than individual institutions, significantly increasing the impact of programmatic activities. And plans are underway to re-structure the Centers for Research Excellence in Science and Technology (CREST) program to emulate the successful Experimental Program to Stimulate Competitive Research (EPSCoR) strategy of combining core support with active co-funding of proposals submitted to NSF's other research programs.

NSF operates a range of programs that target small institutions. In addition to EPSCoR, HBCU–UP, and CREST, these programs include the Tribal Colleges and Universities Program (TCUP), the Rural Systemic Initiatives (RSI), the Model Institutions of Excellence (MIE), and many others. NSF continues to be concerned that program offerings and awards reflect the full range of institutions in the United States, and that NSF activities encompass small institutions and those in underserved areas.

SUBCOMMITTEE RECESS

Senator MIKULSKI. So, we conclude this hearing. I want to thank Senator Bond for his graciousness today. We have said a lot of kind words to each other. We actually do believe them and we are ready to really move this appropriation forward. So, thank you very much and we will be back in touch.

Dr. COLWELL. Thank you, Senator.

Senator MIKULSKI. We recess until we have the EPA hearing on Wednesday, June 13th.

[Whereupon, at 11:26 a.m., Wednesday, June 6, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, JUNE 13, 2001

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met, at 10:08 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Barbara A. Mikulski (chairman) presiding.

Present: Senators Mikulski, Leahy, Kohl, Johnson, Bond, Burns, Craig, Domenici, and Stevens.

ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF CHRISTINE TODD WHITMAN, ADMINISTRATOR

OPENING STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Good morning. The subcommittee of VA–HUD will convene and today we will take testimony from Administrator Christie Todd Whitman of the Environmental Protection Agency. I would like to thank the Administrator for being so flexible in the change of time and our schedule. We were trying to do a Coast Guard hearing and several other things, and we are trying to get caught up in our hearings. Anyway, so thank you for your flexibility.

I want to welcome you to your first hearing before this subcommittee. You know that we feel very strongly in this committee that EPA serves a very important mission of protecting human health and the environment. I was pleased to support Administrator Whitman's nomination to lead the agency, because I think she brings great expertise. First of all, a long history of being an advocate for the environment, and the administrative skills of being the chief executive of a State, as well as having to also work with Federal agencies from the gubernatorial level, and I look forward to working with her.

New Jersey and Maryland are confronted by many of the same problems, whether it's brownfields redevelopment, coastal water quality, and air pollution from their highways, byways, expressways and roadways.

I think that with adequate resources, the agency can benefit from her experiences in New Jersey, so I am so glad that she is here today to answer our questions about EPA's budget. I must say, Administrator Whitman, I am puzzled and troubled by some aspects of the budget and look forward to our conversation with you.

The 2002 budget for EPA totals $7.3 billion. That is a $500 million dollar decrease from 2001. This is more than a 6 percent cut. Now we have been told that this decrease is because the new Administration cut what we would call congressionally directed initiatives, otherwise known as earmarks. But I am concerned that it also could cut programs to protect water quality, clean air, enforcement of environmental laws and of course the whole issue of scientific analysis.

In the area of enforcement, I am troubled by this year's request. I understand the budget cuts 270 environmental enforcers, kind of like the environmental cops on the beat, and most of these cuts would be at the regional level where EPA works to deter polluters from ignoring those laws.

At the same time, the budget would fund a new State grant program. I know that a lot of enforcement goes on at the State level and there is no way the Federal Government could, nor should it be the sole enforcer, but I am concerned about what is the proper balance and what is this new State grant program. I certainly do not want to have a shift in policy that would send the wrong message to polluters, and so I am puzzled about how this change will be made, and also, does it require an authorization.

Now let us go to clean water infrastructure. Communities in Maryland and all across the Nation are confronted with enormous costs to upgrade old and failing sewer systems, and this has tremendous impact on its leakages into groundwater or into, in my case, the Chesapeake Bay. In Maryland, these projects are critical because this is part of what is causing the nutrient discharges into the bay, and we have been working on a bipartisan basis to save the bay.

So once again, I am puzzled by the proposed cuts to the Clean Water State Revolving Loan Fund. There has been a request of $850 million which is $500 million lower than the amount we appropriated last year. We also have a $450 million request for new sewer grant programs and frankly, I do not know what that means, but we thought we were funding clean water at 1.3, now it's 850, so it is less and we are going into a competitive program instead of a funded program, and I would believe as a governor, you would like the previous program because you could rely on, you thought you could rely upon these funds, and I would like to have more on that.

Then, we must raise the issue of arsenic in drinking water. The recent decision not to revise the acceptable level of arsenic in drinking water as required by the law written by this subcommittee, the current standard was set in 1942, and we know a lot more about public health and arsenic and yet I am concerned that you delayed rolling that into February, when the committee who confronted this last year set a June 22 date.

Climate change is something that I want to know what is the Administration proposing, because I found the President's recent remarks confusing. It sounds like we will be doing more and more research, but I am not sure where the recommendations go, where does research end and action begin.

Sound science. I know this is something you and I have talked about, and I am absolutely committed to the concept and also operationalizing the concept of sound science, but again, I understand this has been cut by several million dollars, so I would like to talk about that.

And again in the brownfields, I really like the brownfields initiative and I think for our communities, really, the old industrial sites of the northeast and midwest, and I also believe that in States like Montana and Utah, that there are these, and other western States, that the brownfields are both an environmental problem, but they are an economic development opportunity and I really look forward to moving that.

Of course, you know my devotion to the Chesapeake Bay. The Chesapeake Bay Program was started by Senator Charles Mathias, my predecessor, and we look forward to really making sure we stay the course on the cleanup of the bay.

Finally, I am going to reiterate that I am working with my colleague Senator Bond, and I would say this to the committee, say it at my own caucus, urge my colleagues to say it, this bill should not be a vehicle for environmental riders, and if the Administration and the House and the Senate could work together in a bipartisan basis, this would be terrific. I would like the focus of our floor debate and then the focus of the conference to be in how best can we help EPA serve the Nation in public health and protecting the environment and not the hours we spent last year, really most of our discussion on EPA was——

Senator BOND. It was.

Senator MIKULSKI. They were broadly supported but nevertheless, riders become authorizing by proxy, and we would prefer that this really be dealt with in some sort of directive or order.

PREPARED STATEMENT

So that concludes my statement, I look forward to proceeding with the hearing, and now I would like to turn to our ranking member, Senator Bond.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BARBARA A. MIKULSKI

I welcome Administrator Whitman to her first hearing before the Subcommittee.

EPA serves the very important mission of protecting human health and the environment, and I was pleased to support Administrator Whitman's nomination to lead the agency. New Jersey and Maryland are confronted by many similar environmental challenges—brownfields redevelopment and coastal water quality to name a few—so I look forward to working with Administrator Whitman.

I think that with adequate resources, the agency can benefit from her experiences in New Jersey. I am glad she is here today to answer our questions about EPA's budget request, because I am puzzled and troubled by many aspects of this budget.

The 2002 budget request for EPA totals $7.3 billion, a $500 million decrease from the 2001 level. This is more than a 6 percent cut. We have been told that this decrease is because the new Administration cut earmarks. But what this really means is cuts in programs to protect water quality, infrastructure, clean air, enforcement of environmental laws, and scientific analysis.

ENFORCEMENT OF ENVIRONMENTAL LAWS

I am troubled by this year's request for enforcement. The budget cuts 270 environmental cops on the beat. Most of these cuts would be at the regional level where EPA works to deter polluters from ignoring the law.

At the same time, the budget would fund a new State grant program. Boosting State enforcement programs is important, but we should not weaken our Federal enforcement efforts. We need both strong Federal and State enforcement efforts to achieve compliance with our environmental laws—not one or the other.

This fundamental shift in policy may send the wrong message to polluters, and I am puzzled about how this change can be made without authorization. I would like to know how it is possible that this budget can keep the Federal enforcement role strong even though it cuts resources.

CLEAN WATER INFRASTRUCTURE

Communities in Maryland and all across the nation are confronted with enormous costs to upgrade old and failing sewer systems. In Maryland, these projects are critical because they will help preventing sewage and nutrient discharges into the Chesapeake Bay.

So I am troubled by the proposed cut to the Clean Water State Revolving Loan Fund. We have a request of only $850 million which is $500 million lower than we have appropriated in recent years.

We also have a $450 million request for the new sewer grants program. But I am puzzled why this budget ignores Congress' direction to fully fund the Clean Water fund first.

ARSENIC IN DRINKING WATER

I am also puzzled by the recent decision not to lower the acceptable level of arsenic in drinking water, as required by a law written by this Subcommittee. The current standard was set in 1942, and we now know that arsenic causes cancer. What exactly is the Administration's policy on this issue?

CLIMATE CHANGE

On this issue of Climate Change, I want to know exactly what the Administration is proposing, because I have found the President's recent remarks very confusing. It sounds like we will be doing more and more research, but no real recommendations have been made. Where is the Administration going with this important issue? How does EPA fit in? We've had 10 years of solid study. We now need to take this important issue to the next level. When will we get there?

SOUND SCIENCE

One of the aspects of this budget that I find most baffling is the cuts in sound science programs. During the campaign, President Bush said "efforts to improve our environment must be based on sound science, not social fads." The new Administration has said many of EPA's past actions—like lowering the level of arsenic in drinking water—have not been based on sound science. So we should expect the new Administration to increase funding for sound science programs. So I am puzzled why the budget cuts EPA's science and technology account by $56 million.

BROWNFIELDS

The budget includes $98 million for brownfields activities, a slight increase over 2001. The Senate recently passed S. 350, the Brownfields Redevelopment Act, which would authorize a substantial increase in brownfields funding—up to $250 million.

This will create new jobs and increase the tax base in our communities, and I want to thank Administrator Whitman for her support for this important legislation. I hope EPA will work to get the House to act on this bill, so hopefully our Subcommittee can provide the additional resources.

CHESAPEAKE BAY PROGRAM

The budget also cuts many regional water programs, like the Chesapeake Bay program. The request for the Chesapeake Bay is $2 million lower than the Page 5 2001 level. I want to know the consequences of this cut, and what it will mean to this important program.

ENVIRONMENTAL RIDERS

Finally, I also want to reiterate that Senator Bond and I have always taken the position that the VA–HUD bill should not be a vehicle for environmental riders. And I hope that as we move a bill through the Committee this year, we will continue this policy.

Now let me turn to our Ranking Member, Senator Bond, for his comments.

STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Thank you very much, Madam Chair, and it is a pleasure to welcome EPA Administrator Whitman to testify on the budget. Madam Administrator, you have one of the toughest jobs in government, but I think you are the right person for the job. I do not know why you took it, but I am glad you did. EPA is quickly becoming one of the most important agencies in the government as we map out a strategy to assess and address many of the critical questions and concerns impacting the Nation and world, whether it is changes in climate as well as the primary responsibility of EPA in meeting basic environmental standards and requirements in this country.

We have had a number of problems and concerns in the past over the ability of EPA to administer its programs effectively, including the inability to meet work force demands, a lack of information and accountability, failure properly to monitor and insure the appropriate use of grants, and these will continue to be serious challenges for you. I assure you we will work with you in taking on steps to address the broader issues such as climate changes, there are no easy answers or simple solutions, but I certainly agree with the chair that sound science must be the touchstone for environmental issues, and most especially the large international issues and decisions, and we need to address global climate change based on what we know, with the firm understanding of how our decisions will impact the climate, the economy, and our relationship with other Nations of the international community.

Skipping on down to the statement, and I ask Madam Chair, that my full statement be accepted into the record.

Senator MIKULSKI. Without objection.

Senator BOND. I want to highlight several things the chair has noted, such as the decision of the Administration to eliminate funding for what they dismiss as earmarks but what we know are individual water and sewer grants to communities with special needs. The people who have benefitted from these grants really understand how important they are to the environment and quality of life, and I hope that you will help us explain to OMB the importance of these grants and the fact that I don't believe the admonition of the OMB is going to be well received.

I too am deeply disturbed that this Administration has apparently decided to carry on the tradition of the previous one by proposing to slash funding for the Clean Water State Revolving Fund down to $850 million.

I recognize the Administration is proposing a new sewer overflow control grants program at $450 million. You know, there is merit to it, but I believe we need to continue funding of the Clean Water State Revolving Fund, at least at $1.35 billion. It is a pressing need.

In light of the most recent EPA gap analysis, the United States will need to spend over the next two decades some $200 billion to replace existing water infrastructure systems, which means by the year 2020, the United States will need to spend some $21 billion annually to meet capital expenditures for wastewater treatment, as opposed to about $9.4 billion being spent annually now.

I should note that I understand that the sewer overflow control grants program activities are also eligible under the Clean Water State Revolving Funds and I do have some concerns about how this new program would be administered to meet the most critical needs in the States.

I am not a supporter generally of EPA boutique programs, but I do note that you propose to make 25 million dollars in grants available to States to improve their own enforcement efforts consistent with their environmental priorities and also, you propose making 25 million dollars in grants available to improve environmental information systems. While, we have had some problems with that in the past, I understand that you have significant experience as governor in the use of environmental information systems and will be able to assure us that these would be effectively administered.

PREPARED STATEMENT

In any event, I look forward to working with you on the many exciting and important challenges you face at EPA, and I think that your experience in New Jersey as well as your broad range of public service will make you a very effective administrator and we are delighted to have you.

[The statement follows:]

PREPARED STATEMENT OF SENATOR CHRISTOPHER S. BOND

Thank you, Madam Chair. I am happy to welcome EPA Administrator Christie Todd Whitman to testify on the EPA's budget for fiscal year 2002. This is one of the toughest jobs in the Government, but I believe that you are the right person for this job. In particular, the EPA is quickly becoming one of the more important agencies in the Government as we begin to map out a strategy to assess and address the many issues and concerns that are impacting this Nation and the world through changes to the climate as well as for meeting the EPA's primary mission to maintain basic environmental standards and requirements. As we continue to evaluate the impact of human and industrial activity on the climate and the environment, the EPA will play a larger and larger role as both a guardian and mediator of environmental policies and issues for this country and, in many ways, the world.

We have had a number of problems and concerns in the past over the ability of the EPA to administer its programs effectively, including an inability to meet workforce demands, a lack of information accountability and a failure to properly monitor and ensure the appropriate use of grants. These remain serious concerns and a great challenge to you as the new EPA Administrator. In addition, the EPA is the primary agency at the center of a storm of issues including how to address air quality standards without undermining critically needed energy production, what to do about the gasoline additive MTBE, and how states will set "total maximum daily loads" (TMDLs) of pollution to ensure that water quality standards are attained. I promise that we will work with you to address the many challenges facing the EPA.

I also assure you that we will work with you on taking the next steps to address the larger issues of climate change as it impacts the entire world. There are no easy answers or simple solutions in trying to meet national environmental goals in an international context. The Federal Government invests billions of dollars each year through the EPA alone to meet air and water quality standards as well as to address the environmental damage resulting from decisions made in the past during the industrial growth of this Nation. However, sound science needs to be the touchstone for all environmental issues and most especially these larger international environmental issues and decisions—we need to address global climate change based on what we know with a firm understanding of how our decisions will impact the climate, the economy and our relationship with the other Nations of the international community.

Moving on to the budget request before us today, EPA is requesting a $7.3 billion budget for fiscal year 2002, a decrease of $500 million from the fiscal year 2001 level. This reduction reflects the Administration's decision to eliminate any funding attributed to what is often described as "earmarks" but what I prefer to describe as individual water and sewer grants to communities with special needs. And I assure you these communities and the people and families of these communities appreciate the difference that these grants make to the quality of life in their communities. I look forward to working with you in making the Administration understand how important many of these grants are to these communities.

Unfortunately, the Administration also has carried on the tradition of the last administration by proposing to slash the funding for the Clean Water State Revolving Fund from some $1.35 billion in fiscal year 2001 to $850 million in fiscal year 2002. Instead, the Administration is proposing to fund a new Sewer Overflow Control Grants program at $450 million. While I believe that this new sewer grants program has merit and is designed to address a critical local need, I strongly support the continued funding of the Clean Water State Revolving Fund at $1.35 billion in fiscal year 2002, the same level as fiscal year 2001. This need is especially relevant since the most recent EPA GAP analysis indicates that the United States will need to spend over the next 2 decades some $300 billion to replace existing water infrastructure systems, which means, by the year 2020, the United States will need to spend some $21 billion annually to meet capital expenditures for wastewater treatment as opposed to the some $9.4 billion being spent annually now. In addition, I understand that the activities that are eligible under the proposed Sewer Overflow Control Grants program are also eligible under the Clean Water State Revolving Fund. Finally, I have many concerns about how this new Sewer Overflow Control Grants program will be administered to meet the most critical needs among states and localities.

I am glad that the EPA is focusing on its primary programs rather than creating a series of new programs and responsibilities for an agency that is already strapped with many internal problems. In addition to the Sewer Overflow Control Grants program, the EPA is requesting funding for 2 new programs that emphasize the role of states in managing their environmental responsibilities. In the first program, the EPA would make $25 million in grants available to states to improve their own enforcement efforts consistent with their environmental priorities. The second program would have the EPA make $25 million in grants available to states to improve their environmental information systems. While I am not a strong supporter of boutique programs, these programs are going in the right direction by bolstering the relationship of the EPA with the states. Again, however, I am concerned about implementation issues; in particular, how these grants will be awarded, under what criteria and how the EPA will judge results.

Administrator Whitman, I look forward to working with you on the many challenges that will face you at the EPA. Again, I believe that you, both as a former governor and a committed public servant, are the right person for this very challenging job.

Thank you, Madam Chair.

Senator MIKULSKI. Senator Johnson, I will turn to you, but I note that the ranking member of the full committee is here. Did you wish to make a statement at this time?

Senator STEVENS. You are very gracious, but I have come to hear the governor and I have no statement.

Senator MIKULSKI. Thank you. Senator Johnson.

STATEMENT OF SENATOR TIM JOHNSON

Senator JOHNSON. Thank you, Madam Chairman, for holding this very timely hearing, and welcome to Administrator Whitman. I think your choice was an excellent one on the part of the President, and I just want to say congratulations as well as condolences, but nonetheless, we are glad that you are here. I will submit a full statement and be very brief as to opening statement.

The EPA deals with some of our most difficult and most tractable problems in America, fundamentally important problems. Global warming, air pollution, safe drinking water, health of our rivers and contaminated sites. In the State of South Dakota, we are particularly concerned with this, as I shared with you yesterday, and I want to again express my appreciation for your coming by and hearing some of the concerns of South Dakota yesterday.

The issue of earmarks has been raised, and while I am not a defender of every earmark that comes down the road, I would share an observation with the Administration that the chairwoman has noted and Senator Bond has noted, and that is because elected officials in Washington determine how to use a small portion of funds as opposed to nonelected officials at the State level, that does not necessarily mean that these decisions are inferior or are an unsatisfactory use of limited resources we have available. So I would hope that we would have a constructive effort on how best to utilize our resources and that both Federal and State level officials would be involved.

I want to applaud EPA for its recent decision not to grant a waiver on oxygenation of gasoline sold in the State of California. I am pleased that that decision has been made. We are going to maintain our clean air in this Nation, and obviously I look forward to working with the EPA in that regard.

I have cosponsored legislation with my good friend Senator Chuck Hagel, bipartisan legislation I am going to call the Renewable Fuels Security Act of 2001. This legislation would require that by 2008, all transportation fuel in the United States would have to be comprised of renewable fuels, at least in 5 percent by 2016. This is ambitious legislation. Nonetheless, I believe it dovetails nicely with the decision made by the EPA, and I look forward to working with both you and with Congress in general on a vigorous effort at developing and implementing a rule for fuel standards.

I also want to express appreciation for your work on brownfield legislation. We have a long ways to go here and again, I would emphasize as I did the other day, the reality is that we have brownfield problems in rural areas as well as urban, even though the urban needs urgent attention and that's where most people think of when they think of brownfield problems, but they are serious issues in our rural areas as well.

So thank you again for joining us today for discussion of your budget and Madam Chairman, I will submit a statement to more fully announce my views.

Senator MIKULSKI. Senator Burns.

PREPARED STATEMENT

Senator BURNS. Thank you, Madam Chairman. I will just put my statement in the record. It is getting late and I think the visit with the Administrator will be long and detailed.

Senator MIKULSKI. Thank you. Without objection, it will be accepted.

[The statement follows:]

PREPARED STATEMENT OF SENATOR CONRAD BURNS

Thank you Madam Chairman, for this opportunity to speak today. I welcome Administrator Christine Todd Whitman and thank her for being with us today to share the goals and views of the Environmental Protection Agency as they relate to appropriations priorities for fiscal year 2002.

The EPA Administrator has an important and tough job, because the responsibilities of her agency can so easily reach beyond protecting the environment and instead infringe on the freedoms of the American citizen. I know, because one of the reasons I ran for Senate in 1988 was because of a dispute I had been involved in with the EPA on behalf of Yellowstone County when I was commissioner there. The EPA is charged with enforcing our federal environmental regulations, which is a very important job. Whether you agree with them or not, we all know that the laws we pass here in Congress aren't worth the paper they're written on unless they're enforced. However, in Montana I know that the State Department of Environmental Quality is responsible for almost all enforcement actions, so I am interested to hear from the Administrator how her agency will continue to improve that working relationship with the States.

Another place where the EPA has a very important role in the detection and clean up of environmental health hazards. As you know, folks in Lincoln County and Libby Montana are having a very tough time dealing with the contamination of asbestos throughout the community. People have died, others are ill, still others may become ill, and the area has suffered socially and economically as well. Clean-up of tremolite asbestos from the vermiculite mine that operated there for many years is on-going and I certainly appreciate the hard work that has gone on there. Still, there is understandable concern about how long the clean up will take and folks are wanting to know if EPA will be there to complete the job. This is one thing I would like to find out about today.

One issue that I am interested in visiting with the Administrator about today deals with the arsenic standard in drinking water. The standard had been changed from 50 parts per billion to 5 ppb in the final days of the Clinton Administration, but as I understand that level is being reviewed, and I applaud that decision. I agree that any new standard should be based on sound science, but I would add that the cost of the standard for small water systems should also be a factor. Setting an unreasonably low level for arsenic could be detrimental for rural water systems in Montana and all over the West where there is a high level of naturally occurring level of arsenic. Additionally, the cost of treating water could be so burdensome that at the local level, scarce dollars could be pulled from other important health and education programs. This is a decision that needs to be made thoughtfully, and I trust that Administrator Whitman is listening.

I look forward to hearing your testimony today and to working with you in the future.

STATEMENT OF SENATOR LARRY E. CRAIG

Senator MIKULSKI. Senator Craig.

Senator CRAIG. Thank you. I have questions I am going to submit for the record and to you, Director Whitman. Thank you for coming, I have enjoyed my meetings with you and the issues that we are working on are critically important to all of us.

I will mention one before I go because in it is an invitation. I want you to come to our beautiful State of Idaho. The reason I would like to have you come is that I would like to have you submerse yourself in probably one of the largest Superfund sites in the Nation, and the Coeur d'Alene basin. Now this is a Superfund site that has a pristine lake in it, the tourists come and travel through, and find one of the most beautiful areas in the world, and yet it is by definition a Superfund site, some 21 square miles, Madam Chairman.

The problem we have has been the length of time and the phenomenal costs involved, but cleanup has proceeded. That's problem one.

Problem two is that the regional EPA out of Seattle in their studies are trying to determine whether to expand the box from 21 square miles to as much as 1,500 square miles in a Superfund site. Now that is about all of north Idaho.

I would also suggest to you, that is one of the number one tourist sites in the Nation, it is a great site by a most pristine lake, near a world class resort that says swim in the water, it is clean. It is safe, but the EPA thinks it is a Superfund site. That is why I think it would be important for you to come, the Idaho delegation would love to have you out, but I think it is important to understand priorities.

EPA in many instances, I believe, has lost its priorities and has not appropriately targeted, and clearly, the direction that you are offering I think begins to speak to those important issues. Superfund ought to be real, it ought to clean up problems, it ought to eliminate the litigation and the timeliness, and the waste of money involved, we all know that, you are very well aware of it.

But anyway, I want to extend that invitation to you today. I have to run to another meeting as many of us do, and we know there are other issues, many have been mentioned. Climate change, TMDL, arsenic. Thank you for doing the right thing, the correct thing in getting us to the best science that will be most cost effective. I come from a State with very high arsenic levels in our drinking water because of the geography of my State. Hundreds of millions of dollars could have been spent. It was a political trip wire placed in the right place for the wrong reasons. You did the right thing in my opinion, and are now going to address it in the appropriate fashion from the best science, and out of that, we will get the best standards. Thank you.

Senator MIKULSKI. Thank you, Senator Craig, and we will ensure that your questions are inserted for Administrator Whitman.

Senator Kohl, do you have a statement?

Senator KOHL. Yes, I have a few questions.

Senator MIKULSKI. We are not at questions yet. Do you have an opening statement?

Senator KOHL. No, I'm fine, thank you.

Senator MIKULSKI. Then Administrator Whitman, why do you not proceed and give us your first testimony here.

STATEMENT OF CHRISTINE TODD WHITMAN

Ms. WHITMAN. Certainly, Madam Chair, I am delighted. Members of the subcommittee, thank you for giving me the opportunity to be here today to discuss fully the EPA budget.

If it's all right with the Chair, I would like to submit a fuller statement, however, but I will read a very brief one that touches on major points.

Senator MIKULSKI. Without objection.

Ms. WHITMAN. I am pleased to report that the President's budget does in our view provide the funding necessary to enable the Environmental Protection Agency to carry out its mission effectively and efficiently. The fiscal year 2002 request is $7.3 billion, a $56 million increase over last year's request.

The President's budget request for EPA reflects a commitment to building and strengthening partnerships across America, partnerships that we need in order to be able to achieve our goal of making America's air cleaner, our water purer, and our land better protected. The budget encourages the development of innovative environmental programs and embraces the expertise and experience of States, local governments and Native tribes, while providing them with greater flexibility with which to pursue our shared goals.

America's States and tribes receive $3.3 billion in this proposed budget, $500 million more than requested by the previous Administration. Included in these funds is a $25 million grant program for State enforcement programs. Each year, as the Chair noted, the States perform about 95 percent of the Nation's environmental compliance inspections and 90 percent of the enforcement actions. This program will allow the States to enhance their enforcement efforts in ways that will increase accountability for results and will provide flexibility for meeting and addressing their unique needs.

The President's proposed budget also includes $25 million to improve the States' environmental information systems. By helping States and EPA exchange information electronically, we will improve accuracy and provide for better decision making with better information.

For the continued cleanup of toxic waste sites, the President's budget requests $1.3 billion for Superfund. This will allow us to continue to work to address the cleanup of the 1,200 sites that remain on the Federal national priority list, while also supporting the Department of Defense's effort to clean up sites that were part of the base realignment and closure process.

I am also pleased to report that the proposed budget increases funding for the brownfields program by $5 million above last year's enacted budget, to $98 million. This program will provide for additional support for the State voluntary cleanup programs and brownfields assessment demonstration pilot programs. It's an excellent demonstration, as the chair mentioned, of the partnership between the Federal Government and the States.

With respect to America's water infrastructure, the President's budget proposal includes $2.1 billion in grants to States to insure that every American community enjoys safe and clean water. The Administration's proposal of $1.3 billion in wastewater infrastructure grants to the States includes $450 million in new programs to help communities address combined sewer overflows and sanitary sewer overflows. Also included is $850 million for the continued capitalization of the Clean Water State Revolving Fund.

Overall, the President's request for infrastructure is $500 million greater than last year's request.

In this budget proposal, we have sought to strike the appropriate balance between the needs for infrastructure funding for both the Clean Water SRF and the new grant programs, and the exercise of judicious fiscal restraint. Our proposal of $850 million for the Clean Water SRF and $450 million for the Wet Weather Act achieves these important goals which the Administration shares with the Congress.

The President's budget also fully maintains EPA's support for the core water quality programs, programs that help States manage their water quality programs and address non-point source pollution. We will be working with the States to develop TMDL's for their most impaired waters, as well as to provide technical assistance in the adoption and implementation of new drinking water standards. We also maintain support for the development of beach monitoring and notification programs by States and local governments.

With respect to drinking water, the President's budget proposes to maintain capitalization of the drinking water State revolving fund at the current level of $823 million. The President's budget will continue to provide States with flexibility to transfer funds between their clean water and drinking water State revolving funds, helping them address their most critical needs.

I am also pleased that the President's budget request maintains current funding for EPA's clean air program. This will allow us to build on the progress we have made since the passage of the Clean Air Act in 1990. It will also allow us to strengthen our relationship with our States, tribes and local partners by providing $220 million to help them carry out their clean air responsibilities.

Despite the fact that much progress has been made, much remains to be done. More than 150 million tons of air pollution was released into the air of the United States in 1999. More than 62 million of our fellow Americans live in counties where monitor data shows unhealthy air for one or more of the six common pollutants.

By using EPA's authority to set standards that will clean the air and protect public health, authority that was recently reaffirmed by the Supreme Court, we will continue to work with the States to reduce transported emissions of smog producing pollutants, and we will seek to expand the existing nine-State market based allowance trading system to additional States.

With respect to global climate change, the Administration is requesting $145 million in fiscal year 2002 to strengthen our partnerships with business, organizations and consumers, to achieve voluntary reductions in greenhouse gas emissions. These efforts are expected to result in an annual reduction of more than 73 million metric tons of carbon equivalent, reduce energy consumption by more than 85 billion kilowatt hours, which will save consumers more than $10 billion in energy costs and help develop a new generation of efficient cleaner cars and trucks. As business and individuals purchase new vehicles and equipment over the coming decade we want to do all we can to insure that these purchasers have smarter, cleaner and more efficient options available to them. Therefore, this budget supports our voluntarily efforts to promote the development of such equipment and vehicles.

As important as the air we breathe is the safety of the food that we eat. The President's proposed budget supports the important work of using the strongest science to insure that industrial chemicals and pesticides meet today's food safety standards. Both our pesticides and chemicals program seek to work with all stakeholders to insure that the products used to protect against insects and other threats to crops are safe, not just for the food we eat, but for the environment as well.

In all the work we do at EPA, I am committed to insuring that the policies we set are based on the best scientific information available. To insure the availability of solid scientific analysis, the President's budget supports a strong rigorous research program, including a proposed $535 million for the Office of Research and Development, a $5 million increase over last year's budget request.

In addition, the President's budget proposal includes $110 million for the Science to Achieve Results or STAR program. This program is one which gives EPA access to the best environmental scientists and engineers from outside the Agency so that we can always be insured we are relying on the strongest science available.

PREPARED STATEMENT

Taken together, I believe the President's budget helps communities across America address their most pressing environmental priorities. It provides funds and it sets priorities. My Agency needs to meet its mission of protecting our environment and safeguarding the public health. It is this Administration's first installment on our pledge to leave America's air cleaner, water purer, and land better protected than when we came into office.

Thank you, Madam Chair, and I would be happy to take questions.

[The statement follows:]

PREPARED STATEMENT OF CHRISTINE TODD WHITMAN

Madam Chair and Members of the Subcommittee, I am pleased to be here to discuss President Bush's request for EPA. The President's budget provides the necessary funds for the Agency to carry out our mission efficiently and effectively—to protect human health and safeguard the environment. The fiscal year 2002 request is $7.3 billion, a $56 million increase above last year's budget request.

The President's budget request for EPA reflects a commitment to increase partnerships across America to develop innovative environmental programs that ensure stewardship of our land, air, and water for generations to come. This request provides the resources and vision necessary to reach our nation's environmental mission to protect the environment and human health.

Each day, America's communities are developing environmental experience and expertise. Sharing this expertise with the Agency will help us fulfill its mission. The states and tribes receive about half of EPA's budget, because they are the innovators and energizers and are on the front line in implementing and enforcing our environmental statutes. The fiscal year 2002 request for states, tribes and EPA partners is $3.3 billion, almost $500 million more than was requested by the previous Administration.

The President's request for EPA reflects a commitment to provide more flexibility to states and local communities to craft solutions to meet their unique environmental needs.

NEW ENFORCEMENT GRANT PROGRAM

The President's Budget for fiscal year 2002 includes $25 million for grants to state enforcement programs. Each year, the states conduct about 95 percent of the nation's environmental compliance inspections and take about 90 percent of the enforcement actions. This grant program will benefit the national environmental enforcement program by providing states much-needed funds to enhance their enforcement efforts in delegated environmental programs. EPA envisions a program which includes three ingredients: a program for which there is accountability for results, flexibility to use the dollars to address state environmental priorities, and a program that is simple and efficient to administer. Over the next several months, EPA plans to work with the states to develop specific guidelines for the grant program. As we proceed through this process, we will keep the Subcommittee informed of our progress.

INFORMATION EXCHANGE NETWORK

The budget request also includes a $25 million program intended to improve the states' environmental information systems. This program will help states and EPA create the necessary infrastructure to efficiently exchange information electronically, which will reduce burden, improve accuracy and inform decision-making. This request reflects two years of collaboration with the states, with whom EPA has created a Network blueprint to improve the nation-wide exchange of environmental information. As an example of our ongoing efforts with the states in this area, in June

2001 all states will have the opportunity to begin submitting their Air Emissions Inventory data using the Information Exchange Network, demonstrating the progress made so far.

SUPERFUND

This budget continues a commitment to clean up toxic waste sites with $1.3 billion for the Superfund program. The Agency's Superfund program responds to the needs of states, communities and the public to address contamination from uncontrolled releases of toxic wastes that threaten human health, the environment and local economies. The Superfund program not only protects human health and the environment through the cleanup of toxic waste sites, but works with both public and private partners to promote redevelopment of Superfund sites. The President's budget proposes funding Superfund at the fiscal year 2001 appropriated level.

Cleanup construction is under way or completed at 92 percent of the 1,458 sites on the Federal National Priority List (NPL). In fiscal year 2002, the Superfund program and its partners will complete construction at 65 private and Federal sites. This target reflects funding reductions in prior fiscal years and the number of large, complex sites now entering the construction phase of the Superfund pipeline. By the end of fiscal year 2002, EPA will have undertaken more than 6,800 removals at hazardous waste sites to immediately reduce the threat to human health and the environment.

Working with our Federal partners to clean up Federal Facilities, the fiscal year 2002 budget includes resources to support continuing cleanup oversight, technical assistance and property transfer at Federal NPL and Base Realignment and Closure (BRAC) sites. Efforts to support the Department of Defense's (DOD's) BRAC property transfer program have created jobs and accelerated the availability of more than 350,000 acres for reuse.

BROWNFIELDS

In the President's fiscal year 2002 budget, the brownfields program request is increased by $5 million above last year's enacted level, for a total of $98 million. These resources will be used to provide additional support for State Voluntary Cleanup Programs and the Brownfields Assessment Demonstration Pilot program. The fiscal year 2002 funding request provides the resources necessary to award 38 communities new Brownfields Assessment Demonstration Pilots, 29 new Brownfields Cleanup Revolving Loan Fund pilots, and 10 new job training pilots. The request includes supplemental funding for all three existing pilot programs, the existing 28 Showcase communities, and for state/tribal voluntary cleanup programs.

President Bush has made the clean up and redevelopment of brownfields and the enactment of brownfields legislation a priority. The brownfields program is an important urban redevelopment tool that provides an alternative to the development of greenfields, and plays a key role in the Administration's goal of building strong and healthy communities for the 21st century. The Agency estimates that the brownfields program has leveraged more than an estimated $2.9 billion in cleanup and redevelopment funds. Through the EPA program, states, tribes and local communities have assessed more than 2,500 sites.

WATER INFRASTRUCTURE FUNDING

The President's budget includes $2.1 billion in grants to states for water infrastructure to ensure that safe and clean water is supplied in every American community. With respect to wastewater infrastructure, the Administration proposes $1.3 billion for grants to states in fiscal year 2002, $500 million more than the previous Administration's fiscal year 2001 request. Included in the wastewater infrastructure request is a new $450 million grant program to assist local communities in addressing infrastructure needs related to Combined Sewer Overflows (CSOs) and Sanitary Sewer Overflows (SSOs) to address the largest remaining municipal wastewater problem, and $850 million for continued capitalization of state Clean Water State Revolving Loan Funds (CWSRF). The CWSRF investment keeps EPA on track with our commitment to meet the goal for the CWSRF to provide $2 billion average in annual financial assistance over the long-term even after Federal assistance ends.

SUPPORTING CORE WATER QUALITY PROGRAMS

The President's request fully maintains support for EPA's core water quality programs, including $170 million in grants to states under Clean Water Act Section 106 to manage water quality programs and $237 million for grants under the Section 319 nonpoint source program to address polluted runoff. We recommend the elimination of the cap on Section 319 grants to Indian Tribes. This budget includes $2 million for "BEACHES" grants to support the development of beach monitoring and notification programs at the state and local level.

In addition, the budget maintains support for EPA's most critical core programs including efforts to:

—Work cooperatively with states to develop Total Maximum Daily Loads (TMDLs) for the states most impaired waters;
—Train and provide technical assistance to states to aid in the adoption and implementation of new drinking water standards;
—Reduce the backlog of expired wastewater discharge permits under the National Pollutant Discharge Elimination System (NPDES); and
—Work to ensure that states have protective, up-to-date water quality standards in place.

The budget also maintains funding of $75 million to address priority water and wastewater infrastructure needs along the U.S.-Mexico border, and $35 million to support much needed water and wastewater projects in Alaska rural and Native Villages. Also, in recognition of the lack of basic wastewater infrastructure that exists in much of Indian Country, the President is proposing to extend authority granted by the Congress for the current fiscal year that allows the Agency to reserve up to one-and-a-half percent of funds appropriated for the Clean Water SRFs for wastewater grants to tribes.

DRINKING WATER SRF

With regard to drinking water, the Administration proposes to maintain capitalization of the drinking water SRF at current levels in fiscal year 2002, $823 million. By the end of fiscal year 2002, state drinking water SRFs will have awarded 2,400 loans, with about 850 SRF funded projects having initiated operations by that date.

In addition, the Safe Drinking Water Act Amendments of 1996 included a provision that allows states flexibility to transfer funds between their clean water and drinking water SRFs in order to address their most compelling infrastructure needs. Under the President's Budget, the Administration is proposing to allow states to continue to exercise this important flexibility.

Taken together, the Administration's budget will help communities across the country address their most critical clean water and drinking water priorities.

ENSURING CLEAN AIR

The President's fiscal year 2002 budget request maintains current funding for EPA's clean air program, allowing us to continue the progress of past years. Almost $220 million or 40 percent of the $565 million in our budget request would go to our state, tribal, and local partners to help them carry out their responsibilities under the Clean Air Act.

In 1990, Congress passed the Clean Air Act Amendments with overwhelming support, setting ambitious air pollution reduction goals. Since then, the nation has achieved unprecedented success in cleaning our air and protecting public health. Working with state, tribal, and local partners, we have achieved these successes through rulemakings, voluntary measures, market mechanisms, and stakeholder consultation. Despite the substantial progress, many challenges remain.

Examples of Clean Air Act successes include the fact that the air in our cities is cleaner than it has been in a long time. Nationally, average air quality levels have improved for all five of the six common pollutants subject to air quality standards. There have been dramatic increases in the number of areas with clean air and more areas will come into compliance with national clean air health standards in fiscal year 2002.

Our cars and fuels are cleaner. The average new car is 90 percent cleaner (in terms of emissions) than in 1970; over 30 percent of the nation's gasoline is now cleaner-burning, reformulated gasoline. We will implement the tightest emissions standards ever for cars, gasoline and the first tailpipe standards that apply equally to cars, as well as sport utility vehicles (SUVs), pick-up trucks and minivans.

We have issued technology-based air toxics rules, or MACT standards, that by 2002 we believe will cut industrial air toxics by a cumulative 40 percent from 1993 levels or 1.5 million tons per year. Through fiscal year 2000, emissions of air toxics have declined 30 percent since MACT and the auto emission standards that began to be implemented in 1993. The fiscal year 2002 budget request includes the resources needed to complete the last round of MACT standards.

In the Acid Rain Program, electric utilities have cut sulfur dioxide (SO_2) emissions by approximately 28 percent or 5 million tons and have cut rainfall acidity in the East by up to 25 percent. When Title IV is fully implemented in 2010, SO_2 and nitrogen oxide (NO_X) reductions will provide health benefits, mostly from a reduction in annual cases of premature mortality. Acid rain control will also produce significant benefits in terms of improved visibility, lowered surface water acidity, and less damage to high elevation forests and materials. However, recent ecological studies show that acid rain is still a problem. We look forward to working with the Congress on a multi-pollutant strategy to require power plants to further reduce emissions of SO_2 and NO_X.

Although substantial progress has been made, it is important not to lose sight of the magnitude of the air pollution problem that still remains. Over 150 million tons of air pollution were released into the air in 1999 in the United States, and approximately 62 million people lived in counties where monitored data showed unhealthy air for one or more of the six common pollutants.

In fiscal year 2002 we will continue our work with states to reduce transported emissions of nitrogen oxides that contribute significantly to urban smog in downwind areas. Currently, 15 of the 19 states subject to the NO_X SIP call have plans that EPA has approved or expects to approve. When fully implemented, the NO_X SIP call will achieve nearly a million ton reduction in NO_X emissions. One of the other key measures will be an expansion of the existing nine-state, market-based allowance trading system to additional states. During fiscal year 2002 we will be re-engineering the information technology support structure for the allowance and emissions tracking systems to provide for improved public access and timely exchange of data with state partners.

ADDRESSING GLOBAL WARMING

To address the challenge of global warming, we are requesting $145 million for voluntary and climate change science programs for fiscal year 2002. Under this budget, EPA will continue its partnership efforts with businesses, organizations, and consumers to achieve greenhouse gas reductions by taking advantage of the many voluntary opportunities to reduce pollution and energy bills by fostering energy efficient programs, products, technologies, and cost-effective renewable energy.

As a result of work already under way, EPA's performance goals with fiscal year 2002 funding are to:

—reduce greenhouse gas emissions annually by over 73 million metric tons of carbon equivalent, offsetting about 20 percent of the growth in greenhouse gas emissions above 1990 levels;

—reduce other forms of pollution, including reducing NO_X emissions by about 180,000 tons;

—reduce U.S. energy consumption by more than 85 billion kilowatt hours, contributing to over $10 billion in energy savings to consumers and businesses; and

—contribute to developing a new generation of fuel efficient and low-polluting cars and trucks.

The opportunity to save on our nation's $600 billion annual energy bill over the next decade while reducing air pollution is tremendous. The opportunity to reduce greenhouse gas emissions is also large. We currently expect that more than half of the nation's greenhouse gas emissions in ten years from now will come from equipment that will be purchased between now and then. Fully funding EPA's voluntary energy efficiency programs will help capitalize on this tremendous opportunity for consumers, businesses, and organizations to make smarter equipment purchasing and investment decisions leading to a significant reduction of U.S. greenhouse gas emissions and air pollutants. In addition, EPA will expand its voluntary partnership efforts in the transportation sector. Voluntary initiatives to reduce vehicle miles traveled have enormous potential to provide near-term reductions in energy consumption, air pollution and greenhouse gas emissions.

ENSURING SAFE FOOD AND PROTECTING THE PUBLIC FROM HARMFUL CHEMICALS

The President's 2002 Budget request supports the important work of applying the latest science to ensure industrial chemicals and pesticides meet today's safety standards. The budget also supports the complementary protections brought through pollution prevention and voluntary partnerships.

For our pesticides programs, we have carried forward earlier increases, maintaining the registration program at $41 million to keep a steady flow of new pesticides coming onto the market, many of which are based on innovative and safer chemistry. Likewise we maintain our commitment to reviewing older pesticides, ensuring they meet Food Quality Protection Act (FQPA) standards while at the same time working with growers and the agricultural industry to help make a smooth transition to safer pesticides. In August 2002 we expect to meet our second statutory deadline for tolerance reassessments, completing an additional 2,527 and meeting the 66 percent of the 9,721 reassessments required in the law.

This budget request includes $46 million for our new and existing chemicals programs. Chemicals are in all the products and services we enjoy in our daily lives. The $14 million High Production Volume Chemical Challenge program aims to gather health and safety information for the public to make better informed choices. As part of the HPV voluntary program, 469 companies committed to provide basic information about 2,155 chemicals. The budget request of $20 million will support partnerships with states and private industry on pollution prevention projects, reducing use or exposure to chemicals to reduce potential risks most especially those chemicals that persist in our environment, collect or bioaccumulate in our bodies, and have adverse or toxic effects in the environment and on human health.

In both the pesticide and the chemical programs we continue to place special emphasis on reducing potential risks to children and other vulnerable populations. Emerging science is focusing our attention on chemicals that may harm animal or human endocrine systems, and we are working with the scientific community to find ways to identify those chemicals as part of our endocrine disruptor program.

Let me mention here that the budget assumes no impediment to promulgating the final pesticide tolerance fee rule in 2002, and you will see that the request levels for the reregistration and the tolerance reassessment programs reflect that change, namely from a reregistration maintenance fee to a tolerance fee. These two critical programs are fully supported with $52 million in appropriated funds if a new fee is in place in 2002 and we will be working with you on this issue over the coming months.

SOUND SCIENCE

Environmental policy should always be based on the soundest information available. The role of environmental science has become more critical than ever in making policy decisions, thereby, improving our ability to sustain natural resources while maintaining public trust and the integrity of our world's ecosystem. Science has played a vital role in improving America's environment—from targeting priority chemicals concerns, better characterizing sources of pollution and designing control strategies. While we must also realize that science and public policy proceed along fundamentally different time lines, we will continue to use the best available science and scientific analyses to aid in the development of environmental policy.

EPA's fiscal year 2002 President's budget supports a strong and rigorous research program. The fiscal year 2002 request includes $535 million for the Office of Research and Development (ORD), reflecting an increase of $5 million over the previous administrations fiscal year 2001 request. This request will allow the Agency to support a research program focused on addressing key environmental concerns such as the health effects of small particles in order to assure promulgation of standards that protect human health, and heightened interest in better addressing in Agency decisions the unique susceptibilities of children to potential environmental health threats. The Agency's request will also continue to support the Global Change research program focusing efforts on assessment activities examining the potential consequences of global change and climate variability on human health, air quality, water quality and ecosystem health.

In addition to supporting a strong intramural science program at the Agency, the fiscal year 2002 request provides $110 million for the Science to Achieve Results (STAR) program which includes competitively awarded grants and fellowships. The STAR program continues to successfully engage the best environmental scientists and engineers from academia through a variety of competitive, peer reviewed grants. In addition, the Agency will continue its highly successful Postdoctoral program to hire scientists and engineers who provide a dynamic infusion of intellectual energy and state-of-the-science expertise, as well as assist the Agency in addressing long range research workforce planning needs.

SUMMARY

Madam Chair and Members of the Subcommittee, the President's fiscal year 2002 Budget for EPA provides the resources and vision necessary to reach our Nation's environmental mission to protect the environment and human health. This budget represents this Administration's commitment to work with our environmental partners to develop innovative environmental programs that ensure stewardship of our land, air, and water for generations to come. This concludes my prepared statement. I would be pleased to answer any questions that you may have.

CLEAN WATER INFRASTRUCTURE

Senator MIKULSKI. Thank you very much for your testimony, and to my colleagues, we are going to try to follow with the first round so that everybody gets an opportunity, and then we will go to a second round as well.

Madam Administrator, my first question will go to clean water infrastructure. When I travel through my State of Maryland and visit my counties, they always ask me for two things. One, can I get a fiber optic network, and number two, can I get them water and sewer money, and that is usual and customary. This is also a significant issue in the environmental community. Just in my own state alone, I have gotten close to $50 million worth of requests that are not outrageous, and you know, I do not have to elaborate on this, you have met with Governor Glendening, and we are appreciative of your efforts.

I am concerned about this reduction in Clean Water infrastructure to $850 million, because our target has been $1.3 billion and we even think that is modest when there is all kinds of reports that estimate there is $140 billion in outstanding needs. Then we've got this $450 million program for newly authorized wet weather, which is sewer, but we are up there instead. That is making an addition to, not in lieu of clean water.

Now, having said that, and the problems, isn't this budget robbing Peter to pay Paul by cutting the clean water fund to pay for the new wet weather program, and why does this budget really ignore the trigger that the clean water fund should get $1.3 billion before the wet weather program will kick in? Will you comment please?

Ms. WHITMAN. Certainly. Senator, I recognize the fact that the intent was to have $1.3 billion in the Clean Water SRF State Revolving Fund program, prior to implementation of the wet weather program. However, it was our feeling that the importance of the wet weather program made it imperative that we start to move forward precisely because of the needs that you have outlined.

The $850 million in the Clean Water State Revolving Fund program will allow that fund to revolve at a stabilized base of $2 billion a year, that was the intended long-term revolving level for the State revolving fund. In fact, it will revolve at about $3 billion this year and $2 billion per year over the long-term which we feel is the amount of money that was initially intended to be in that revolving loan fund. As you pointed out, the needs are much greater, but we don't know what they now all are.

The importance, however, of the combined sewer overflow and the sanitary sewer overflow needs was such that we wanted to get that program started, and that's why we proposed taking $450 million and putting it towards that program. In regards to that new program, in the first year, the $450 million will be given directly to the States, as a grant, according to the SRF formula. The States will be able to then competitively give grants to the communities that they feel have the most need for that money. There is some certainty for the States, because the grants will be allocated using the Clean Water SRF formula.

This proposal is different from the intent of Congress, which said that in the first year the grants would go to the communities directly and in the second year to the States. We propose making the grants to the States in the first year.

We do think this is an important program. We are working on a better understanding of what the needs are. You stated a figure, Senator Bond, of $380 billion. My guess it's anywhere from $450 billion to over a trillion dollars in need.

$500 MILLION CUT

Senator MIKULSKI. Well, Administrator Whitman, let me say this, because this is going to take a lot more conversation. Number one, I really firmly disagree with the Administration on this. And we want to, I think we really need to have some ongoing conversations about this.

When your budget was cut by $500 million, the Administration said it was because of earmarks. Now, these $500 million earmarks weren't for a gold plated something or another. Almost every single one of those earmarks was related to water and sewer, and that's why they line up to see Senator Bond and I to talk about that. So that $500 million comes from, those earmarks come from people in local communities who approach my colleagues in the same way they come to me, or my constituents come to me.

If OMB, and working with you, wanted to cut us by $500 million for earmarks, they should have taken that $500 million and put it into clean water or used that $500 million to start the wet weather project. I fundamentally disagree with the priorities. I can understand, every administration doesn't want us to have earmarks, that's an ongoing battle, but that $500 million is only for a very specific area.

So I fundamentally disagree with this approach and I'm going to work with my colleagues on this and also with you. We don't want to be in a big fight with you, but this one program, the reduction to $850 million, the elimination of the money that we use for congressionally directed projects, which come off, indeed, consistently have to come off of a State priority list. It isn't because one of the senators is Uncle Charlie, who was a local commissioner who ran for sheriff. I mean, this is really very serious.

And on the wet weather, we do not in any way minimize the importance of it, but essentially we feel it was cut twice, one by eliminating the earmarks and then by taking $500 million and putting it into wet weather. So we have to think about how we can solve this issue because it's really probably one of the most important programs that we have that goes out to the States.

Ms. WHITMAN. Senator, if I might, while I don't disagree with you, I would just point out that the $1.3 billion, if you put the two programs together, total $1.3 billion, and what we have done is separated it out. However, I would be happy to work with you on that as we move forward, because this is an enormous issue.

Senator MIKULSKI. Absolutely. One is a formula program and one is a grant program. And also then, the loss of $500 million is a reduction of $500 million, ostensibly to get rid of pork. This is not pork.

Ms. WHITMAN. I wouldn't argue that one with you. I know as a governor, we did the same thing in the sense of putting the priorities in for the administration and then recognizing what the legislators saw. Almost all of them were very very good programs and had something justifiable behind them. It was just a question of setting the budget priorities in the Administration.

Senator MIKULSKI. Well, I have used my 5 minutes, so Senator Bond.

CLEAN WATER STATE REVOLVING FUND

Senator BOND. Thank you, Madam Chair. I had a number of questions about this new program and taking money out of the Clean Water State Revolving Fund and we need to continue to discuss this, but my basic question is when you have a program like the State revolving fund, which basically is the seed corn, what is the justification for taking money out of it and saying eat the seed corn with a grant program, take some money out of the revolving fund, and gives it out as a one-time shot. It doesn't continue as the State revolving funds have, to feed back into the ongoing needs that the States will have in future years.

Ms. WHITMAN. That program was established before I came here. The intent as I understand it was to have a revolving loan fund of $2 billion. That is in fact, what the State revolving loan fund will revolve at in the long-term. This year it will be higher than that, but it will continue at that $2 billion revolving level over the long-term. So there is a continuing stable high base for the revolving loan fund that will continue.

We do not anticipate that the wet weather program will go away in a year, it's going to be an ongoing program. But I would suggest, just as the Chair and you have mentioned, we need to engage as the Administration and Congress, in a very thorough discussion of how we are going to address these infrastructure needs, because it could be 25 times our budget, were we to fund everything that we think is needed, and should the Federal Government have to pick up all the costs. We need to have a very comprehensive discussion of water infrastructure needs. I believe this is one of the most pressing problems that we're going to face from now until the next decade.

ENFORCEMENT PROGRAM

Senator BOND. Well, I would agree with you on that.

Let me turn now to questions, other questions on the enforcement program. The budget request redirects $25 million from Federal enforcement to State enforcement programs and I as a former governor myself, I like to see the States taking responsibility, but we need to be watchful that the Federal Government is able to fulfill its important responsibilities. Are you confident that the remaining funds are sufficient to insure a robust Federal enforcement program?

Ms. WHITMAN. Absolutely, Senator, that is our commitment. I have said a number of times that we want to extend the carrot where possible, but the stick is certainly not retired. We have had recently a number of very, I won't say positive because that would be pejorative, but certainly large settlements where we have come down on those polluters who need to see some enforcement action.

We believe that we can do this. What we are doing here is maximizing the role of what the States are already doing in compliance assistance and enforcement. They do, as I indicated, 95 percent of the compliance reviews and they do about 90 percent of the enforcement actions. We will still have a very vigorous enforcement program, particularly for those actions that are multistate and places where States do not have the ability to bring enforcement action. We will still be ready and very able to bring enforcement actions, and able to target our work on the ones that fall to the Federal agency.

AIR POLLUTION

Senator BOND. Moving to air, the Administration has pledged to continue with the current litigation against utilities and refineries who may be violating new source review air regulation, but how is the Administration exploring ways to improve the program by removing this incentive for energy producers or suppliers or refiners to update their facilities with more efficient higher capacity technology? How, what can you do to make sure that we have the sources for energy available?

Ms. WHITMAN. Well, Senator, we're very sensitive to those concerns for emissions, and we are currently undertaking a review of the new source review program. We have reached out to our regions, we have reached to those who have been involved in it to ask for their input on what kinds of things could we do to help improve the new source review and insure that we are actually reaching the goal that we all have of cleaning the environment but not injuring business from doing business because of the way that it is implemented.

When we have completed our process and review, we will then obviously reach out to stakeholders by asking for input from others. Then we can present to everyone a comprehensive reevaluation of new source review that continues to preserve and protect the environment, but also allows us to insure that we are moving forward with addressing our energy needs.

Senator BOND. Well, we as consumers need it. I thank you, Madam Administrator, and Madam Chair.

Senator MIKULSKI. Senator Kohl.

ENFORCEMENT IN MILWAUKEE

Senator KOHL. Thank you, Madam Chairman. Administrator Whitman, today it was reported that the EPA is considering enforcement actions against Milwaukee for dumping untreated sewage into Lake Michigan.

Senator MIKULSKI. Senator Kohl, excuse me. Could you pull your microphone closer?

Senator KOHL. Okay. I will start over again. Today it was reported that EPA is considering enforcement actions against the city of Milwaukee sewer district for dumping untreated sewage into Lake Michigan. While no one of course favors such pollution, this enforcement seeks to punish a district that is working as fast as it can to fully comply with the law.

The Milwaukee sewage district has been working hard and investing many resources to update its sewage system. In the early 1990s Milwaukee spend $3 billion in additional capacity and Milwaukee is in the midst of a $320 million update to alleviate the very problem that EPA is concerned about, leaking pipes and inadequate storage.

And so, it seems counterproductive to fine a district that is already working trying to get itself to comply with the law, while other districts are continuing to dump significantly more pollution. So, are you aware that among similar sized cities, Milwaukee has the best record in terms of reductions in separate and combined sewer overflows, and should Milwaukee be held up as an example of what can be done to improve water quality in an effective partnership between local and Federal Government, and will you examine reaching a compliance agreement instead of imposing what I understand might be a $25,000 a day fine?

And does the Administration, finally, support additional visible grant dollars in addition to loans for water infrastructure to help communities like Milwaukee?

Ms. WHITMAN. Senator, it is our objective to work cooperatively with the State and the city and the surrounding communities to try to address this issue. There is no lawsuit at the present time, and we will continue to work cooperatively.

In fact, the last part of your question of providing the additional dollars is why we decided to break up the $1.3 billion to have $850 million for the State Revolving Loan Fund and $450 million to go towards combined and sanitary storm sewer overflows to start to reach these infrastructures and begin to address them. The wet weather act really targets those particular needs, but we are intent to work in a collegial way with the State, the city and the surrounding communities to address the unique problems that the city of Milwaukee has.

CLEANUP OF FOX RIVER

Senator KOHL. I thank you. Administrator Whitman, I am also concerned about the cleanup of the Fox River. As you know, EPA and the State of Wisconsin have been concerned with the Fox River and the impact of PCB contamination for some time. Currently we are waiting for a decision on the cleanup plan, completion of the proposed plan, and the regional plan should be out in late July. This plan will be reviewed by EPA I understand very soon.

Is the Administration going to have any changes to the plan, and if so, will there be delays or extra time to conduct an examination so that a cleanup plan can begin soon? During the past Administration, Wisconsin was allowed to take the lead on the cleanup, including moving the Fox River off the Superfund list while the State worked on its program to resolve the problems.

Also, the EPA during the previous Administration, with the support of Senator Feingold and others regarding this issue, it was stated in writing that the State could continue to take the lead. Will this relationship continue in the future and can the State count on EPA's continued cooperation?

Ms. WHITMAN. The State can certainly count on EPA's cooperation. I can't comment on the final proposals in the plan, simply because we haven't seen it. We need to review the plan, but we will do that in an expedited way and we will work closely with the State and insure that it is an appropriate plan that reaches all our goals.

ARSENIC

Senator KOHL. Thank you. Moving on to the subject of arsenic, as the chairman of the Agricultural Appropriations Subcommittee, I see more and more rural communities come to the USDA for rural development assistance to meet their drinking water needs. They are worried about the arsenic standard but they are also faced with old systems that are wearing out.

Many of these communities are graying, so many of their inhabitants are living on fixed incomes and cannot afford either higher taxes or steeper water bills.

In Wisconsin alone, the needs for drinking water infrastructure are valued at $1.8 billion. Drinking water systems are sorely needed, and many of them are faced with new demands on systems that are wearing out. As part of the Administration's review of the arsenic standard.

Will you consider providing additional funding to small and disadvantaged communities to meet the new standards?

Ms. WHITMAN. Senator, that is part of why I asked for the additional time to review the standard, to insure that we had thoroughly identified the fiscal needs of the small and midsize water companies that would be particularly hit by this, so that we didn't see unintended consequences of people not being able to afford their water bills, water companies going out of business, and people sinking wells and then getting water that has no protection in place.

We have two studies going on. One is with the National Academy of Sciences. I have asked them to, rather than say as they did initially that 50 is not safe, bring that level down and take a tighter look. I asked them to tell me between 3 and 20, which is what the original record was based upon, where they felt the science told them was a safe level, because of the enormous consequences of this decision.

We also have asked an outside advisory panel to take a look at what the cost implications are for the water companies in implementing whatever standard is reached. That will give us an idea of what we need to do as far as additional dollars. What is going to be required in order to help small and midsize water companies meet the requirements?

I have also even had discussions with the Secretary of Agriculture as to what kind of Agriculture money might be available to help our rural communities. That's one of the things that we want to take into account when we make the final decision.

Senator KOHL. I want to thank you for your interest, and I thank you, Madam Chairman.

Senator MIKULSKI. Thank you. Ordinarily, we have been rotating, but Senator Domenici, I understand you will yield to Senator Leahy.

Senator LEAHY. Thank you, Madam Chairman, and thank you, Senator Domenici.

Senator DOMENICI. You're welcome, Senator.

NEW SOURCE REVIEW

Senator LEAHY. It's good to have you here. I tried to reach you a couple times yesterday and thank you for your fiscal year 2002 budget.

I want to mention in New England, Lake Champlain. It is a unique piece of water, it has a watershed larger than the state of Massachusetts, but it faces the kind of development problems that any growing area in the northeast does, and your Agency has helped Vermont and New York citizens protect the lake, and we appreciate you doing that.

The Region 1 staff has been superb in working with the States on environment issues. I know that I hear from everybody in Vermont how proud they are of the professionals in the Region 1 office as being responsive, and I invite you to come up and see this part of the world, you probably have anyway, but in your capacity as Administrator.

On May 23, some of the other Senators and I sent you a letter regarding the Administration's intent to review new source review or NSR regulations of the Clean Air Act. It raised some red flags in my mind because I know some of the concerns we had, and some of the Midwestern power plants and others that have been grandfathered under that Act, and it would cause a great deal of problems for us. But we had asked for specific language in the Administration's national energy plan report that represents that the President direct you and Secretary Abraham and others to conduct a 90-day review of NSR regulations, including both the administrative interpretation and implementation of the provisions.

Now as I read that, it looked to me like there was a call in this review in saying the Administration believes the NSR regulations are currently misinterpreted and incorrectly implemented, which would contradict what you and Attorney General Ashcroft have said when you strongly commended EPA legal actions against violators of NSR regulations.

You were quoted as saying, the result of legal settlements provide Americans with cleaner and healthier air, and I agree with you. So my letter, I wish you would look at that.

Let me ask you just one basic simple one. Why was this language even necessary? Why is an EPA review necessary if the provision is undeniably responsible for EPA's success in achieving cleaner air and more healthy air?

Ms. WHITMAN. Senator, the review is to see what we can do to make things better. The new source review permits review can take up to 18 months. We don't feel this is necessarily in the best interest of either the public or the particular business or industry that has made the application. We need to insure that we have a common understanding of what is subject to new source review and what is not.

What we have found in some instances actually is that as cases have been brought forth, are an attempt to clarify new source review through the legal process, which in my mind is never the best way to do it. The intent needs to be clarified at the administrative and legislative level, not in the courts. The new source review is an attempt to insure that we have the program working in the best way possible so that it does what the intent is, that we do it more effectively and better.

ENFORCEMENT OF NEW SOURCE REVIEW REGULATIONS

Senator LEAHY. Well, I just want to make sure that we're not reviewing just for the sake of reviewing, because I remember somebody from another administration, used to reorganize the enforcement division about every 6 or 7 or 8 weeks, and there were no real enforcement actions, they were always in the process of reviewing it.

And I might ask you, what kind of personnel and budget resources are going to be used to uphold and enforce the NSR regulations?

Ms. WHITMAN. We are fully committed to enforcement and our enforcement efforts. We believe that this budget allows us to continue the type of enforcement we had in the past. But I will also mention, Senator, that I have had a lot of anecdotal stories about new source review actually hindering our ability to improve air quality because of the way it has been interpreted.

One instance, and I can't tell you exactly where, as I don't remember, but I remember the management coming in and saying they had a proposal to put a new form of scrubber on one of their facilities that would capture two of the three major pollutants in which we had an interest. However, they had another way at another part of their plant to bring them into compliance with the third pollutant. In fact the two and that one were going to be below what we were requiring. Because all three weren't captured with the one, we wouldn't grant new source review.

It was an instance where we weren't being smart about how we were looking at new source review. My feeling here is we just want to make sure that it is working the way Congress intended that it should work, and we have seen it work.

Senator LEAHY. But you understand my concern.

Ms. WHITMAN. Oh, I absolutely do.

ENFORCEMENT CUTS

Senator LEAHY. We talk about these cuts in enforcement, and as an old prosecutor, I always like the idea of having the law on the books, and while I know that everybody is pure as angels, they want to follow the law, every so often, a little devil sneaks in there and sometimes we don't have enforcement. But cuts are going to result in the loss of 270 personnel nationwide, about 90 percent of EPA enforcement staff, and about 80 percent of the cuts are going to come from regional EPA offices.

I know we have always tried in Vermont to appeal to upwind States for stronger emission controls, because they send the emissions into the air and they seem to come down through mercury and other problems in our lakes and our streams and our soil. Their State enforcement agencies say gee whiz, we will look into that, but they don't do anything, and the only thing that might happen is if there is Federal enforcement of the clean air law.

So, I'm happy to see new State based enforcement initiatives that may help, but I'm really worried if we are going to do that by cutting out Federal enforcement things, because I do not think a State like mine is going to be able to do diddly squat, and that's a professional prosectorial term, in stopping these pollutants in coming into our water.

So I will look very closely at that and I will be very happy, any answer you might want to give here, or a more detailed answer to put in the record, why are there all these cuts in enforcement.

Ms. WHITMAN. Certainly. First of all, Senator, of those cuts, 144 are funded vacancies and have been vacant for a year, so that it is not a cut in current enforcement action. Those are funded vacancies that have been vacant for a year. We are redeploying some people, which is over half of the total number of the remaining number of people to which you refer.

Senator LEAHY. We will not have a lot of vacancies like that when an administration changes?

Ms. WHITMAN. They have been vacant for a year or better. We are redeploying some people, about 65, and some of them are being put into criminal enforcement. We are looking at criminal enforcement, and at our Title VI problems that we have at the Agency, and we're beefing up or redirecting some staff to those areas. The rest we will reach through attrition, and we will watch the attrition over the year. If attrition doesn't account for all of them, we are not going to come in and cut. Our commitment here is not to have anyone lose their job, but in fact to insure that we are doing it through attrition and through intelligent redeployment.

We are redeploying to the areas that we think need the extra bodies. Civil rights is an important one for the Agency, and we are redeploying people there. We are redeploying people to TMDL management, which is another important part in disputes resolution.

So while there will be cuts as it appears, more than half of those are due to funded vacancies today.

Senator LEAHY. My time is about up, but we will discuss this further, because I do want to make sure that——

Senator MIKULSKI. Senator, I think we do want to discuss it further. I think if you turn around and look at those——

Senator LEAHY. Madam Chairman, you told me to turn around, so I will.

Senator MIKULSKI. But you can see where there is a decline, but I'm going to turn to my colleagues who have been waiting patiently, but you can see that really the northeast and midwest is what's going to lose, as well as Texas, a bulk of the enforcement, so I think this is important. But I will turn it over to Senator Domenici.

Senator DOMENICI. Thank you, Madam Chairman.

Senator LEAHY. Thanks again, Pete.

Senator DOMENICI. You're welcome.

Madam Chairman, you know that I am a new member of, as old as I am, I am a new member of your subcommittee.

Senator MIKULSKI. I know, and we are happy to have you.

KYOTO PROTOCOL

Senator DOMENICI. And I am happy to be here. I did not think we would have as many exciting things right off as we are having, so I am glad to be here today.

First off, let me say to the head of the Environmental Protection Agency, I am very confused about what is going on in your department. That may even be an understatement for you.

First, did not the U.S. Senate vote on the sense of the Senate as to whether or not we would choose as a body to ratify the Kyoto Agreement?

Ms. WHITMAN. Yes. The U.S. Senate, voted 95 to 0 against the implementation of what was then the proposed Kyoto Protocol.

Senator DOMENICI. Well, the point of it is, that is a treaty and if the United States was ever going to enforce it, it has to be ratified by the U.S. Senate. So what is the big deal? Since the U.S. Senate has already said it would not ratify it, why is the President having to answer up on this issue when as a matter of fact, Congress has said don't send it to us because if you do, we will kill it. And when I say we, I am not talking about Republicans, I am talking about everybody in the Senate. It was led by a bipartisan group as I recall, the Senator from Nebraska, Hagel, the Senator from West Virginia, Byrd, with every Senator voting we will not implement it. Do you have any idea why we would have said that, Madam Secretary?

Ms. WHITMAN. Senator, I can't explain why some people seem to be rethinking their position. The Europeans took the President's statement that as an indication from the President that he did not feel global climate change was an issue of any sort, and he no longer wanted to engage with Europe or the rest of the world in solving the problem. That was not the case.

NEW ARSENIC STANDARDS

Senator DOMENICI. I just want to make the point for the record one more time, and I choose to make it wherever I can, that the issue with reference to the Kyoto Agreement was already rendered void by the U.S. Senate saying we will not ratify it.

Now how in the world can he proceed at the executive level implementing it, negotiating further about it when we have already said as a treaty, we will not accept it? Now frankly, I think that right off, that you all dropped the ball on that one, okay? The President should never have gotten himself in this predicament when you consider the facts.

The facts are that all you had to do was invite senators over to a meeting and they would have said there is no Kyoto Agreement because we will not ratify it. With no embarrassment, no concern, bipartisan, every single senator.

Now, having said that, let me talk about another issue of very big importance to me and to the world, and to you. If I were in your shoes in the middle of an environmental crisis in the United States, with the world wanting to grow, and China wanting to become a prosperous Nation in the world, India wanting to, all poor countries wanting to get rich, which I am for, and America saying we must continue to grow and prosper, if I were in your shoes, I would be advocating a course with reference to energy that said is there a way that we can produce substantially more energy for ourselves and the world and pollute the air less than we are today.

And I would have asked who can tell me how to do that, and you know, there would have been only one answer. Of course there would be some minor answers about, if we make solar big enough, that would be the answer. But the one answer would be, if you develop a game plan to use nuclear power in the poor countries and in America to some extent in the future, you will end up with less pollution and more energy, and what a great achievement of leadership that would have been.

I want to say to you that that is how I feel. We are going to vote on that soon, so there is going to be a 30-year plan to produce less pollution as part of the implementation of our energy policy, but I want to tell you right now, I believe the Environmental Protection Agency has come perilously close in the middle of a presidential desire to move with nuclear, you have come perilously close to saying it will not happen.

Now let me ask you a question. I am reading a press release of yours, the bottom of the first page, it says, referring to your new standards, surface standards with reference to potential water pollution in the middle of a desert. And you say, under these standards, the new ones, future generations will be securely protected, and now I underline the following: Our standards require that a person living in the vicinity of Yucca Mountain and drinking untreated water at the site 10,000 years from now, will have less radiation exposure than we get today in about two round trip flights from New York to Los Angeles.

Now I might ask you, are you interested in restricting the round trip flights from New York to Los Angeles?

Ms. WHITMAN. No, of course not, Senator.

Senator DOMENICI. Why not? It has the same radiation exposure as does your new standard with reference to the site 10,000 years from now. Are there two different standards for us, one for this—is there a standard for this site and another standard that lets Americans die from this?

Ms. WHITMAN. This is a consistent drinking water standard. It's applied throughout the United States and is applied at the other sites where there are nuclear facilities, and it's a site that has that same standard in place.

Senator DOMENICI. Well, I am going to seek advice from wherever I can get it, and find out whether we can test your new standards in terms of whether a license will be issued, because that is the test, that is the issue, not the issue of putting something on the books, but can you ever license a facility under those standards.

You in your meetings have been told it is an acceptable standard. I worked on that, from what I can tell, longer than almost anybody sitting around your table, and I contend that there will never be a license issued, because you cannot prove beyond a reasonable doubt, and that is the test when you apply for a license, you cannot prove beyond a reasonable doubt that you will meet those new standards 10,000 years from now. It cannot be done.

So essentially if I am right, we have to find another way to dispose of the waste, or we have to say to the President of the United States, you cannot have as part of your plan, a significant nuclear component.

Now, you are free to comment. That is my feelings and if you think differently, you can say it now or you can say it whenever you come to my office, and I will accept it as your statement.

Ms. WHITMAN. Senator, I would be happy to repeat for the record that this is a stringent standard, that 10,000 years is what's required by the Nuclear Regulatory Commission's requirement for its approval. We believe that this is a fair standard that will protect the public, and our job is to protect the public. We need it to insure that we have that protection there. The standard is one that is tough but can be met. We believe in the importance of protecting the public health and that's why we went forward with it.

Senator DOMENICI. Well, I want to repeat, I believe we should start national hearings on whether we should abolish flights between New York and Los Angeles, because a logical standard for radiation should be the same one that you put in with reference to a desert site 10,000 years from now.

Now having said that, I want to make sure the committee understands a very serious problem for western States, including mine, and the Secretary is aware of it. I want to insert in the record, Madam Chairperson, a chart showing what it will cost States like New Mexico to implement the new arsenic standards.

We understand we have been living with arsenic from time immemorial. This is a natural component that comes from rocky structures. We have far more than the 5 milligram, or 5 percent or the 20 that is being suggested, and they have never shown an incident of resulting illness from it in our State. But it will cost, if we go all the way down to 5, it will cost us for the replenishment of large and small systems, a total of $1.52 billion if we have to meet the 5 milligram test, 375 if we have to meet the 10, and 127 if we have to meet the 20, to redo the plan and replace.

Senator MIKULSKI. Are you asking that the chart be entered in the record?

Senator DOMENICI. I am asking that.

Senator MIKULSKI. Frankly, Senator, I would like to see the chart, and without objection, it certainly will be entered into the record.

[The information follows:]

~~Background Memorandum~~—Basic Facts

Sandia National Laboratory
Arsenic Removal Technology
Demonstration and News Conference
Monday, May 28, 2001
2:30-3:30 p.m.

LEVEL	# Of SYSTEMS AFFECTED	TOTAL CAPITAL COSTS	ANNUAL O & M COSTS	AVERAGE MONTHLY RATE INCREASE/$ CUSTOMER
> 5 µg/L	79 Small 267 Large 346 Total	$ 187 million $ 865 million $1,052 million	$ 40 million $ 44 million $ 84 million	$90.82 $47.27
> 10 µg/L	N.R. Small N.R. Large 114 Total	$ 56 million $ 319 million $ 375 million	$ 1 million $ 15 million $ 16 million	$87.23 $38.58
> 20 µg/L	N.R. Small N.R. Large 37 Total	$ 10 million $ 117 million $ 127 million	$ 0.29 million $ 4.5 million $ 4.79 million	$57.46 $25.34

* These numbers are based on information contained in "Cost of Compliance with a Lower Arsenic Drinking Water Standard in New Mexico" by Kelly Bitner. A Professional Report Submitted in Partial Fulfillment of the Requirements of the degree of Master of Water Resources. University of New Mexico. The report analyzed from a cost standpoint a number of alternative technologies for removing arsenic. The costs vary significantly. For purposes of illustration, this table utilizes the least-cost method in each case.

*N.R. = Not Reported

* Small System = A system serving less than 1,000.

ARSENIC STUDY GROUP

Senator DOMENICI. Now, I want to ask one favor of you, which I am certainly less than entitled to based on my comments here today about your department, but I would like you to make sure that somebody is on this study group for arsenic that represents one of the three States that will be economically deprived, either New Mexico, Arizona or Utah. I would think you would want somebody on it from the affected State, and Montana, so I would ask if you have appointed the group, I would ask that you open it and put someone on, and if you haven't closed it, I think in fairness you ought to put someone on. Thank you, Madam Chair.

Senator MIKULSKI. Thank you, Senator Domenici. This arsenic and water is really a complicated issue. I think this is one of the areas I wanted to discuss and I think there is a question of what is public health and also the cost of compliance, and not creating an unfunded Federal mandate.

But Senator Burns, I would like to——

Ms. WHITMAN. Just so the Senator knows, there is someone from Arizona on that panel, I just wanted you to know that.

Senator DOMENICI. What?

Ms. WHITMAN. There is someone from Arizona on that study group.

Senator DOMENICI. Then might I inquire why you did not put someone from New Mexico with them. We are the most adversely affected of the States.

Senator MIKULSKI. Are we okay?

Ms. WHITMAN. We're okay. I just wanted to make sure he knew that.

PRICE OF FARM CHEMICALS: CANADA VS. U.S.A.

Senator MIKULSKI. Senator Burns.

Senator BURNS. Thank you very much, Madam Chairman. I just have a couple of questions.

As you know, we have already discussed it, about Lincoln County and Libby, Montana, and the asbestos situation up there, and your commitment that you gave to that area up there on the cleanup, and we appreciate that very much.

But I also am concerned about a situation on the Canadian border. We have a situation where there is a great price disparity between farm chemicals between what it costs to produce in Canada and the producers in the United States, and basically it is the same farm chemicals. And I feel like right now, we have to take some of the irritant off of that border to really make our free trade agreement work, and we cannot do that unless we normalize those labels on farm chemicals.

And my question today, I know you have not been in that chair very long, what plans you have made or are making to deal with that situation, how do we normalize those labels?

Ms. WHITMAN. Senator, we are very aware of the problem of normalization of pesticides, particularly as it impacts the many farmers in the northwest, because they are the closest to the border and able to see the price disparity that exists. We are working with both the Department of Commerce and Trade, as well as within our own Agency and the Department of Agriculture to see what we can do to address that issue. It's a serious one and it's one that we know that we need to address.

We have seen progress made under NAFTA in some of these areas. Roundup is probably the most egregious at this point, and we need to direct ourselves to that one and so we will continue to pursue efforts of normalization in a way that's consistent with what our standards require.

Senator BURNS. Am I not correct that you are the final say, though, on the chemicals?

Ms. WHITMAN. We are the final say on the chemicals and the makeup.

Senator BURNS. Now don't just limit it to the pesticides, so go to the herbicides and the rest of them too, because it seems to me that right now Canada uses I think six or seven different chemicals on their production of canola. We have only got labels of I think around three, yet all the canola that is harvested in Canada ends up in the market in the United States. Now there is a disparity there, and we also ought to take a look at that, not only the normalization of the label but also what can be applied and what cannot be applied and still enter the United States market.

So those are the areas where—and Libby, of course, is still a concern on the asbestos, that situation up there, and those are my concerns, but I look forward to working with you on these other situations and as we work our way through this, I feel it is very very important. And thank you, Madam Chairman, I appreciate that very much.

Senator MIKULSKI. Senator Bond, I know that you have a radio show, so I will let you go next so you can go down and participate.

Senator BOND. Madam Chair, thank you very much, that will be a real thrill.

Senator BURNS. He has a face for radio.

GENETICALLY MODIFIED FOODS

Senator BOND. Thank you, Madam Chairman. I would like to ask the Administrator, one of my priorities in this committee is the National Science Foundation. We work together to develop safe genetically modified foods, because I think this may be the key to healthy feeding and assisting the world population in dealing with problems of chemical pollution, pesticide pollution in the environment.

I know the EPA is working with other Federal agencies to insure that these food products and related products are regulated to insure the highest level of safety that we as human beings can achieve, but my question is, how do we deal with the fears and hysteria whipped up by European protectionists as well as others with special interests, and some people with legitimate concerns, but how can we address the fear factor that is being fanned that is really devastating, both to increasing investment in this area and the use of these products which have tremendous benefit for the world population and our environment?

Ms. WHITMAN. Senator, as you pointed out, the genetically modified or altered crops and ways of farming are as old as farming itself. We have looked at finding pest resistant crops and a better variety of tomatoes or corn or wheat, and this has been going on forever. You have touched on what is really driving a lot of the concern.

People are very nervous when they hear genetically modified crops. It implies something to them that is akin to the Frankenstein of the old movies. We need to do a better job of insuring that the science is real behind anything that is approved. Also, we need to insure that we do not make a mistake in the future, as I think everyone in the Agency will admit we made in the past in trying to help with a genetically modified product and to thinking that we could somehow separate something that is used for crops and animals from the human food chain.

We need to understand that anything that we approve for one has to be approved for the other because it's too difficult to keep them separate. We need to be able to enter into a dialogue with farmers to insure best practices are used and to be able to reassure to the world bodies that in fact best practices do exist and can protect the food supply.

There is a concern obviously about transparency. As a country we have been at the forefront of insuring transparency as we move forward. There is a concern in the European community about labeling. We have a concern about labeling because it raises the fear somehow that there's something wrong with it because it says genetically modified.

We feel that the transparency in the process of development is even more important. We are working actively with the Department of Agriculture to see what we can do to try to insure the community that their food is safe. We want to assure safe food no matter what.

NEW FARM BILL

Senator BOND. It is the safest food supply in the world and we need to continue, and I look forward to working with you on that.

I stepped out just a few minutes ago to meet with the leadership of one of the leading farm cooperatives in Missouri, and they are up here and I said what is your concern, and they said they are concerned about the new farm bill, but what they are really worried about is the new feed lot pollution regulations. And they wanted to know how we could be sure that your new CAFO/AFO, TMDL, do not make it impossible for the small farm operator to stay in business.

They say, you know, if you have to guarantee that there will be no overflow when there is a 25-inch rain, we are out of business. You are going to run the small farm, the small hog producer out of business. They want to make sure that their operations are clean. There are a lot of things that can be done, but they want to have some assurance from EPA that you are not just going to shut them down and run them out of business.

Ms. WHITMAN. Senator, we have heard their concerns. That's why we have extended the comment period on the CAFO regulations. For the TMDL regulation, we have two studies going on, one on the science and one on the costs, to insure that we can reach those standards that are protective of the environment but don't have the consequence of running out the small family owned farm, and those are the ones that tend to be most impacted by the standard.

There is some flexibility that was proposed in the original regulations, but there are many who are afraid that it is not sufficient to protect the small family farm. Before we are ready to make final recommendations, we will be encouraging more public participation and public input. We have been listening to small farmers. I met with them the other day and encouraged them to make sure they avail themselves of the comment period which closes at the end of July. We want to do our very best to incorporate all the concerns before arriving at these two resolutions.

FTE REDUCTION: ENFORCEMENT PROGRAM

Senator BOND. Madam Chair, if I may, just one last one. There is some suggestion that there is a reduction of 269 FTEs in the operating programs. As I understand it, there are only 65 actual enforcement FTEs who will be redeployed in the expectation that States will be able to meet environmental enforcement needs. I think the question that all of us want to know is what will EPA do to insure that overall quality of enforcement, the assurance we need to provide to everyone that enforcement will not be lessened by this change, the redeployment and the reliance on the State enforcement.

Ms. WHITMAN. Senator, the intent here is for the opposite to be true. The plan is to leverage the dollars and the enforcement personnel that we have. The States are on site and know what's happening in their regions, who the bad actors are and where to go. States perform 95 percent of the inspections in compliance outreach now, and 90 percent of the actual enforcement actions. They are very active.

We have not finalized the program yet, but the intent is to insure that we help those States that are already doing a great deal with some extra money to really ratchet up their program, and that's our goal. We will maintain our responsibility to insure that where a State can't enforce, EPA is there enforcing. Where there is a multistate enforcement issue, we are there enforcing.

In the redeployment, we are insuring that we have people addressing the issues that we find to be troubling for the Agency. We are moving some people to civil rights, which has been an issue of concern at the Agency. We are moving people to TMDL development to insure that we have the right number of people there to help with that effort.

The request of $475 million in the budget for compliance and enforcement efforts is in fact an increase of $10 million over fiscal year 2001. Included in that increase is a $1.5 million increase for compliance assistance and a $1 million increase for criminal enforcement, which we feel are priorities for redeploying and redirecting personnel.

We believe in the States. The States will need help and we are initiating the $25 million enforcement program to the States. We are going to be watching that program very very carefully as it is our responsibility to insure enforcement and we will continue to do that.

Senator BOND. Thank you very much, Madam Administrator. Thank you, Madam Chair.

Senator MIKULSKI. Thank you. Well, Administrator Whitman, this leaves it to you and I, one on one.

Ms. WHITMAN. Wonderful.

COORDINATION WITH OTHER AGENCIES TO SOLVE PROBLEMS

Senator MIKULSKI. But let me first of all give some comments and then some wrap-up questions.

Just some general comments. One of the key issues, I believe with EPA, is really devoted to coordinating with other agencies and we are really counting on your executive ability because that is what an executive does, to see how all the agencies fit together to solve a problem.

And just a few observations for, as you continue your stewardship. One, on brownfields, in the interest of time I am not going to go into the brownfields questions, but I think you and I both agree that brownfields is a tremendous opportunity, and HUD has money and EPA has money, and we want to make sure that there is leverage there and there is coordination. We have certainly enjoyed our very cordial relationship with Secretary Martinez, and I am not sure of their problems in Florida, but they certainly have a lot of environmental issues. I hope that your team would be coordinating with them so that as we clean up brownfields, that it goes then the next step, that is, from environmental, it goes from brownfields to greenfields, so that's one thing.

The second, as you know, one of my highest priorities will always be the Chesapeake Bay and again, for the cleanup of the bay it is not only the bay programs, but it is also the work of the USDA and NOAA, and I would hope again, there will be close coordination with USDA and NOAA. As you know, the causes of pfisteria are controversial. You dealt with that on the New Jersey shores. I don't like to finger point, I like to pinpoint solutions. We have quite a bit of research and other activity going on with the blue crab species, et cetera. So we really need, again, coordination, but I hope you would make a note to really insist that those agencies are working together.

The other that I think could give us all problems is the Army Corps of Engineers. Now I love the Corps, and you can't have the Port of Baltimore without the Corps of Engineers. But they are now talking about changing their wetlands policy. Administrator Whitman, I don't want you to recommend controversies, and to open that door again to relax permits and so on really gives me pause.

I'm going to be talking with General Flowers about this, but in the early days of the new Administration, with all the challenges we have, even with some of the criticisms of the Administration, let's not go to undoing the wetlands policy. I don't think—I really hope that General Flowers and I can talk about this, so that again, the Corps has what it needs to do to be the Corps of Engineers, but if they relax their standards, it is going to come back to you, it is going to come back to the Congress, and we are going to have the wetlands fight all over again, and I do not think people want to do it.

I think people have gotten used to the rules, and you know, the whole Eastern Shore is a wetland, because of the very nature of the bay on one side and the ocean on the other. And so you know where I stand, I really think that like in war, early warnings and sound intelligence would hope that we will not get into that, so would you?

Ms. WHITMAN. Certainly.

WORKING WITH OUR PARTNERS

Senator MIKULSKI. I do not know if you were aware of that. Were you aware of the wetlands issue?

Ms. WHITMAN. Yes, Senator, I am aware of the wetlands issues and I am aware of the concerns surrounding what is being talked about. We obviously have a deep commitment at the Agency to protecting the Nation's wetlands and we will continue to have that.

I couldn't agree with you more on your emphasis on partnership. While I will take your words to heart on meeting with General Flowers, I haven't done that yet, but I will assure you Secretary Veneman and I meet on a regular basis both informally and formally with staff to identify issues of concern. The Chesapeake Bay is one that we were just talking about yesterday, and where our mutual areas coincide we need to be working together.

With brownfields, you're absolutely right, the next step is going to be equally important, clean them up and then we need to have the right kind of policies. I have an additional interest in insuring that we have a good working relationship with Housing because, of course, I would like to see and insure that as Housing provides dollars for low to moderate income housing that they insure they are as energy efficient as possible. There are many new technologies now that allow us to bring housing in at appropriate cost levels that have the best in energy efficiency and are sustainable for the people who live in those houses.

Senator MIKULSKI. Well, this is the subcommittee to talk to and we would hope that the partnership that Secretary Martinez, and since Senator Bond and I have kind of a concept or something, which we continue.

Ms. WHITMAN. Okay.

REGION 3: ENFORCEMENT REDEPLOYMENT

Senator MIKULSKI. Let me go over again my questions. I am not going to go into great detail over the enforcement issue, it is not a great concern to me, but you can see Region 3 loses quite a bit of people, as well as 1, 2, 4 and the others. We have been very satisfied with the enforcement in Region 3 and what I am concerned about is, one, that we maintain adequate enforcement.

Second, and I am going to submit questions for the record here, because I think we will proceed better here and then before we do our markup, I am sure that you and I will be talking again. I just want you to understand that Senator Bond and I are working on a bipartisan basis with this.

Ms. WHITMAN. I know that.

Senator MIKULSKI. But States have mixed enforcement records and my concerns would be, who is going to use the money and how are they going to use the money, and how will EPA work with the States that have poor records, particularly if regional staff resources are cut?

Region 3, I think has a culture of environmental stewardship. It includes Delaware, Maryland, you know, et cetera, but I am concerned that not everybody has put that in, so we really need to look at this. And as I heard how you are going to redeploy your people in criminal issues, in others, which obviously are very important, but it seems to me that enforcement is just making sure that they ensure change, that you need them in the areas where you are redeploying, but we also leave them in these areas. So we would really like to have an ongoing analysis of doing that. Do you have any comments?

Ms. WHITMAN. Well, I can certainly comment. We have not allocated cuts across regions yet. We will look closely at the issue.

Senator MIKULSKI. Well, I got this from the Environment and Public Works Committee.

Ms. WHITMAN. I have seen that chart before, but we haven't gone to that level yet to allocate those cuts by region. You are not wrong, Senator, and the point that you make about not all States being equal is one that I also take very seriously. As we look at the implementation of the new program, $25 million enforcement program is something that is going to be at the forefront.

The point here is to put the money where it will do the most good and leverage the dollars we already have and insure that we retain the ability to provide the enforcement where we know States don't have that ability. This is not a flat across the board increase where everybody gets the same thing.

Senator MIKULSKI. Well, we want to hear more about this.

Ms. WHITMAN. Certainly.

MANDATE FOR NEW ARSENIC STANDARDS

Senator MIKULSKI. Let me now go to the arsenic and drinking water. First off, I am very mindful of the cost, but we are going to have some real issues on our hands. First of all, I am truly troubled at the standard of 50 ppb. That is the same standard as Bangladesh, Bolivia, and China. The European community has 10, Japan has 10, but I am not a biochemist so I am not going to say what the standard should be.

What I am concerned about is two things, number one, we had a mandate for June 22, 2001, for there to be new arsenic standards. I do not know what authority you have to move that, but you moved it. Do you think you have authority?

Ms. WHITMAN. No, Senator, we will not make the date. I don't want to say that's a common practice at the Agency, unfortunately it's done all too often. However, we have no statutory authority. We have asked for the Congress to consider an extension, given that we want to insure we have the very best data, the most current data, and the best standard possible to safeguard the people.

But what we are not changing is the enforcement date of 2006, which is the same as what was contemplated under the Clinton Administration proposal. There will be a new standard, it will be dramatically lower, and it will be enforceable by the year 2006.

Senator MIKULSKI. Can you tell me if you can, according to your announcement, the EPA would delay this until February 22. Am I correct?

Ms. WHITMAN. I'm hoping to get it done faster.

Senator MIKULSKI. What are you delaying?

Ms. WHITMAN. The final rule is what's being delayed. Before we have a final rule in place, we have to indicate what the rule would be and have it out for public comment, and fulfill the other requirements of the rule making process. It will take until February to have a final rule in place, but the implementation and enforcement date will be 2006.

SOUND SCIENCE: ARSENIC DRINKING WATER STANDARD

Senator MIKULSKI. When I chaired this committee in the early 1990s, I actually commissioned a study by the National Association of Public Administration on where EPA was in terms of its science, and did it have the infrastructure and were they able to do it. I worked off that NAPA study and I know my colleagues did, and I also then note that there has been a cut in the science and technology account by $56 million. And again, this is not meant to be a provocative or an argumentative question of you.

I want to make sure that the Agency uses sound science, so I want to ask you, what kind of science are you using now for the arsenic drinking water standard that was not used before to get at it, and then second, how can we have sound science if we are cutting it by $56 million, and could we come to an agreement by an operational definition of sound science?

Ms. WHITMAN. That will probably be more difficult.

Senator MIKULSKI. I am going to at least have this probably for the next 18 months, and I really know Senator Bond is passionate about sound science too, and we want to help you get there. And rather than every time there is a dispute, everybody criticizes the science, so I would like to——

Ms. WHITMAN. Well, our Office of Research and Development actually has an increase in its budget. Science is done across the Agency in a number of different places. Our Office of Research and Development, the office where we look to get the best science, has a proposed increase. What we're doing with arsenic is that we are looking at all the scientific work that was done in the Agency. I have asked the National Academy of Sciences to conduct a scientific review. When they did the initial review they said that they were troubled that 50 parts per billion was too high. They did not indicate what would be an appropriate lower level.

Senator MIKULSKI. So they did not give you a bottom line.

Ms. WHITMAN. They didn't give us a bottom line, so I asked them to relook at this. There have been about three new studies subsequent to the proposal that was done in January that actually indicate increased problems from arsenic.

I said look at those new studies, look at everything else, between 3 and 20, because that was where the original record was built. I didn't want to set everything back by simply ignoring the old record. Can you give us a better indication of what is a safe standard in drinking water? Is it that you're safe at 10 and not 11, you're safe at 20 and not at 21? Can they do it? I don't know if they can. Science unfortunately is never as precise as we would like, but I asked them to do that and to incorporate the new studies that have come to fore and been printed since that time.

We are also asking an outside group, and one of the senators indicated he was not altogether happy with the makeup of the group, although we did try to find a very balanced group, to look at what the cost implications are for implementation to the small and midsize water companies.

Senator MIKULSKI. Particularly for the western States.

Ms. WHITMAN. Yes. We have a number of western State representatives, and we have a scientist who has worked on arsenic from the southern part of California, an area that has high naturally occurring arsenic. They are not all from New Mexico, but we do have representation and we tried for balance.

I am going next week to a regular public meeting of the National Academy of Sciences to ask for an update as to where they are, how they are moving on the request we made of them to reexamine the science and try to give us a better number. I am taking a personal interest in this and I want to make sure we get it right.

SCIENCE AND TECHNOLOGY REDUCTION

Senator MIKULSKI. Well, we are going to—I hope we do not have more bias in this, because this really is a good fight, and we tried to come up with a solution here. Now I agree, and perhaps the instructions to the National Academy study were not as clear as they should be, but we are not going to do this through a rearview mirror. We really do need a standard to be in place by 2006. We also, while we establish the standard, not only look at the cost of compliance with the standard, but look at how we are going to do it.

I really acknowledge the validity of the concerns that were raised by my colleagues and as Senator Kohl said, many of our communities are the graying communities and they are usually older core areas, areas where there are failing sewers and failing septic systems, as there are on the New Jersey shore. So I really want to get that.

Now second, I am concerned about the cut in the science and technology account, and I do not know what the consequences of that are. So we would like to know what this means.

And then last but not at all least, and this is long range, was when we turn to EPA and we want sound science, what does that really mean and how are we going to get it? This is a long range conversation, we do deal with appropriations, and we do not want to be authorizers by proxy, but it is now a buzz word often used to delay rather than something I think you and I are in absolute agreement on.

So this is a longer range conversation, what is the operational definition of sound science? When is good, good enough science? And then how do we get there and who does it? In other words, is it an in-house thing, is it for the national laboratories, do we essentially turn to the National Academy on particularly high profile issues? I'm not sure of what is the best way, but I am going to work with you to find what is the best way so that at the end of next fiscal year, that we really have the framework that I think meets what scientists would agree, and then those of us responsible for setting public policy would be conscientious of.

Ms. WHITMAN. Senator, I look forward to that. Most of our studies, or almost all of them actually, are subjected to peer review which I think is an important way to assure sound science when you get some outside look. I have asked one of my offices to supply me with recommendations as to how we can insure that at the beginning of the regulatory process, we incorporate science into the ideas that we're moving forward and build, science and policy at the front end rather than at the back end.

I expect those recommendations as to how I can within the Agency redirect and insure that we are having and putting sound science at the front end of any regulatory decision we make and that we start to get the science in place before we determine the outcome. That unfortunately has not always been the case. I want to make sure that everyone understands that is going to be the case.

Senator MIKULSKI. I would really like you to think about this and also, maybe the National Academy has to advise us on how to get science, maybe that is one of their sets of recommendations.

But again, I am not saying what the method ought to be, I am just telling you the outcome, and I think you would like very much that outcome.

Ms. WHITMAN. I agree.

Senator MIKULSKI. And so, I look forward to working with you.

ADDITIONAL COMMITTEE QUESTIONS

Well, I think this hearing has been very informative and instructive, and we look forward to more conversation as we move forward. We expect to be marking up our bill in mid-July at the subcommittee level. We are going to really try to meet our Congressional mandated schedule this year, so everybody has to get ready to kind of move it.

[The following questions were not asked at the hearing, but were submitted to the Agency for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

COMPLIANCE ASSISTANCE

Question. What is the status of each Aiming for Excellence Report task and milestone in Actions 4 and 5? Provide an explanation of the delay for any milestones behind schedule.

Answer. In the "Aiming for Excellence Report," the Office of Enforcement and Compliance Assurance's (OECA) Office of Compliance is responsible for completing three tasks under Action 4 and three tasks under Action 5. The Office of Compliance has completed the milestones associated with each task. Information on these accomplishments is provided in Attachment A.

ATTACHMENT A

AIMING FOR ENVIRONMENTAL EXCELLENCE: ADDITIONAL REINVENTION ACTIONS AT EPA TO ENCOURAGE STEWARDSHIP AND ACCELERATE ENVIRONMENTAL PROGRESS IMPLEMENTATION PLAN (OFFICE OF COMPLIANCE PROGRESS AS OF JULY 2001)

This Implementation Plan contains a list of the Tasks and Milestones for the Office of Compliance's implementation of Actions 4 and 5 listed in the "Aiming for Excellence Task Force Report." The Actions and Tasks are cross referenced by number to the ten actions and corresponding tasks in Appendix 3 of the report. The milestones present the steps EPA is taking to be accountable for carrying through the report's recommendations.

Action 4.—Support a network of public and private sector organizations that provide assistance on environmental compliance.

Lead.—Office of Enforcement and Compliance Assurance, Office of Prevention, Pesticides, and Toxic Substances, Office of Water, Office of Policy, Economics and Innovation, Region 4.

Task 1.—We will convene a national compliance assistance forum to share information with participants on recently developed compliance assistance materials, get stakeholder input in setting priorities for new compliance assistance materials, and exchange compliance assistance tools. We will also use the forum to help identify industry sectors that have special compliance assistance needs.

—*Milestone 1.*—Establish a small workgroup of state representatives to assist EPA in planning the forum (see also Action 4, task 4; Action 5, task 2).
  —*Date.*—September 1999 (completed)

—*Milestone 2.*—Establish Agency-wide workgroup on compliance assistance.
  —*Date.*—September 1999 (completed)

—*Milestone 3.*—Establish a multi-stakeholder group through NACEPT (National Advisory Council on Environmental Policy and Technology) to assist EPA in planning the forum (see also Action 4, task 4; Action 5, task 2).
  —*Date.*—November 1999 and meet as needed (completed)

—*Milestone 4.*—Convene a compliance assistance forum.
  —*Date.*—March 2000, March 2001, and periodically thereafter (completed). The next Forum is planned for the Fall of 2002.
  —*Discussion.*—March 2000 Forum was attended by approximately 200 participants representing states, trade associations, industry, federally-recognized Indian tribes, and community groups. Gathering focused on building partnerships between compliance assistance providers. Forum 2001 Forum attracted approximately 300 participants representing over 25 states, trade associations, industry, federally-recognized Indian tribes, and community groups. Focused on sharing innovative models for delivering compliance assistance tools and delivery and identifying compliance assistance needs of providers.

Task 4.—We will create a clearinghouse of compliance assistance materials and tools. This clearinghouse will include information from federal, state, tribal, and local governments and from private providers, such as trade associations. EPA will add information to the clearinghouse in phases.

—*Milestone 1*.—Begin design of clearinghouse.

—*Date*.—October 1999 (completed)

—*Milestone 2*.—Seek broad stakeholder input on design.

—*Date*.—March 2000 (completed)

—*Milestone 3*.—Clearinghouse operational.

—*Date*.—December 2000 (completed)

—*Discussion*.—The Clearinghouse, a new and innovative web site that EPA developed with the States and other stakeholders provides comprehensive links to EPA's environmental compliance assistance materials as well as materials from all 50 States and other organizations. Its cutting-edge features allow users to directly interact with EPA and its use enhances communication and collaboration among compliance assistance providers. EPA chose to extend the milestone to further enhance Internet security.

Task 5.—We will distribute and market compliance assistance tools to organizations that are likely to have contact with regulated groups.

—*Milestone 1*.—Will be planned as tools are developed.

—*Date*.—On-going

—*Discussion*.—EPA continues its broad use and distribution of compliance assistance tools designed to reach the regulated community. EPA funds trade association and educational institutions to operate 10 Compliance Assistance Centers (the 10th, for Federal Facilities, opened in fiscal year 2000) which are designed to help small businesses and small governmental entities understand and comply with their environmental obligations. Currently, the Centers are visited over 1,200 times a day by small and large businesses, farms, governments, and the public and interest in these Centers continues to increase. In a recent survey, over 70 percent of the company and local government respondents said they took one or more actions as a result of the Center use (e.g., changing the handling of waste, obtaining a permit). In addition to the Centers, EPA continues to develop other tools such as industry sector notebooks, plain language compliance guides, training models and compliance checklists. In fiscal year 1999, EPA completed 10 sector guides and more than 30 other outreach documents for industries such as food processing and chemical manufacturing. EPA is currently refining existing compliance assistance tools to reach out to federally-recognized Indian tribes.

Action 5.—Deliver compliance assistance information for new "economically significant" rules when and where it is needed.

Lead.—EPA National program offices that prepare regulations, Office of Enforcement and Compliance Assurance (OECA)

Task 1.—We will develop compliance assistance guides and/or self-audit checklists for economically significant rules that apply to companies and/or government facilities (or rules that were "substituted" because of greater benefit), typically within 90 days of issuance. Extensions beyond this time frame will be subject to approval by the Deputy Administrator. EPA also may produce compliance materials for additional rules that do not meet the economically significant threshold, within budget limitations.

—*Lead*.—EPA National program office that prepares regulation, with assistance from the Office of Enforcement and Compliance Assurance

—*Milestone 1*.—Identify the economically significant rules under development.

—*Date*.—June 1999 (completed)

—*Milestone 2*.—Finalize initial set of rules for which compliance assistance materials will be developed.

—*Date*.—October 1999 (completed)

—*Discussion*.—Typically, the guides will be issued within 90 days of rule issuance. Extensions are allowed because of factors such as resource constraints, providing for greater stakeholder involvement, or demands of other work.

—*Milestone 3*.—For subsequent years, use the annual compliance assistance plan (see Task 2) to identify the regulations appropriate for compliance guides.

—*Date*.—Annually in May (no longer applicable—see below)

—*Discussion*.—The plan will no longer be used as the method for identifying regulations but will still include descriptive information on the planned guides. The list of economically significant rules for which compliance guides are to be developed are being tracked on a on-going basis using EPA's Rule and Policy Information and Development System (RAPIDS) data-base. The

RAPIDS data-base, established by the Office of Policy, Economics and Innovations, will also be used to track the development of the compliance guides themselves.

Task 2.—We will develop an annual compliance assistance plan, in consultation with state, tribal, and other compliance assistance providers, to ensure that compliance assistance resources are focused on areas where they are most needed. Based on their input, we will consider developing compliance assistance tools for other new rules that do not meet the economically significant threshold or for existing rules known to have compliance problems.

—*Milestone 1*.—Begin consultation with stakeholders.
—*Date*.—September 1999 (completed)
—*Milestone 2*.—Circulate draft plan to stakeholders.
—*Date*.—February 2000 and annually thereafter (completed)
—*Milestone 3*.—Send draft plan to the Deputy Administrator highlighting issues raised by stakeholders
—*Revised Date*.—November 2000 (completed)
—*Discussion*.—EPA has worked in consultation with States, tribes, the small business community and other stakeholders to develop this plan. As a result of stakeholder comment and discussions with the Compliance Assistance Advisory Committee, EPA made several significant improvements to the draft plan prior to its submission to the Deputy Administrator such as including additional appropriate projects. The process is allowing EPA to identify opportunities for collaboration, eliminate duplications, create partnerships, and identify gaps for future efforts.
—*Milestone 4*.—Issue final plan.
—*Date*.—April 2001 (completed)
—*Discussion*.—The fiscal year 2001 Plan catalogues 368 compliance assistance activities and provides analysis and policy background for compliance assistance activities. The fiscal year 2001 Plan also outlines upcoming federal rules and anticipated rule-related compliance guides.
—*Milestone 4*.—Begin developing fiscal year 2002 Plan
—*Date*.—On-going
—*Discussion*.—EPA is currently placing information into the Plan database. Publication of the draft fiscal year 2002 Plan to seek public comments in the Federal Register is scheduled for July 2001.

Task 3.—We will field test certain compliance assistance tools before issuing them. For one or two rules, the Agency will also develop special software to guide facility operators through regulations and provide answers on applicability, deadlines, and what must be done to comply.

—*Lead*.—EPA National program office that prepares regulation, with assistance from Office of Enforcement and Compliance Assurance
—*Milestone 1*.—Identify 1–2 regulations that are appropriate for software development (expert system).
—*Date*.—May 2000 and annually thereafter (completed). The TRI–ME (Toxics Release Inventory Made Easy) expert system has been developed by the Office of Environmental Information to help prospective reporters understand and comply with the EPCRA section 313 (TRI) reporting requirements.
—*Milestone 2*.—Identify appropriate staff to support development of software development (expert system).
—*Date*.—May 2000 and annually thereafter (completed)
—*Discussion*.—Office of Environmental Information staff are developing the system.
—*Milestone 3*.—Establish schedule for developing and field testing software (expert systems). Date:Spring 2001 (see below) Discussion: The first version of TRI–ME was released as a pilot distribution to 6,000 facilities in the Spring of 2001, for use in completing the TRI forms for calendar year 2000 that were due by Monday, July 2, 2001. Depending on future funding and user feedback, EPA anticipates that a new version of TRI–ME will be released for each TRI reporting year as part of the annual TRI Reporting Forms and Instructions. Beginning with reporting year 2001, in which reports will be due by July 1, 2002, the Agency expects to distribute TRI–ME to all facilities subject to EPCRA section 313. Each version of TRI–ME will be updated to reflect the most current regulations and guidance. Further, with each version of TRI–ME the Agency will strive to improve the user interface, as well as the “expert intelligence” incorporated into the software.

Question. What are the rules currently considered economically significant for the purposes of developing compliance assistance tools? Provide the rule finalization date and the status of any tools development for rules finalized or to be finalized by December 2001.

Answer. As outlined in the "Aiming for Excellence Report," EPA may develop compliance assistance tools for rules that have an economic impact of $100 million or more on companies and/or government facilities or other rules, as appropriate. EPA also develops compliance tools for rules that have a significant economic impact on a substantial number of small entities as defined under the Small Business Regulatory Enforcement Fairness Act.

The potential universe of regulations for which compliance guides may be developed is continually changing based on changes to specific provisions of a regulation and subsequent economic analysis. Also, changes in rule finalization dates alter the compliance tool schedule. Extensions in developing compliance tools are allowed because of factors such as resource constraints, providing for greater stakeholder involvement, or demands of other work.

For the purposes of this response, Attachment A contains information, as of July 5, 2001, on the ten rules finalized or expected to be finalized by December 2001.

ATTACHMENT A

ECONOMICALLY SIGNIFICANT REGULATIONS—COMPLIANCE ASSISTANCE TOOLS AS OF JULY 5, 2001

Regulation	Projected/Actual Final Publication Date	Projected/Actual Compliance Tool Completion Date	Estimated Compliance Tool Cost
Office of Air and Radiation:			
Rulemakings for the Purpose of Reducing Interstate Ozone Transport (Contact: D. Grano, 919–541–3292).	September, 2001	December, 2001	$4,800
Heavy-Duty Engine Emission Standards and Diesel Fuel Sulfur Control Requirements (Contact: T. Wysor, 734–214–4332).	January 18, 2001	March, 2002 [1]	NA
Tier II Light-Duty Vehicle and Light-Duty Truck Emission Standards and Gasoline Sulfur Standards (Contact: T. Wysor, 734–214–4229).	February 10, 2000	March, 2002 [2]	NA
NESHAP: Chemical Recovery Combustion Sources (Contact: G. Wood, 919–541–5272).	January 12, 2001	September, 2001 [3]	$60,000
Control of Emissions of Air Pollution from 2004 and Later Model Year Heavy-Duty Highway Engines and Vehicles; Revisions of Light-Duty Truck Definition (Contact: J. Guy, 202–564–9276).	October 6, 2000	January, 2001	$20,000
Office of Prevention, Pesticides and Toxic Substances: Lead: Identification of Dangerous Levels of Lead Pursuant to TSCA Section 403 (Contact: D. Topping, 202–260–7737).	January 5, 2001	April, 2001	$7,700
Office of Water:			
National Pollutant Discharge Elimination System Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges (Contact, J. Faulk, 202–564–0768).	December, 1999	March, 2000	$5,000
National Primary Drinking Water Regulations: Arsenic and Clarifications to Compliance and New Source Containment Monitoring (Contact: I. Dooley, 202–260–9531).	January 22, 2001 [4]	NA [5]	NA
National Primary Drinking Water Regulations: Stage 1 Disinfectant/Disinfection By-Products Rule (Contact: T. Grubbs, 202–260–7270).	December 16, 1998	August, 2001 [6]	$6,000
Office of Environmental Information: TRI; Reporting Threshold Amendment for Certain Persistent and Bioaccumulative Toxic Chemicals (Contact Gail Froiman, 202–260–0697).	November, 1999	July, 2001	$71,000

[1] Guide development is underway following consultation with the regulated community to ensure key issues are addressed and that EPA uses the most appropriate method of conveying information.
[2] Guide development is underway following consultation with the regulated community to ensure key issues are addressed and that EPA uses the most appropriate method of conveying information.
[3] Issuance date extended to assess the extent of litigation on the regulation.
[4] Regulation currently under review.
[5] Schedule for development of small system compliance guide will follow rule development schedule.

[6] Issuance date extended to address technical corrections.

Question. Provide the name of the person in each program office currently responsible for ensuring that compliance assistance tools are developed for each economically significant rule.

Answer. Attachment A for question Bond–002 contains the name of the person in each program office currently responsible for ensuring that compliance assistance tools are developed for each economically significant rule. If any additional information is needed please contact Peter Pagano with the Office of Congressional and Intergovernmental Relations at 564–3678.

Question. Provide an estimate of the cost of developing compliance assistance tools for each economically significant rule finalized or to be finalized in 2000 and 2001?

Answer. The costs associated with developing compliance assistance tools for economically significant rules vary significantly. Cost variations are based on the type of technical issues associated with the substantive requirements of a rule, the degree of experience that the regulated community has in dealing with environmental rules, and the diversity of the regulated community (e.g., need for bilingual assistance materials). In addition, cost variations occur because of the multiple ways in which information exchanges occur with the regulated community, including face-to-face training and delivery of information via computer-based technology. Cost variations are also associated with whether EPA develops a compliance guide within the agency or uses contractor assistance to develop the guide. Finally, cost fluctuations are affected by timing of the tool development; it is often more cost efficient for the rule developer to prepare the compliance guide at the time, or soon after, the final rule is promulgated. Attachment A contains information on the estimated cost associated with each completed compliance guide.

Question. How is EPA transforming the compliance assistance activity plan from a list of compliance activities into a planning tool describing needs, goals, and actions necessary to address those needs and goals?

Answer. In April 2001, EPA published the Compliance Assistance Activity Plan (the Plan) for fiscal year 2001. This first Plan is a compilation of 368 compliance assistance activities agency-wide for fiscal year 2001. The projects in the Plan were identified as part of the planning and budget development process which began in the Spring of 1999 and they were finalized after the agency received its fiscal year 2001 appropriations. The fiscal year 2001 Plan established a base-line of agency compliance assistance activity. As a planning tool, it helped compliance assistance providers by: identifying opportunities to partner; highlighting planned projects that were duplicative; and providing the opportunity to better utilize and leverage limited resources. The Plan also identifies EPA's 2001 priorities and the regulation-specific compliance assistance tools being developed for economically significant rules and for rules that have a significant economic impact on a substantial number of small entities as defined under the Small Business Regulatory Enforcement Fairness Act.

From the experience of developing the fiscal year 2001 Plan, EPA has made refinements to the Plan development process and how the agency intends to use the Plan in order to enhance its usefulness as a planning tool. For instance, the Office of Compliance (OC) is undertaking a "gap analysis" to identify whether planned compliance assistance projects match the agency's identified programmatic and regional priorities. OC will provide this analysis to program and regional offices to advise them in future planning efforts. In addition, EPA is incorporating a variety of stakeholder outreach efforts into the Plan development process. To better determine the highest priority compliance assistance needs, this year EPA regions and headquarters are holding additional stakeholder meetings with states, tribes and other groups that will augment the feedback received from stakeholders and assistance providers at the Compliance Assistance Providers Forum held in March 2001. The agency is also soliciting comment on its proposed fiscal year 2002 compliance assistance projects via a Federal Register notice this summer. All the comments received through the Forum, stakeholders meetings and Federal Register notice will be reviewed by all regional and relevant headquarters program offices and considered in the development of the agency's fiscal year 2002 operating plans.

Question. Provide a ranking of the top 10 compliance assistance needs and identify the criteria used for the ranking such as risk of environmental damage or susceptibility of the problem to compliance assistance techniques.

Answer. Office of Enforcement and Compliance Assurance (OECA) does not have a ranked list of the top 10 compliance activity needs. However, the Memorandum of Agreement (MOA) between EPA's Headquarters and EPA Regional offices establishes a clear focus and a set of priorities for compliance assurance activities within EPA for a two year cycle as well as ongoing "core" responsibilities. The MOA also guides our partners in the States and local jurisdictions. The MOA Guidance for fiscal year 2002 and 2003 outlines the following priority areas: wet weather (Clean Water Act), anti-microbial rules (Safe Drinking Water Act), New Source Review/Prevention of Significant Deterioration and Toxics (Clean Air Act), permit evaders (Resource Conservation and Recovery Act), petroleum refining sector. Within these priority areas, compliance assistance projects will be implemented, as appropriate, based on the environmental problem or environmental risk to be addressed.

Question. Describe how future Compliance Assistance Activity Plans will direct EPA actions and resources to meet those priority needs?

Answer. It is anticipated that future Compliance Assistance Activity Plans will reflect EPA's continuing efforts to better identify the priority needs for compliance assistance, improve the process for obtaining stakeholder input, engage in dialogue on how best to meet the identified needs, and provide guidance on how to direct resources to the highest priority needs. In addition, EPA is undertaking an effort to better identify how compliance assistance resources are being utilized by using the Plan to help identify the funding sources for the planned fiscal year 2002 activities. It is not anticipated, however, that the Plan will be used to specifically direct EPA actions and resources; the agency's Strategic Plan and annual operating plans and budget are the principal mechanisms for this effort.

Question. How is EPA holding rule development officials accountable to ensure their new rulemakings include consideration of compliance assistance tools from the earliest possible point?

Answer. EPA recognizes the importance of providing regulated entities with information to assist them in understanding and meeting their compliance obligations. Throughout the rulemaking process, we actively seek input from the states and the regulated community so that rules are crafted to be clear and understandable. In addition, through the development of EPA's annual Compliance Assistance Plan, EPA assesses the need for compliance assistance tools across the programs with a specific focus on compliance assistance tools to implement new regulatory requirements. That said, EPA acknowledges that its rulemaking development can be improved. Accordingly, on March 10, 2001, the Administrator formed a task force comprised of the then Acting Assistant Administrators to evaluate the Agency's current rulemaking process and make recommendations for improvement. EPA's senior management has transmitted it recommendations to the Administrator for her review and approval. We will supplement our answer to this question, as appropriate, upon the Administrator's decisions on improving the regulatory process.

In addition, EPA has established a goal to develop compliance tools within 90 days of promulgating the final rules for the two types of regulations for which the Agency has committed to providing compliance guides. EPA has committed to develop compliance guides for federal regulations that have a "significant economic impact on a substantial number of small entities" as defined under the Small Business Regulatory Enforcement Fairness Act (SBREFA). EPA has also committed to develop either a compliance guide or a self-audit checklist for federal regulations with an "economically significant" impact of $100 million or more on companies and/or government facilities as outlined in EPA's Aiming for Excellence report. The Agency is ensuring accountability by closely tracking the implementation of these efforts and widely publicizing its progress through various efforts, including the annual Compliance Assistance Activity Plan.

Question. How could EPA comprehensively analyze its upcoming regulatory requirements and determine where new compliance assistance tools could most effectively increase compliance with those requirements?

Answer. EPA has established a program for continuing the compliance assistance needs discussions with its partners through EPA's National Compliance Assistance Forum. Discussions and information provided at these forums has been used to identify compliance assistance needs and provide input on EPA's National Compliance Assistance Activity Clearinghouse and the Annual Compliance Assistance Activity Plan. Another vehicle for assessing compliance assistance needs comes from EPA's work with the Compliance Assistance Advisory Committee (CAAC) which is a component of the National Advisory Council for Environmental Policy and Technology (NACEPT). These efforts not only support the development of compliance assistance tools, but they also provide a forum to assess the effectiveness of EPA's compliance assistance efforts. Through all of these activities EPA is comprehensively analyzing forthcoming regulatory requirements to identify which are best suited to compliance assistance.

Based on discussions with stakeholders, EPA has also decided to identify, through the rule development process, which rules have an "economically significant" impact on the regulated community, defined as $100 million or more, and that EPA will develop compliance guides for those rules. Similarly, as mandated by the Small Business Regulatory Enforcement Fairness Act (SBREFA), based on the regulatory flexibility analysis conducted early in the rule development process EPA develops plain English compliance assistance guides for all SBREFA rules. In addition, EPA has established a goal to develop compliance tools within 90 days of promulgating the final rules for the two types of regulations for which the Agency has committed to providing compliance guides.

Question. How could EPA comprehensively analyze current regulatory requirements to determine where new compliance assistance tools could most effectively increase compliance with those requirements?

Answer. EPA recognizes the need to ensure compliance with current regulatory requirements and routinely conducts compliance analyses and outreach to identify areas of significant noncompliance. This analysis, in conjunction with analysis by various EPA program offices, is used to develop preliminary national compliance assurance priorities, including compliance assistance priorities and candidates for compliance assistance tools. These draft priorities are shared with various stakeholders including EPA Regions, States and Tribes for further refinement. In addition, in order to increase the focus and effectiveness of its compliance program, and to assure maximum stakeholder input into how EPA utilizes its compliance assistance resources, EPA has begun a process of seeking public comment on its preliminary national enforcement and compliance priorities through publication of a Federal Register Notice. EPA uses national meetings like the Compliance Assistance Providers Forum to identify regulatory requirements and sectors in need of compliance assistance. Toward these same goals, EPA is also working with the Compliance Assistance Advisory committee (CAAC), a multi-stakeholder working group, of the National Advisory Council for Environmental Policy and Technology (NACEPT) to identify priority areas for compliance assistance activity. When appropriate, EPA also works with other groups to identify and develop focused compliance assistance tools such as the recent EPA/CMA effort to determine the root causes of non-compliance in the chemical industry sector. Finally, this year OECA has requested that each Region hold sessions with stakeholders to solicit input on compliance assistance needs and priorities.

Question. Estimates of the printing industry show that up to 90 percent of all printers will never be visited by an environmental inspector or face following enforcement actions. What are other industries which have a low likelihood of being subject to traditional enforcement techniques?

Answer. All facilities must comply with the regulatory requirements that apply to their operations and may be inspected at any time. However, most industry sectors composed of small businesses are less likely to be the subject of a Federal inspection or enforcement action. State or local environmental agencies may have more frequent interaction with small businesses. Compliance assistance has generally been EPA's preferred approach for helping small businesses better understand their regulatory obligations. EPA also offers compliance incentives in the form of waived or reduced penalties to businesses that voluntarily identify, correct and disclose violations in a timely manner as stated in its Small Business Compliance Policy and the Audit Policy (for facilities that do not meet EPA's definition of a small business).

Question. How could EPA analyze the scope and extent of its enforcement activities to determine areas where compliance assistance might fill the gaps where the enforcement program does not currently reach?

Answer. EPA continues to measure and analyze the effectiveness of its compliance assistance and enforcement efforts and determine which tools are most effective in particular situations. The agency has been moving to an approach that identifies and addresses environmental problems using innovative integrated initiatives or strategies that combine compliance assistance, incentives, monitoring and enforcement to address the priorities of the enforcement and compliance assurance program. EPA's experience has shown that use of these tools in a strategic, targeted way helps address noncompliance and uses resources more efficiently and effectively. Once EPA has determined the appropriateness of an integrated strategy, it is implemented in partnership with states through the EPA regional/state planning process to address the problem or priority.

EPA has also determined that small businesses, as a category, are often most in need of assistance to understand their regulatory obligations and are less likely to be subject to federal inspections or enforcement actions. Therefore, much of our compliance assistance efforts have been directed to this group.

Finally, it should be noted that the agency has devoted, and will continue to devote, resources to measure the effectiveness of different types of compliance and enforcement tools. In the past two fiscal years, EPA provided nearly two million dollars to fifteen states to develop and implement outcome based compliance assistance measures. In addition, the Office of Enforcement and Compliance Assurance has provided funds to the regions to conduct compliance assistance projects with a measurement component and is undertaking a number of statistically valid studies to determine industry sector compliance rates. It is through the continuation of these and similar activities that the agency can build a body of knowledge of the efficacy of all of the compliance and enforcement tools.

Question. How is EPA documenting and measuring environmental improvements from compliance assistance activities?

Answer. EPA is documenting and measuring environmental improvements from its compliance assistance activities in several ways. In 1998, the Office of Compliance developed a PC-based database, the Regional Compliance Assistance Tracking System (RCATS), to track regional and headquarters compliance assistance outputs. RCATS was revised in fiscal year 2000 to capture outcome measures in three broad areas: (1) awareness and understanding of regulatory requirements; (2) changes within the regulatory community to improve environmental performance; and (3) direct reduction of emissions/discharges. The methods used to evaluate activities have included: mailed/faxed, Internet posted and e-mailed surveys, phoned interviews, pre and post-tests for workshops and training sessions, and on-site revisits, where appropriate.

This year, the Office of Compliance will be exploring the feasibility of collecting outcome data using a statistically-valid methodology so that broader conclusions based on representative samples can be made about the environmental improvements that result from compliance assistance activities.

Other efforts to document and measure environmental improvements from compliance assistance include conducting regional compliance assistance measurement pilots for the past two years, providing grants to states for developing compliance assistance measures and documenting environmental outputs, and working with a group comprised of EPA and state representatives to develop compliance assistance data standards so that EPA and states share more uniform data on compliance assistance activities.

Question. What is the status of EPA efforts to determine total resources devoted across the agency to compliance assistance activities?

Answer. The Senate Small Business Committee has requested EPA to provide agency-wide compliance assistance information. In response to this request, the Agency has established a Compliance Assistance key program that each EPA program office will use to identify compliance assistance resource information. The Annual Planning and Budget Division (APBD) is continuing to work with the Agency's programs to validate the compliance assistance resource information and plans to provide this information to the Senate Small Business Committee by the end of August 2001.

Question. How is EPA adopting a broad, holistic approach to environmental assistance recognizing that compliance assistance is part of a much larger spectrum of environmental activities?

Answer. In order to promote a holistic approach to providing environmental assistance, the Office of Enforcement and Compliance Assurance (OECA) has been working with a variety of other assistance providers to ensure that compliance assistance is integrated into the full range of activities designed to improve the environment. For example, OECA has partnered with industry, academics, environmental groups and other agencies to establish ten sector-based Compliance Assistance Centers (Center). The Centers provide not only easy to understand compliance information but also information on pollution prevention and best management practices. As another example, OECA has worked closely with EPA's pollution prevention staff, media program staff and industry groups to incorporate pollution prevention and technical assistance in the series of sector notebooks that it has developed and continues to develop. There has also been extensive collaboration between OECA and the network of small business assistance providers within and outside the agency to deliver the full range of environmental assistance information to small businesses.

Question. How is EPA making an explicit commitment to compliance assistance in its Strategic Plan?

Answer. The Office of Enforcement and Compliance Assurance (OECA) has made compliance assistance a significant part of its strategic planning efforts. Goal 9 of the Agency's Strategic Plan, "A Credible Deterrent to Pollution and Greater Compliance with the Law", dated September 2000, sets as an objective for the Agency that, "EPA and its state, tribal and local partners will promote the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs." Through this objective OECA hopes to increase "the understanding of environmental requirements through the development, distribution and use of compliance assistance tools."

To implement this strategic objective, OECA has included in the Annual Performance Plans for fiscal years 2001 and 2002, Annual Performance Goals and Performance Measures to assure that compliance assistance is developed and made available to assistance providers and the regulated community.

An important note is that for fiscal years 2001 and 2002, OECA has committed under Annual Performance Measure PM 258, to developing 150 compliance assistance tools described in its fiscal year 2001 Compliance Assistance Activity Plan. This plan is also referenced in OECA's national work planning guidance for the ten regional offices, the fiscal year 2002/2003 Memorandum of Agreement (MOA) Guidance. The linkages between the Strategic Plan, the Annual Performance Plan, the Compliance Assistance Activity Plan, and the MOA Guidance ensure a strong commitment to compliance assistance.

Question. How is EPA more widely seeking and incorporating into its planning process feedback on compliance assistance from stakeholders and communities?

Answer. The Office of Enforcement and Compliance Assurance (OECA) is taking a two track approach to expanding the opportunities for stakeholder input into its planning process. OECA develops national work planning guidance for the regional compliance and enforcement program every two years. For the fiscal years 2002/2003 national program guidance, released June 19, 2001, stakeholder involvement began in March of 2000. The ten regional offices were requested to solicit suggestions for national compliance and enforcement priorities from their state, tribal and local regulatory partners. OECA received over 150 suggested priorities. Similar suggestions were grouped, background information developed on these groups and on September 28, 2000 EPA published a Federal Register Notice (FR Notice) describing 15 potential compliance and enforcement priorities and soliciting citizen input. On November 15, 2000 OECA hosted a national priorities meeting with Agency, state, tribal and state association representatives to discuss the results of regulatory and citizen input into planning process. The draft national guidance contained six national compliance and enforcement priorities which had been described in the September FR Notice. These six priorities were recently announced as OECA's priorities for fiscal year 2002/2003.

The second track for greater stakeholder involvement in the OECA planning process is through a greatly expanded Compliance Assistance outreach effort. For example, OECA has hosted two national Compliance Assistance Activity Forums, national gatherings to share innovative approaches and discuss current strategies, successes and lessons learned. The two forums have been attended by over 500 individuals representing states, tribes, communities, community activist groups, industry, assistance providers and trade associations. At Forum 2001, EPA solicited input on compliance assistance priorities from stakeholders for the drafting of the fiscal year 2002 Compliance Assistance Plan. OECA has also established a Compliance Assistance Advisory Committee as a standing subcommittee of the National Advisory Council on Environmental Policy (NACEPT). This group was establish under the aegis of the Federal Advisory Committees Act (FACA) and was created to advise OECA on how to better provide compliance assistance and develop a comprehensive Compliance Assistance Activity Plan. The first plan, released in 2001, catalogues over 350 compliance assistance activities; provides analysis and policy background on compliance assistance; and outlines anticipated and pending Federal rules and rules related compliance guidance. The national work planning guidance to the ten regional offices references the Compliance Assistance Activity Plan. For the fiscal year 2002 Plan, each regional office is holding sessions with stakeholders to solicit their input on compliance assistance needs and priorities for the draft fiscal year 2002 Plan.

Question. How are program offices and regions addressing in their strategic plans how compliance assistance and compliance incentives will be implemented?

Answer. EPA program offices address compliance assistance and incentives as part of their annual planning processes. It is during this planning that specific assistance programs or compliance tools are identified that respond to a particular environmental protection objective in the strategic plan. EPA Regions address compliance assistance in their MOAs with Office of Enforcement and Compliance Assurance, as described in response to Question number 006.

Question. How is EPA senior management providing specific guidance to all staff levels regarding the role of compliance assistance in the agency's mission?

Answer. EPA senior management has conveyed a clear commitment to staff about the role of compliance assistance by: (1) emphasizing assistance in objectives under Goal 9 of the Agency Strategic Plan; (2) including goals and measures on assistance in Office of Enforcement and Compliance Assurance's (OECA) Annual Performance Plan; (3) utilizing assistance tools to address various national priorities identified by OECA; (4) implementing various initiatives described in the Aiming for Excellence Report to help other assistance providers; (5) providing $315,000 in fiscal year 2000 and $476,000 in fiscal year 2001 for Regional and state compliance assistance initiatives; and (6) awarding $1.2 million to 10 states for compliance assistance outcome measurement.

Question. What is the status of EPA designation of a National Compliance Assistance Director within Office of Enforcement and Compliance Assurance and a Compliance Assistance Coordinator in each program office and regional office?

Answer. After conducting an internal program review and receiving feedback from stakeholders, the Office of Compliance created a new division, the Compliance Assistance and Sector Programs Division, to provide the agency with a focal point for advancing the practice of compliance assistance. To advance the compliance assistance program, this division has established a compliance assistance work group comprised of contacts in each EPA program office and regional office to assist in developing the annual Compliance Assistance Activity Plan and planning for the annual Compliance Assistance forum.

Question. How is EPA encouraging sector-based and problem-based approaches to compliance?

Answer. To facilitate sector-based and problem-based approaches to compliance by EPA Regions and state programs, Office of Enforcement and Compliance Assurance has: improved the capacity of single-media data systems to analyze compliance trends by industry sector and identify areas of potential noncompliance; solicited ideas from state regulatory partners about environmental risks and noncompliance patterns which should be considered national priorities; developed on-line targeting information tools that analyze noncompliance on a geographic or facility basis; and created partnerships with trade associations to develop sector-based compliance assistance centers to provide information about compliance problems.

Question. How is EPA developing integrated targeting strategies that incorporate all environmental assistance approaches?

Answer. In recent years, EPA has improved its capacity to apply the full range of tools (compliance assistance, incentives for self-auditing such as pollution prevention tools, inspections, and enforcement actions) in combinations tailored to specific risks or noncompliance patterns. One area where Office of Enforcement and Compliance Assurance (OECA) has developed such an integrated strategy is for addressing compliance assistance needs associated with Concentrated Animal Feeding Operations (CAFOs). In addition, OECA's final fiscal year 2002/2003 Memorandum of Agreement (MOA) Guidance provides direction to the regions on how to use each of these tools in addressing the six national MOA priorities. Through the Compliance Assistance Clearinghouse, the Annual Compliance Assistance Activity Plan, the Compliance Assistance Providers Forum, and other mechanisms, EPA has a more comprehensive understanding of the available assistance techniques which can be applied to specific environmental problems.

Question. How is EPA developing operation guidance defining the Agency's role as compliance assistance "wholesaler?"

Answer. EPA recognizes that its co-regulators, state, local and tribal governments provide the bulk of direct compliance assistance. EPA recognizes this and is attempting to better serve the significant efforts of these agencies as well as the network of private compliance assistance providers. At this time, the agency is working closely with states and various provider communities to better understand and discuss the appropriate roles and responsibilities for different organizations providing compliance assistance. Clearly, there is not one single model for addressing all compliance assistance needs. Solutions to the development and delivery of compliance assistance will need to be developed on a case-specific basis. We are continuing to enhance the agency's "wholesaler" functions through the annual Compliance Assistance Activity Plan. We are also clarifying our role as a compliance assistance "wholesaler" through dialogue with various stakeholders at venues such as the National Compliance Assistance Providers Forum, regional stakeholder meetings, the Compliance Assistance Advisory Council, and the Small Business Development Centers and Small Business Assistance Program conferences.

Question. How is EPA ensuring that the analytic blueprint for each new regulation includes a compliance assistance analysis?

Answer. Pursuant to the Small Business Regulatory Enforcement Fairness Act (SBREFA), EPA has committed to develop compliance guides for Federal regulations that have a "significant economic impact on a substantial number of small entities." The Agency also develops either a compliance guide or a self-audit checklist for federal regulations with an "economically significant" impact of $100M or more on companies and/or government facilities. As of July 5, 2001, there are ten rules finalized or expected to be finalized by December 2001 for which a guide or checklist is scheduled to be developed.

More generally, Agency guidance requires program offices responsible for "Tier 1 and Tier 2" regulatory actions (i.e., those that require participation of the Administrator's office and those that need cross-media or Assistant Administrator-level involvement) to develop an "analytic blueprint." An analytic blueprint is a plan for the analyses, consultation and other activities that support the regulation. Among other things, the blueprint is intended to:

—Identify the potential regulated universe and compliance/enforcement issues for each group within the universe;
—Identify compliance/enforcement issues for different regulatory options; and
—Identify the outreach and technical support needs for rule implementation.

Use of an analytic blueprint should help rule developers focus, at any early point in the process, on what compliance assistance would be appropriate for that particular rule.

The Administrator recently charged an Agency task force with developing recommendations on how to improve EPA's regulatory development process.

Question. How is EPA ensuring that each rulemaking working group perform an assessment of the compliance assistance needs associated with the various regulatory options, including an assessment of the resources needed for implementation?

Answer. EPA examines the need for compliance assistance through several different mechanisms throughout the rule development process. The Small Business Regulatory Enforcement Fairness Act (SBREFA) requires EPA to develop compliance guides for Federal regulations that have a "significant economic impact on a substantial number of small entities." The Agency also develops either a compliance guide or a self-audit checklist for Federal regulations with an "economically significant" impact of $100M or more on companies and/or government facilities. As of July 5, 2001, there are ten rules finalized or expected to be finalized by December 2001 for which a guide or checklist is scheduled to be developed.

With regard to SBREFA's compliance guide requirements, the Agency's "1999 Revised Interim Guidance for EPA Rulewriters: Regulatory Flexibility Act as Amended by the Small Business Regulatory Enforcement Fairness Act," prescribes the conditions and criteria for preparing small business compliance guides. This guidance directs regulatory workgroups to begin developing compliance assistance guides as early in the process as there is enough information to do so, with a goal to publish the guides within two months of promulgation of the rules. The guidance further states that "it remains EPA policy that program offices should assess the direct impact of every rule on small entities and minimize any adverse impact to the extent feasible, regardless of the magnitude of the impact or number of small entities affected."

Question. How is EPA ensuring that each rulemaking working group include a description of the compliance assistance tools that will be developed for the selected regulatory option when preparing its rule for Federal Register publication?

Answer. EPA is required to develop compliance guides for federal regulations that have a "significant economic impact on a substantial number of small entities" as defined under the Small Business Regulatory Enforcement Fairness Act (SBREFA). In addition, EPA has committed to develop either a compliance guide or a self-audit checklist for federal regulations with an "economically significant" impact of $100 million or more on companies and/or government facilities as outlined in EPA's "Aiming for Excellence" report. For purposes of determining if we will issue Compliance tools, program offices in EPA have the lead in undertaking the analysis which will determine if a rule falls under SBREFA or is economically significant. Information regarding program office plans to develop compliance activity guides is available to the public through the annual Compliance Assistance Activity Plan (the Plan). On or about July 25, 2001, a Federal Register notice will announce the availability of the draft Plan inventory for fiscal year 2002 for public review and comment.

Agency interim guidance for EPA rulewriters, regarding implementing the Regulatory Flexibility Act, as amended by the SBREFA, dated March 29, 1999, advises rulewriters to integrate development of compliance assistance guides into the rulemaking process. Rulewriters are advised to begin on compliance assistance guides as soon as there is enough information to do so. The Office of Compliance is working with the Office of Policy, Economics and Innovation to improve tracking of compliance guide development during the regulatory process.

Question. How is EPA better targeting compliance assistance to constituencies which have not traditionally participated in compliance assistance activities?

Answer. EPA is taking numerous steps to draw more diverse constituents into compliance assistance activities. In particular, EPA is soliciting more input from our stakeholders. The Office of Enforcement and Compliance Assurance (OECA) sponsors the Compliance Assistance Advisory Committee (CAAC), a multi-stakeholder working group of the National Advisory Council for Environmental Policy and Technology to provide input and guidance into the national compliance assistance program. OECA also broadly solicits input into its compliance assurance priorities by holding stakeholder meetings and issuing a Federal Register Notice prior to its selection of priorities. EPA also seeks out new constituents through holding the annual Compliance Assistance Providers Forum which brings together an array of compliance and environmental assistance providers and industry to collaborate and identify compliance assistance priorities.

In addition, EPA is partnering with third parties who can expand the reach of the agency's "wholesale" compliance assistance efforts. EPA recognizes that its co-regulators, state, local and tribal governments, trade associations and other assistance providers have direct access to and, often, the trust of the regulated community. The agency is attempting to better serve the efforts of other assistance providers by undertaking "wholesale" compliance assistance functions: developing a web-based National Compliance Assistance Clearinghouse, holding an annual Compliance Assistance Providers Forum, developing an annual Compliance Assistance Activity Plan, creating compliance assistance tools that can be distributed locally by other assistance providers.

Another example of how partnering with third parties can expand the reach of compliance assistance to new constituencies is the compliance assistance centers. Eight of the ten compliance assistance centers that EPA supports are run by third parties. These centers are a degree removed from EPA and thus can reach sources that, in the past, may have been uncomfortable approaching EPA for assistance, or may deal primarily with their trade association. EPA is also establishing a partnership with the National Center for Manufacturing Sciences that will provide logistical support in the form of computer hardware, software and web support which will make it possible for new industry sectors to establish their own compliance assistance centers and reach new segments of the regulated community.

Finally, the Office of Enforcement and Compliance Assurance is using non-traditional as well as traditional data sources to identify industry sectors with environmental problems that could, in part, be addressed by compliance assistance. These efforts should enable the agency to identify problems and provide compliance assistance to constituencies that in the past, may have not been addressed by the agency.

Question. How is EPA developing a voluntary national compliance assistance providers' measurement collection system?

Answer. The Office of Compliance has developed its own internal tracking system, Reporting for Compliance Assistance Tracking System (RCATS). Compliance assistance staff in the regions and headquarters report on their output and outcome data through this system. Because RCATS is on a platform (Lotus-Notes) that is not often used by states and because states' reporting needs may differ from ours, in fiscal year 1999 OC funded the efforts of the Northeast Waste Management Officials Association, to develop a state version of RCATS. The National Advisory Council for Environmental Policy and Technology's (NACEPT) Compliance Assistance Advisory Committee has also been discussing measuring compliance assistance outcomes and is expected to make recommendations to the Agency on measurement collection. Most recently, Office of Enforcement and Compliance Assurance (OECA) is developing ICIS, the Integrated Compliance Information System, that will replace RCATS and will serve both EPA and state reporting needs. ICIS will incorporate data elements of the Annual Agency Compliance Assistance Plan, RCATs, and the other compliance assistance output and outcome measures that are relevant to EPA as well as states. In developing the compliance assistance functions for ICIS, the Agency will build on the work begun by the joint EPA/State Data Standards project co-chaired by OECA, Office of Environmental Information (OEI) and Environmental Council Of States (ECOS) to identify the data elements and outcome measures for the compliance assistance program and conduct analyses of ongoing measurement projects. The system will be made available to states and facilitates EPA and the states sharing data on compliance assistance activities.

Question. How is EPA testing methods for understanding the direct impact of compliance assistance on compliance and environmental performance at regulated activities?

Answer. The Office of Compliance (OC) has focused its assistance efforts on small business/communities that have not had much exposure to traditional enforcement and therefore may not be fully aware of their compliance obligations. The bulk of such activities are undertaken through EPA's regional offices and commonly include: hotlines, workshops/seminars/training, development of compliance guides (e.g., plain-language explanations of regulations, videos), and on-site visits.

Over the past few years, EPA has conducted over 50 surveys to determine the impacts of its compliance assistance program in three broad areas: (1) awareness and understanding and regulatory requirements; (2) changes within the regulatory community to improve environmental performance; and (3) direct reduction of emissions/discharges. The methods used to evaluate activities have included: mailed/faxed, Internet posted and e-mailed surveys, phoned interviews, pre and post-tests for workshops and training sessions, and on-site revisits, where appropriate. For the last two years, the Office of Enforcement and Compliance Assurance (OECA) has asked each Region to undertake a compliance assistance measurement project and report back on the results. In addition, the Office of Compliance has funded eight Regional projects in fiscal year 2000 and ten projects in fiscal year 2001 that are designed to measure the effectiveness of workshops, Internet information, user guides and on-site visits, as well as finding new tools to enhance the effectiveness of compliance assistance. In addition to evaluating compliance assistance tools, the projects also used various measurement techniques (i.e., surveys, website hits, pre- and post-test) to begin to evaluate the best way to generate defensible outcome measures for these important activities.

In fiscal year 1999 OECA funded 5 states: Texas, Connecticut, California, New Hampshire and Colorado, to develop and implement outcome based compliance assistance measures ($778,000) and funded 10 states in fiscal year 2000: Iowa, Maryland, New York, Michigan, New Mexico, Ohio, Massachusetts, and Missouri ($1,270,541).

In fiscal year 2001, OECA is embarking on a pilot project to determine the feasibility of collecting statistically-valid outcome information. OECA will be comparing the cost and feasibility of collecting statistically-valid outcome data through on-site visits versus mailed surveys for three regulated sectors: metal finishers, marinas and salvage yards. By exploring the feasibility of collecting outcome measures in a statistically-valid manner, EPA hopes to further improve its ability to measure outcomes from its compliance assistance efforts.

Question. Provide the dollars and FTE for activities under the Compliance Assistance and Centers Key Program. In meeting this request, provide resource levels from the fiscal year 2001 budget request, fiscal year 2001 enacted, fiscal year 2001 actuals, and fiscal year 2002 request. Organize the information by appropriation, Goal, Objective, Sub-objective, Office or Region, and Activity.

Answer. The table below provides the dollars and FTE under the Compliance Assistance and Centers Key Program for the Office of Enforcement and Compliance Assurance (OECA). The key program database does not contain information for fiscal year 2001 actuals. Therefore, this information is not included in the following table.

[In millions of dollars]

Approp/Goal/Obj/HQ Office/Region	Fiscal year 2001 request		Fiscal year 2001 enacted		Fiscal year 2002 request	
	Dollars	FTE	Dollars	FTE	Dollars	FTE
EPM	24.0	212.2	25.1	206.0	26.5	213.0
0501	0.4	4.0	0.5	3.9	0.5	3.9
Ofc of Site Remed. Enforce.	0.4	4.0	0.5	3.9	0.5	3.9
0902	23.6	208.2	24.6	202.1	26.0	209.1
Immediate Office	0.3	0.0	0.4	0.0	0.4	0.0
Ofc of Compliance	4.3	22.9	6.4	25.4	6.2	25.4
Ofc of Reg. Enforce.	2.1	16.7	0.0	0.0	0.0	0.0
Federal Facilities Enforcement Office	0.8	3.1	0.8	3.1	0.8	3.1
Ofc of Enf. Capacity & Outreach	0.4	3.7	0.3	3.0	0.0	0.0
Ofc of Planning, Policy Analysis, & Communications	0.0	0.0	0.0	0.0	0.3	3.0
Regions	15.7	161.8	16.7	170.6	18.3	177.6
Oil Spills Response	0.3	1.8	0.3	1.8	0.3	1.8
0502	0.3	1.8	0.3	1.8	0.3	1.8
Ofc of Site Remed. Enforce.	0.2	0.9	0.2	0.9	0.2	0.9
Ofc of Compliance	0.1	0.9	0.1	0.9	0.1	0.9
Superfund	0.1	0.8	0.0	0.0	0.0	0.0
0902	0.1	0.8	0.0	0.0	0.0	0.0
Ofc of Enf. Capacity & Outreach	0.1	0.8	0.0	0.0	0.0	0.0

ENFORCEMENT

Question. In the face of attrition to its Regional enforcement FTEs, how is EPA ensuring that the enforcement staffs in each Region are sufficient to handle the enforcement needs in that given Region?

Answer. Agencies routinely face attrition in their program and use their resources to focus on their most pressing problems. The fiscal year 2002 budget provides

EPA's enforcement and compliance assurance program sufficient resources to carry out the appropriate federal role, focusing on federal cases involving multi-state or multi-facility corporations, environmental programs which cannot be delegated to states due to statutory prohibition, or issues for which EPA can provide specialized expertise.

The President's focus is helping states conduct their enforcement activities while maintaining a federal enforcement level that was set in fiscal year 2000.

Question. In reassigning enforcement FTE to non enforcement positions as proposed by the President's Budget, how will EPA ensure that enforcement staff in each Region are sufficient to handle the enforcement needs in that Region?

Answer. If such reassignments are necessary, Regional managers will make reassignments only after taking into consideration the need to address high priority risks and noncompliance patterns in their region. The fiscal year 2002 budget provides sufficient resources to the enforcement and compliance assurance program, both headquarters and regions, to address multi-state, multiple facility, and cases that cannot be delegated to states.

Question. How will the proposed reduction of enforcement FTE and additional state enforcement resources impact enforcement outputs—federal, state, and local?

Answer. We expect improved national enforcement results. Already 90 percent of inspection activities are conducted by States. The Administration's proposal to give States greater resources will enhance their ability while reducing the overlap of State and Federal efforts.

Question. How will the proposed reduction of federal enforcement FTE and additional state enforcement resources impact national environmental indicators, such as clean air and clean water?

Answer. The Agency believes that the resources in the enforcement program are sufficient to continue achieving significant reductions in pollution through enforcement and compliance assurance activities at the federal level. Additional resources to the States will enable them to better achieve their delegated duties. The Administration's shift of resources from Federal enforcement to State level enforcement is designed to enhance compliance, not detract from it.

Question. How will EPA ensure that geographic areas subject to a decrease in federal enforcement personnel realize an increase in state enforcement resources?

Answer. Although we expect that states will take a number of enforcement actions made possible by the use of the grant funds, we do not expect that there will be a one-to-one correspondence overall, or geographically, between reductions in federal enforcement actions, and increases in state enforcement actions. Instead, states will use the grant funds to address important environmental risks and noncompliance patterns through strategies that utilize enforcement actions, inspections and investigations, incentives for facility self-auditing, and compliance assistance in appropriate combinations.

Question. How will EPA avoid imposing matching requirements for the $25 million in new enforcement grants on states which may already have too few environmental resources?

Answer. EPA does not intend to incorporate matching requirements in the new enforcement grant program. Through EPA's consultation with states and tribes, we determined that matching requirements would be a burden that might deter states and tribes from participating in the program.

Question. Will acceptance of multiple proposals from states for the $25 million in new enforcement grants reward states which have the resources to submit numerous high quality proposals.

Answer. Based on feedback from states and tribes EPA will likely require a lead agency within a state or tribe to submit a single, consolidated proposal. Agencies other than the lead agency will remain eligible to receive grants funds if they are included in the proposal.

Question. How will EPA compare future outcome improvements expected from the new state enforcement grants to the immediate loss of output activities from the FTE decrease?

Answer. There will likely not be a one-to-one correspondence between reductions in federal activities (outputs and outcomes) and state and tribal activities that will result from use of the new grant funds. Instead, the goal is to ensure that states and tribes are focusing on high priority environmental problems, and are held accountable for measuring and reporting results.

Question. Will states receive the entire $25 million from the new enforcement grant program or will EPA use some of that money?

Answer. EPA will distribute the entire $25 million to states, tribes, and other eligible entities.

Question. How will EPA obtain information from states measuring their outputs or outcome from usage of the new $25 million?

Answer. States will be approved for grant funding only if their grant proposal includes specific plans to measure and report on their performance in achieving results. For example, states will need to define performance measures for determining whether they are having an impact on the environmental risk or noncompliance pattern they are addressing with the grant funds. EPA will establish required reporting intervals for states to provide performance information that can be reviewed by EPA on a regular basis.

Question. Will the information EPA obtains from states on their use of the $25 million be sufficient for EPA to determine whether the environment was hurt by the enforcement FTE cuts?

Answer. Information gathered from states and tribes on their use of grant funds will allow the Agency to determine the impact they are having on the environmental problems they chose to address.

EPA's performance information about its own programmatic outputs and outcomes will be used to determine whether there is a non-compliance pattern or emerging environmental risk that needs to be addressed. As we have in previous years, EPA will continue to monitor information about program performance to ensure we are focusing on important problems, and achieving the right results and outcomes.

Question. How will EPA articulate a new vision for national enforcement which includes appropriate balance, roles and responsibilities between state and federal enforcement agencies?

Answer. The grant program will provide opportunities to improve and expand our enforcement partnerships with states. These opportunities will allow EPA and states to further clarify their respective roles and responsibilities.

ENFORCEMENT: BREAKOUT OF FEDERAL ENFORCEMENT ACTIVITIES BETWEEN MULTI-STATE AND SINGLE-STATE ACTIONS

Question. What is the breakout for federal enforcement activities between multi-state and single-state actions?

Answer. For the most recently completed fiscal year, fiscal year 2000, there were a total of 5,609 settled administrative and judicial actions (data from EPA's Enforcement Docket Data System). Of the 219 judicial actions, five involved multiple states; of the 5,390 administrative actions, 42 involved multiple states.

The attached chart identifies some of the significant multi-state cases to date in fiscal year 2001. Specifically, the chart shows multi-state cases with consent decrees or publicly announced agreements in principle that have been lodged in fiscal year 2001.

EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE FISCAL YEAR 2001—SIGNIFICANT MULTI-STATE CASES

Company	Number of Facilities	Injunctive Relief ($1,000)	Environmental Project(s) [1] ($1,000)	Penalties ($1,000)	Environmental Benefits
BP Amoco [2]	8	500,000	([3])	10,000	40,000 tpy [4] (SO_2, NO_X)
Koch [2]	3	80,000	([5])	4,500	6,000 tpy (SO_2, NO_X)
Motiva [2]	9	400,000	5,500	9,500	50,000 tpy (SO_2, NO_X)
MAP [2]	7	265,000	6,500	3,800	23,000 tpy (SO_2, NO_X)
Cinergy [6]	10	1,400,000	21,500	8,500	500,000 tpy (SO_2, NO_X)
Morton International [2].	24	44,000	16,000	22,000	400 tpy of hazardous waste properly disposed
Nucor [2]	14	85,000	4,000	9,000	9,400 tp (NO_X and VOC) over the life of the agreement
Safety-Kleen Corp [2].	130	3,000	([5])	221.25	Improved financial assurance
VEPCO [6]	8	1,600,000	13,900	5,300	250,000 tpy (SO_2 and NO_X)
Willamette [2]	13	74,000	8,000	11,200	27,000 tpy (VOC, PM, and CO)
Palm Harbor Homes (EPCRA Part 22 Administrative Action) [2].	10	163.5	([5])	([5])	19 violations for failing to file Form R reports for diisocyanates processed when manufacturing homes.

EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE FISCAL YEAR 2001—SIGNIFICANT MULTI-STATE CASES—Continued

Company	Number of Facilities	Injunctive Relief ($1,000)	Environmental Project(s) [1] ($1,000)	Penalties ($1,000)	Environmental Benefits
Preston Engravers and Roto-Die Co [2].	3	245	([7])	([5])	Not yet available—CDS not yet complete
Walmart [2]	17	4,500	([5])	1,000	Not available
Amtrak [2]	9	([7])	900	500	Not available
Air Liquide [2] ...	22	([7])	500	4,500	Not available

[1] Rounded to the nearest million.
[2] Settlement—Lodged or Entered.
[3] Not yet quantified.
[4] tpy (tons per year)
[5] None.
[6] Agreement in principle.

Question. What types of actions are most appropriate for state enforcement agencies?

Answer. States are well equipped to handle most violations of the delegated enforcement programs they administer. States already conduct more than 90 percent of inspections and can often respond more quickly to routine violations than EPA. Because states handle most permitting responsibilities, EPA coordinates closely with states on any Federal enforcement action that affects a program administered by states.

Question. What types of actions are most appropriate for EPA versus state enforcement agencies?

Answer. For obvious reasons—such as lack of effective state jurisdiction—multistate cases are well suited to federal enforcement. EPA works closely with states in developing and negotiating such cases, and states often join the federal government as parties to the final consent decree. Global settlements may offer companies an efficient way to settle many violations at once, and may help to preserve a level playing field in a competitive marketplace.

Other cases appropriate for EPA involvement involve violations leading to interstate transfer of pollutants, e.g., the long-range transport of air emissions like nitrogen oxides and sulfur dioxides. Such pollutants are the target of the Agency's lawsuits for violations of the Clean Air Act New Source Review provisions, which require companies to install pollution controls on grandfathered plants when they are expanded in a way that increases their capacity to emit. Interstate pollution may arise under other statutes, e.g., when pollutants from an industrial discharger in one state flow downstream to affect water quality in another. Still other examples of appropriate federal cases, more difficult to categorize, involve environmental violations that are technically complex or otherwise beyond the capacity of the state to address. Finally, EPA remains responsible for certain programs in some states, while others, such as the Toxic Substances Control Act, wetlands enforcement, pesticide registration or right-to-know laws are either not delegated to states or cannot be under the law.

Question. How would any changes to the current balance of roles and responsibilities between federal and state enforcement agencies improve environmental protection?

Answer. Any reexamination of federal and state roles and responsibilities would be designed to ensure that federal and state enforcement and compliance assurance resources are focused on the most important environmental problems. The partnerships enabled by the grant program will lead to clearer identification of these problems, and the most appropriate combination of federal and state resources to effectively address them.

Question. How can EPA modify its audit policy to encourage more reporting of environmental violations versus purely paperwork or reporting violations?

Answer. To date, over 5,000 facilities have entered EPA's audit program and disclosed all types of violations under nearly every federal environmental statute that EPA administers. The Audit Policy has proven to be efficient for companies and EPA in resolving record-keeping and reporting violations. Record-keeping and reporting requirements provide the framework for public access to information, the structure for safe handling and the use and discharge of hazardous substances, and are derived from federal laws enacted by Congress. The failure to submit emergency and chemical inventory forms, for example, can have tragic consequences, such as the death of firefighters unaware of the presence of hazardous chemicals. EPA believes that the benefits to public health and the environment of statutes like the Emergency Planning and Community Right to Know Act, which was enacted by Congress in the wake of the Bhopal tragedy, should not be minimized. Since monitoring and reporting violations represent a significant amount of environmental violations in general, it is not surprising the violations disclosed under the audit program reflect a similar pattern.

In addition, EPA has had success in using targeted integrated strategies to increase the quality and breadth of disclosures. For example, EPA has undertaken several efforts over the past 2 years to encourage the disclosure and correction of violations of emission and discharge limits. These include a compliance partnership agreement to encourage controlling volatile organic compounds (VOC) emissions from petroleum storage tanks, an audit agreement with the National Pork Producers Council to reduce or eliminate penalties for disclosure and correction of Clean Water Act violations; 67 municipal audits which are expected to reduce sanitary sewer overflows by improving maintenance and expanding capacity; and voluntary audits by airlines of compliance with fuel standards.

EPA is seeing an increase in the breadth of disclosure types through use of corporate auditing agreements—agreements that allow companies to plan corporate-wide audits with an advance understanding between the company and EPA regarding schedules for audits, disclosures and corrections. Most recently, EPA is entering into audit agreements for voluntary review and corrections relating to the handling, use and disposal of chlorofluorocarbons (CFCs); meeting air emissions standards under the New Source Review program and national emission standards for hazardous air pollutants; use, disposal, storage and marking of PCBs; operating standard and corrective action requirements for underground storage tanks; and illegal injection of hazardous substances into underground wells.

The Audit Policy as it exists currently is providing a meaningful incentive for companies to participate in the program, as is evidenced by the fact that participation in the program has doubled nearly each year since the policy's inception.

Question. How is EPA measuring the outcome improvements to the environment resulting from use of the Audit Policy?

Answer. EPA reports successes of Audit Policy use in a quantitative measure, consistent with reporting requirements under the Government Performance and Results Act. In addition, last year, in recognition of the significant growth in the audit program and to better reflect the Agency's focus on environmental and health improvements that result from its settlements, EPA began tracking its audit cases in a modified system that will allow for input regarding case results, similar to EPA's enforcement cases. We are hopeful that additional information will be available this year.

Question. How can EPA modify the use of its enforcement discretion to encourage activities, such as in the reinvention area, which bring about improvements to the environment?

Answer. In order to encourage innovative projects promising superior environmental results, EPA made clear it would consider the use of tailored compliance mechanisms, such as enforcement discretion. See 62 Federal Register 19872, 76–77 (April 23, 1997). In fact, EPA has used enforcement discretion for innovative projects in a number of instances, e.g., International Paper Co. XL Project (flexibility provided to exceed Clean Air Act permit limits to develop and calibrate Predictive Emissions Monitoring System model); New York State Department of Environmental Conservation XL Project (flexibility provided to "bridge" the gap between the effective dates of a Federal project-specific rule and the equivalent State project-specific rule); New England Universities Laboratories (time-limited enforcement discretion used to "bridge" the gap between the effective dates of the Federal project-specific rule and the equivalent Massachusetts rule); and OSi XL Project (EPA agreed in advance to issue an administrative compliance order putting OSi on an 18-month compliance schedule in event project testing alternative RCRA Subpart CC controls is terminated). In addition, EPA offers incentives involving enforcement discretion, to those facilities participating in the National Environmental Performance Track Program (Performance Track). Performance Track is a recognition program designed to motivate and reward companies and other entities that are top environmental performers. These incentives include lowered priority for inspection targeting, access to Audit Policy penalty mitigation and recognition of good faith participation in the program in discretionary penalty assessment.

Question. How are EPA Regions improving their monitoring of enforcement agreements to determine compliance with those agreements, as examined by the EPA's Inspector General (IG)?

Answer. As the IG noted in their report, the actions already taken by Office of Enforcement and Compliance Assurance (OECA) and the Regions will resolve most of the IG's recommendations. OECA has used the report for reminding the Regions of the need to follow existing requirements and guidance for tracking compliance milestones, analyzing violations of judicial and enforcement instruments, and prioritizing them for response. In addition, at OECA's request, the Regions revised the region-specific enforcement instrument compliance tracking and enforcement plans covering, both judicial consent decrees and administrative orders. OECA can provide the full response to the IG's report if requested.

Question. How is EPA improving its reporting of environmental achievements to accurately reflect actual pollution reductions achieved from enforcement actions versus reporting projected results?

Answer. In fiscal year 1996, Office of Enforcement and Compliance Assurance (OECA) developed a method to estimate the anticipated reductions achieved through enforcement actions at the time of settlement. In the future, OECA intends to make clear in its public documents that those pollutant reductions through enforcement actions are estimates, made at the time of settlement, assuming the injunctive requirements in the underlying enforcement instruments are implemented. In addition, OECA has taken steps to improve the accuracy of pollutant reduction estimates by providing guidance and training to regional offices about estimation techniques.

Question. How is EPA establishing performance measures for ensuring that facilities under a formal enforcement action return to compliance?

Answer. Beginning in fiscal year 2002, Office of Enforcement and Compliance Assurance (OECA) intends to develop and implement an annual performance measure for each region, requiring regular updating of the Consent Decree Enforcement Tracking Subsystem (CDETS) in DOCKET, or an appropriate alternative database, to reflect key schedules/milestones and actions taken to ensure compliance with judicial cases.

Question. How is EPA verifying and validating that actual accomplishments resulted from EPA enforcement activities?

Answer. Office of Enforcement and Compliance Assurance (OECA) currently reports pollutant reduction estimates for enforcement actions at the time of settlement. OECA is investigating several options for verifying actual pollutant reductions resulting from an enforcement action based on the estimates reported. Resource constraints will make it virtually impossible to physically verify that the pollutant reduction amount estimated has actually been realized in all of EPA's enforcement cases; however, we expect in most cases the estimation techniques would be adequate.

GRANTS

Question. How many different non-profit recipients received non-construction grant awards in the last 3 years?

Answer. Between fiscal year 1998 and fiscal year 2000 EPA awarded grants to approximately 1900 different non-profit recipients.

Question. How many dollars did EPA award to non-profit recipients in non-construction grants in the last 3 years?

Answer. Between fiscal year 1998 and fiscal year 2000, EPA awarded $756,394,243 to non-profit recipients.

Question. List the top twenty non-profit EPA grant recipients by number of awards in fiscal year 2000. Provide also the number of awards and total dollar amount awarded.

Answer.

FISCAL YEAR 2000 TOP 20 NON-PROFIT GRANTEES BY NUMBER OF AWARDS

Rank	Name/City/State	No. of Awards	Dollars Awarded
1	National Older Worker Career Center, Washington, DC	89	$14,912,002
2	National Caucus & Center on Black Aged, Washington, DC	84	8,315,158
3	National Senior Citizens Ed & Rsch Ctr, Silver Spring, MD	64	8,226,948
4	Natl Asian Pacific Center for Aging, Seattle, WA	38	6,257,258
5	The Environmental Careers Organization, Boston, MA	28	7,213,689
6	National Academy of Science, Washington, DC	25	5,983,972
7	National Council on Aging, Washington, DC	23	4,141,298

FISCAL YEAR 2000 TOP 20 NON-PROFIT GRANTEES BY NUMBER OF AWARDS—Continued

Rank	Name/City/State	No. of Awards	Dollars Awarded
8	National Association for Hispanic Elderly, Pasadena, CA	20	4,534,076
9	International City/county Mgmt. Assoc., Washington, DC	10	2,066,540
10	Environmental Law Institute, Washington, DC	9	887,538
11	Northeast States for Coordinated Air Use Mgmt., Boston, MA	8	1,924,353
12	Inter Tribal Council of Arizona Inc., Phoenix, AZ	8	1,171,944
13	Research Triangle Institute Research, Triangle, NC	7	2,409,300
14	Center for Watershed Protection Inc., Ellicott City, MD	7	334,500
15	Lake Michigan Air Directors Consortium, Des Plaines, IL	7	1,946,140
16	Center for Clean Air Policy, Washington, DC	7	888,233
17	National Association of Counties, Washington, DC	7	971,000
18	The Environmental Council of the State, Washington, DC	6	876,991
19	WV University Research Corporation, Morgantown, WV	6	5,291,063
20	Natl Conference of State Legislatures, Denver, CO	5	424,439

Question. List the top twenty non-profit EPA grant recipients by total amount of funds awarded in fiscal year 2000. Provide also the number of awards and the total dollar amount awarded.

FISCAL YEAR 2000 TOP 20 NON-PROFIT GRANTEES BY DOLLARS AWARDS

Rank	Name/City/State	No. of Awards	Dollars Awarded
1	North American Development Bank, San Antonio, TX	1	$41,000,000
2	National Older Worker Career Center, Washington, DC	89	14,912,002
3	National Caucus & Center on Black Aged, Washington, DC	84	8,315,158
4	National Senior Citizens Ed & Rsch Ctr, Silver Spring, MD	64	8,226,948
5	National Rural Water Association, Duncan, OK	3	8,114,800
6	The Environmental Careers Organization, Boston, MA	28	7,213,689
7	Natl Asian Pacific Center for Aging, Seattle, WA	38	6,257,258
8	Health Effects Institute, Cambridge, MA	1	6,000,000
9	National Academy of Science, Washington, DC	25	5,983,972
10	WV University Research Corporation, Morgantown, WV	6	5,291,063
11	America's Clean Water Foundation, Washington, DC	1	4,749,750
12	National Association for Hispanic Elderly, Pasadena, CA	20	4,534,076
13	American Water Works Association Research, Denver, CO	2	4,205,100
14	National Council on Aging, Washington, DC	23	4,141,298
15	Lovelace Biomedical & Envir. Res Institution, Albuquerque, NM	2	3,334,400
16	Canaan Valley Institute, Davis, WV	4	3,222,096
17	National Fish & Wildlife Foundation, San Francisco, CA	1	2,931,301
18	Water Environment Research Foundation, Alexandria, VA	1	2,778,600
19	Border Environmental Cooperation Comm., El Paso, TX	1	2,500,000
20	Rural Community Assistance Programs In., Leesburg, VA	3	2,497,716

Question. How many bench reviews did EPA conduct of non-profit non-construction grantees in fiscal year 2000? List by region.

Regional Grants Management Office	*Bench Reviews Fiscal Year 2000*
I	
II	
III	3
IV	
V	
VI	2
VII	
VIII	
IX	
X	

Regional Grants Management Office	*Bench Reviews Fiscal Year 2000*
HQ	15
Total	20

Question. How many onsite reviews did EPA conduct of non-profit non-construction grantees in fiscal year 2000? List by region.

Answer. As noted in the following table, EPA Grants Management Offices conducted a total of 26 administrative onsite reviews of non-profit non-construction grantees in fiscal year 2000.

Regional Grants Management Office	*On-site Reviews Fiscal Year 2000*
I	2
II	3
III	1
IV	
V	2
VI	
VII	
VIII	
IX	5
X	
HQ	13
Total	26

Question. How many Full Time Equivalents (FTE) are devoted to conducting onsite reviews of grantees?

Answer. 3 FTEs.

INFORMATION BURDEN:

Question. What steps did EPA take to correct the misleading reporting burden reduction information reported to OMB, as documented by the General Accounting Office in its report on this subject last year?

Answer. The General Accounting Office (GAO) review found that EPA's estimate for hours of burden reduced, as reported in Reinventing Environmental Protection, is misleading because it represents the sum of program changes and program adjustments. We believe this finding is too narrow because it does not represent the full range of burden reduction activities that EPA has pursued.

EPA has acted aggressively to reduce burden through a variety of innovative activities that provide environmental managers with more choice and assistance in meeting their environmental responsibilities. These activities include: the establishment of compliance assistance centers; development of electronic reporting opportunities; creation of audit policy and regulatory compliance options; implementation of plain language regulations and guidance; and developing electronic tools such as the Toxic Release Inventory-Made Easy (TRI–ME) that help make our regulations and guidance more understandable and easier for the public to deal with. GAO's report states that these efforts were outside the scope of their review of the agency's information collection requirements.

We agreed with the recommendation that the Agency should correct the burden hour estimate for the national pretreatment program. The reduction of nearly 600,000 burden hours was a result of Office of Management and Budget (OMB) approval of an Information Collection Request (ICR) renewal submitted by EPA converting burden hours for contracted lab analyses into burden dollars. This ICR was adjusted to convert the burden dollars back to burden hours in the renewal approved by OMB on September 28, 2000. Subsequently, OMB has modified its approach regarding the proper categorization of such contracted services, specifying that burden should be expressed in hours to the extent possible.

Question. What steps did EPA take to ensure that it does not continue to use improper burden reduction reporting techniques as exposed by GAO?

Answer. EPA will properly identify burden reductions as adjustments and/or program changes as defined by OMB. Also, EPA will characterize lab analysis burden where possible as consistent with OMB's latest guidance.

Question. How many hours of paperwork burden did EPA impose on businesses in the last reporting year and each of the previous four years?

Answer. The total EPA burden hours (includes business, state and local governments other non-federal reporting enitities) for each of the last five fiscal years is as follows:

[In millions of dollars]

Year	Burden hours
Fiscal year 2000	129
Fiscal Year 1999	119
Fiscal Year 1998	115
Fiscal Year 1997	116
Fiscal Year 1996	108

Some of the key increases in burden hours from fiscal year 1999 to 2000 are:

—3.6 million hours: Total Maximum Daily Load final rule (3.3 million hours due to an adjustment of previous burden to account for burden on states

—1.1 million hours: Radon in Drinking Water final rule

—1.2 million hours: NPDES—animal feeding operations permits

—1.6 million hours: RCRA lead-based paint debris final rule

—1.5 million hours: Toxic Release Inventory persistent bioaccumulative toxic (PBT) final rule

Question. How is EPA reducing the paperwork burden it imposes on businesses?

Answer. EPA continues to review existing paperwork requirements for streamlining opportunities on a case by case basis. In addition, we are promoting burden reduction across entire programs, as in the Office of Solid Waste's burden reduction effort for the RCRA program. EPA also has initiated cross Agency efforts like the National Environmental Information Exchange Network and the More Effective and Efficient Reporting initiative that will provide burden reduction opportunities.

Question. How is the Office of Environmental Information working with program offices to tailor new rules to impose less paperwork burden?

Answer. OEI has initiated a new initiative called More Effective and Efficient Reporting (MEER). An Agency-wide burden reduction strategy is one component of this initiative. OEI is working closely with other EPA offices to identify appropriate activities which can be part of an on-going, long-term effort to streamline collections while maintaining the Agency's commitment to our mission. OEI's goal is to develop a strategy with several incremental steps which can help the Agency make information collection more efficient and less burdensome. As part of this effort, OEI has been working with its partners and stakeholders to streamline and consolidate reporting, facilitating, and examining impediments to consolidation. Over the next year, OEI intends to establish a MEER Steering committee and workgroup, develop a background report on burden reduction and consolidation efforts to date, and convene a program office workshop on burden reduction efforts.

Question. How are the program offices, either with or without the help of OEI, reviewing current paperwork requirements to reduce their burden on businesses?

Answer. The Office of Solid Waste (OSW) is developing the Burden Reduction Proposed Rule to reduce the record-keeping and reporting burden RCRA imposes on the States, the public, and the regulated community. This streamlining is important not only to meet the goals of the Paperwork Reduction Act, but also to allow EPA and the states to focus their implementation efforts on the most important regulatory requirements. OSW is assessing which RCRA requirements can be cut back, streamlined, or eliminated; they estimate that they should be able to reduce burden by about 40 percent.

Several EPA initiatives have been launched that have potential for significant burden reduction. These projects have generally helped to steer the Agency toward ways of collecting and managing information from the public and States which will be more efficient over the long-term. Most notable among these is the National Environmental Information Exchange Network (NEIEN). The NEIEN is a partnership program with the States aimed at developing an integrated environmental data exchange. It includes efforts to move toward electronic reporting, use of specific data standards, and a centralized data exchange network. Six data standards were finalized on November 21, 2000. EPA and the States are currently developing three additional data standards. EPA plans to propose a rule, the Cross-Media Electronic Reporting and Record-keeping Rule (CROMERRR), to simplify the transfer of data to the Agency as well as remove obstacles to e-reporting.

Another cross-Agency initiative with burden reduction potential. Performance Track will reduce reporting burdens for companies which have been recognized for performing beyond compliance with regulatory requirements to attain levels of environmental performance and management which benefit people, communities, and the environment.

In addition to Agency and programmatic streamlining efforts, EPA has encouraged a number of innovative activities which are typically not counted in burden reduction estimates. These include Web-based Compliance Assistance Centers, the promotion of internal facility audit policies to detect violations, and options for regulatory compliance such as emissions trading. EPA has also worked hard to implement easier to understand regulatory language. Among the Agency's oldest innovative efforts, EPA has been providing assistance to small businesses through the Office of the Small Business Ombudsman.

PERFORMANCE GOALS

Question. Provide the number of annual planning goals in the fiscal year 2001 and fiscal year 2002 annual performance plans, and the breakout of output and outcome goals.

Answer. The Agency's fiscal year 2001 and fiscal year 2002 Annual Plans contain 75 and 77 annual performance goals (APGs), respectively.

EPA periodically evaluates for outcome orientation its entire set of externally reported APGs which are listed in the Agency's Annual Plan/Congressional Justification document. For fiscal year 2001, there are 179 APGs, with 33 characterized as end outcomes, nine as intermediate outcomes, and 137 as outputs. For fiscal year 2002, after an initial review, there are 181 APGs, with 42 characterized as end outcomes, 11 as intermediate outcomes, and 128 as outputs. The hierarchy used in these evaluations is generally consistent with one that has been used by the General Accounting Office.

PERFORMANCE MEASURES

Question. Provide the number of performance measures in the fiscal year 2001 and fiscal year 2002 annual performance plans, and the breakout of output and outcome goals.

Answer. The Agency's fiscal year 2001 and fiscal year 2002 Annual Plans contain 163 and 135 annual performance measures (APMs), respectively.

EPA periodically evaluates for outcome orientation its entire set of externally reported APMs which are listed in the Agency's Annual Plan/Congressional Justification document. For fiscal year 2001, there are 358 APMs, with 65 characterized as end outcomes, 32 as intermediate outcomes, and 261 as outputs. For fiscal year 2002, after an initial review, there are 360 APMs, with 77 characterized as end outcomes, 26 as intermediate outcomes, and 257 as outputs. The hierarchy used in these evaluations is generally consistent with one that has been used by the General Accounting Office.

Question. How is EPA increasing the number of outcome goals and performance measures?

Answer. The Agency recognizes the need to make greater use of outcome goals and measures, and we have initiated a variety of projects to improve performance measurement. We use improvement work teams, conduct workshops, and prepare special analyses to support development of more outcome-oriented goals and measures. Some examples of our ongoing work include: establishment of a work group and cooperative agreement with Florida State University to develop more outcome-focused goals and measures related to chemicals and pesticides (Office of Prevention, Pesticides, and Toxic Substances); the establishment of a National Performance Measurement Strategy with includes a plan to develop more outcome-based performance goals and measures (Office of Enforcement and Compliance Assurance); and benchmarking of performance measures used by other agencies with functions similar to those of EPA's varied programs (Office of Chief Financial Officer). In addition, in order to help maintain a focus on outcomes, the Agency has established an annual performance goal in its Annual Plan dedicated to increasing the proportion of our goals and measures that are characterized as outcomes.

Question. How can EPA examine and revise its GPRA strategic planning more quickly than otherwise required under GPRA?

Answer. The Agency's strategic planning is an ongoing activity that occurs throughout the development of each annual budget and undergirds all major programmatic decisions of the Agency. This activity is not governed by GPRA deadlines. GPRA does, however, establish a minimum triennial floor for the development of revised Agency strategic plans. Although the GPRA allows plans to be revised earlier than the triennial deadline, the law—as well as good governmental practice—requires federal agencies to consult with Congress and consider the views and suggestions of other entities potentially affected by or interested in their strategic plans. As a result, the revision of the Agency's Plan is an extensive process that neither could—nor should—be completed hastily. The Agency's most recent Strategic Plan was completed in September of 2000, with the next mandated revision due in September of 2003. While a well-considered revision could be accomplished earlier than this date, the Agency would need to carefully evaluate the time required to meaningfully consider the strategic direction of all of its programs, consult closely with Congress and State and Tribal partners, and engage the views of the regulated community, citizen and public policy groups, as well as the public as a whole. Our experience with prior Strategic Plans demonstrates that an extensive revision undertaken with significant consultation could require two years from the beginning of the initial project planning to the production of the document itself.

Question. Will EPA develop different measures for program management and program effectiveness?

Answer. Over the last few years, EPA has worked to establish sound measures for program management. The Agency's Strategic Plan includes a separate strategic goal for effective management as a way to capture activities and results that are fundamental for effective and efficient operation of all Agency programs. The Agency is committed to its on-going effort to improving the quality of all its performance goals and measures including those pertaining mainly to program management activities.

EPA has established a framework for results-based management that the Agency continues to improve upon. By improving its ability to track progress, EPA positively affects improvements in demonstrating overall program effectiveness.

Furthermore, a number of ongoing activities, within EPA's existing programs, should positively impact EPA's ability to increase both the quantity and quality of environmental outcome measures in Agency management systems. This improvement strategy includes an analytic approach to assist programs in the development of measures that better reflect program effectiveness and directly communicate environmental results. This approach involves using a framework known as the Hierarchy of Indicators. The framework consists of six categories that range from administrative measures, or outputs, to changes in environmental quality or outcomes.

This approach can be very useful in developing measures that reflect programmatic goals and ensure that the activities of the offices are properly linked to environmental results (to the extent possible). The hierarchy can be used to assist program offices in developing measures that are farther along the continuum. Not all Agency activities are conducive to such changes. However, offices responsible for necessary administrative activities are encouraged to develop intermediate outcomes that better link activities to environmental outcomes.

EFFORTS TO REDUCE THE NPDES PERMIT BACKLOG

Question. What is the Status of EPA's efforts to reduce the backlog of federal and state NPDES permits? Provide a breakdown by region and state.

Answer. EPA has made strong progress in reducing the NPDES permit backlog towards meeting our target of a 10 percent backlog for major permits by the end of 2001 and 10 percent backlog for all permits (majors and minors) by the end of 2004. EPA-issued permits for major facilities are slightly off the target trend line to meet the 2001 goal, however, a large boost is expected through the issuance of a general permit covering major facilities in Alaska. EPA continues to improve permit backlog of minors through permit issuance and data clean-up.

The authorized states, as a whole, have made some improvements toward meeting the 2001 goal of 10 percent backlog of majors, however, achievement of the target for authorized states is in doubt. Authorized states' efforts to meet the 2004 backlog reduction goal of 10 percent backlog for all permits are on target, with states making strides through both permit issuance and data clean-up.

The attached charts provide data on State and Regional progress towards meeting backlog reduction goals.

Backlog Status Report for Majors - May 2001

		January 2000				Actual For May 2001				
		Total Facilities	Expired*	Backlog	Goal for May, 2001	Total Facilities	Expired*	Backlog	On Target to Meet December 2001 Goal (1)	Permit Deficit****
EPA Region 1										
	CT	117	45	38.5%	18.7%	114	24	21.1%	Possible	2.73
	MA**	148	78	52.7%	23.0%	143	42	29.4%	Possible	9.12
	ME	93	22	23.7%	14.2%	87	25	28.7%	Unlikely	12.68
	NH**	62	33	53.2%	23.2%	60	13	21.7%	YES	0
	RI	25	18	72.0%	28.9%	25	9	36.0%	Possible	1.78
	VT	34	4	11.8%	10.5%	34	2	5.9%	YES	0
EPA Issued		210	111	52.9%	23.0%	203	55	27.1%	Possible	8.22
State Issued		269	89	33.1%	17.0%	260	60	23.1%	Possible	15.73
Region Total		479	200	41.8%	19.7%	463	115	24.8%	Possible	23.95
EPA Region 2										
	NJ	168	52	31.0%	16.4%	163	71	43.6%	Unlikely	44.31
	NY	360	15	4.2%	4.2%	357	12	3.4%	YES	0
	PR**	97	57	58.8%	24.8%	84	45	53.6%	Unlikely	24.13
	VI	6	3	50.0%	22.2%	6	3	50.0%	Unlikely	1.67
EPA Issued		97	57	58.8%	24.8%	84	45	53.6%	Unlikely	24.13
State Issued		534	70	13.1%	10.9%	526	86	16.3%	Possible	28.42
Region Total		631	127	20.1%	13.1%	610	131	21.5%	Possible	51.20
EPA Region 3										
	DC**	4	4	100.0%	37.4%	4	2	50.0%	Unlikely	0.50
	DE	24	7	29.2%	15.8%	24	7	29.2%	Unlikely	3.20
	MD	99	21	21.2%	13.4%	101	16	15.8%	Possible	2.45
	PA	387	44	11.4%	10.4%	391	98	25.1%	Unlikely	57.27
	VA	145	47	32.4%	16.8%	140	24	17.1%	Possible	0.45
	WV	93	16	17.2%	12.2%	93	47	50.5%	Unlikely	35.66
EPA Issued		4	4	100.0%	37.4%	4	2	50.0%	Unlikely	0.50
State Issued		748	135	18.0%	12.4%	749	192	25.6%	Unlikely	98.75
Region Total		752	139	18.5%	12.6%	753	194	25.8%	Unlikely	99.26
EPA Region 4										
	AL	212	30	14.2%	11.3%	190	9	4.7%	YES	0
	FL	254	44	17.3%	12.2%	262	28	10.7%	YES	0
	GA	171	2	1.2%	1.2%	173	3	1.7%	YES***	0
	KY	130	3	2.3%	2.3%	132	10	7.6%	YES***	0
	MS	86	12	14.0%	11.2%	86	9	10.5%	YES	0
	NC	216	57	26.4%	15.0%	231	24	10.4%	YES	0
	SC	193	41	21.2%	13.4%	186	41	22.0%	Possible	16.04
	TN	152	42	27.6%	15.4%	158	14	8.9%	YES	0
EPA Issued		NA	NA	NA		NA	NA	NA		
State Issued		1,414	231	16.3%	11.9%	1,418	138	9.7%	YES	0
Region Total		1,414	231	16.3%	11.9%	1,418	138	9.7%	YES	0

Backlog Status Report for Majors - May 2001

		January 2000				Actual For May 2001				
		Total Facilities	Expired*	Backlog	Goal for May, 2001	Total Facilities	Expired*	Backlog	On Target to Meet December 2001 Goal (1)	Permit Deficit****
EPA Region 5										
	IL	268	46	17.2%	12.2%	280	70	25.0%	Unlikely	35.89
	IN	175	81	46.3%	21.0%	180	81	45.0%	Unlikely	43.12
	MI	181	44	24.3%	14.4%	183	32	17.5%	Possible	5.73
	MN	85	38	44.7%	20.6%	84	41	48.8%	Unlikely	23.73
	OH	277	115	41.5%	19.6%	289	102	35.3%	Unlikely	45.38
	WI	133	24	18.0%	12.4%	134	11	8.2%	YES	0
EPA Issued		NA	NA	NA		NA	NA	NA		
State Issued		1,119	348	31.1%	16.4%	1,150	337	29.3%	Unlikely	148.15
Region Total		1,119	348	31.1%	16.4%	1,150	337	29.3%	Unlikely	148.15
EPA Region 6										
	AR	108	13	12.0%	10.6%	109	18	16.5%	Possible	6.42
	LA	249	144	57.8%	24.6%	248	140	56.5%	Unlikely	79.10
	NM**	35	22	62.9%	26.1%	35	6	17.1%	YES	0
	OK	93	25	26.9%	15.1%	95	25	26.3%	Unlikely	10.62
	TX	585	164	28.0%	15.5%	570	177	31.1%	Unlikely	88.71
EPA Issued		35	22	62.9%	26.1%	35	6	17.1%	YES	0
State Issued		1,035	346	33.4%	17.1%	1,022	360	35.2%	Unlikely	184.92
Region Total		1,070	368	34.4%	17.4%	1,057	366	34.6%	Unlikely	181.83
EPA Region 7										
	IA	123	31	25.2%	14.6%	125	19	15.2%	Possible	0.72
	KS	58	11	19.0%	12.7%	58	5	8.6%	YES	0
	MO	147	40	27.2%	15.2%	147	38	25.9%	Unlikely	15.60
	NE	60	42	70.0%	28.3%	56	31	55.4%	Unlikely	15.17
EPA Issued		NA	NA	NA		NA	NA	NA		
State Issued		388	124	32.0%	16.7%	386	93	24.1%	Possible	28.60
Region Total		388	124	32.0%	16.7%	386	93	24.1%	Possible	28.60
EPA Region 8										
	CO	102	54	52.9%	23.1%	102	39	38.2%	Unlikely	15.47
	MT	44	11	25.0%	14.6%	43	18	41.9%	Unlikely	11.74
	ND	26	0	0.0%	0.0%	26	0	0.0%	YES	0
	SD	31	5	16.1%	11.9%	29	4	13.8%	Possible	0.56
	UT	34	2	5.9%	5.9%	33	2	6.1%	YES***	0.06
	WY	26	0	0.0%	0.0%	26	0	0.0%	YES	0
EPA Issued		NA	NA	NA		NA	NA	NA		
State Issued		263	72	27.4%	15.3%	259	63	24.3%	Possible	23.40
Region Total		263	72	27.4%	15.3%	259	63	24.3%	Possible	23.40
EPA Region 9										
	AS**	4	3	75.0%	29.8%	4	1	25.0%	YES	0
	AZ**	46	10	21.7%	13.6%	49	4	8.2%	YES	0
	CA	236	99	41.9%	19.7%	242	78	32.2%	Unlikely	30.27
	GU**	8	8	100.0%	37.4%	6	2	33.3%	YES	0
	HI	27	12	44.4%	20.5%	23	8	34.8%	Unlikely	3.29
	NI**	2	1	50.0%	22.2%	2	0	0.0%	YES	0
	NV	10	7	70.0%	28.3%	10	6	60.0%	Unlikely	3.17
EPA Issued		60	22	36.7%	18.1%	61	7	11.5%	YES	0
State Issued		273	118	43.2%	20.1%	275	92	33.5%	Unlikely	36.69
Region Total		333	140	42.0%	19.8%	336	99	29.5%	Possible	32.63

Backlog Status Report for Majors - May 2001

		January 2000				Actual For May 2001				
		Total Facilities	Expired*	Backlog	Goal for May, 2001	Total Facilities	Expired*	Backlog	On Target to Meet December 2001 Goal (1)	Permit Deficit****
EPA Region 10										
	AK**	77	18	23.4%	14.1%	75	23	30.7%	**Possible**	12.45
	ID**	68	29	42.6%	19.9%	63	18	28.6%	**Possible**	5.44
	OR	76	51	67.1%	27.4%	78	54	69.2%	**Unlikely**	32.64
	WA	89	41	46.1%	21.0%	86	44	51.2%	**Unlikely**	25.96
EPA Issued		145	47	32.4%	16.8%	138	41	29.7%	**Possible**	17.79
State Issued		165	92	55.8%	23.9%	164	98	59.8%	**Unlikely**	58.76
Region Total		310	139	44.8%	20.6%	302	139	46.0%	**Unlikely**	76.78
All Majors		**6,759**	**1,888**	**27.9%**	15.5%	**6,734**	**1,675**	24.9%	**Possible**	634.06
EPA Issued		**551**	**263**	**47.7%**	21.5%	**525**	**156**	29.7%	**Possible**	43.21
State Issued		**6,208**	**1,625**	**26.2%**	14.9%	**6,209**	**1,519**	24.5%	**Possible**	592.42

*Includes no data facilities

**Indicates EPA is the permitting authority.

***Although the State is below the 10 percent goal, the State's backlog is beginning to trend upwards

****The number of permits that needed to be issued through the reporting period to remain on target to meet the December 2001 goal.

(1) "Possible" indicates that permit deficit is within 10% of the monthly target to meet the 2001 goal or is of 5 permits or less.

Note: As of January 2001, Maine is no longer an EPA State.

Backlog Status Report for Minors (Individual Permits Only) - May 2001

		August 2000				Actual For May 2001				
		Total Facilities	Expired*	Backlog	Goal for May, 2001	Total Facilities	Expired*	Backlog	On Target to Meet December 2004 Goal (1)	Permit Deficit****
EPA Region 1										
	CT	129	98	76.0%	64.6%	105	47	44.8%	YES	0
	GB**	14	14	100.0%	84.4%	(2)	(2)	(2)	(2)	(2)
	MA**	521	423	81.2%	68.9%	482	412	85.5%	Unlikely	80.05
	ME	261	182	69.7%	59.4%	260	155	59.6%	Possible	0.58
	NH**	186	161	86.6%	73.3%	183	165	90.2%	Unlikely	30.85
	RI	109	87	79.8%	67.7%	108	92	85.2%	Unlikely	18.85
	VT	108	20	18.5%	17.0%	113	25	22.1%	Possible	5.74
EPA Issued		982	780	79.4%	67.4%	665	577	86.8%	Unlikely	128.70
State Issued		346	205	59.2%	50.7%	586	319	54.4%	Possible	21.75
Region Total		1,328	985	74.2%	63.1%	1,251	896	71.6%	Possible	107.06
EPA Region 2										
	AT**	6	6	100.0%	84.4%	6	6	100.0%	Unlikely	0.93
	NJ	2,664	263	9.9%	9.9%	2,706	356	13.2%	Possible	88.85
	NY	1,761	305	17.3%	16.1%	1,427	62	4.3%	YES	0
	PR**	197	100	50.8%	43.7%	199	112	56.3%	Unlikely	25.02
	VI	77	44	57.1%	49.0%	80	47	58.8%	Possible	7.81
EPA Issued		203	106	52.2%	44.9%	205	118	57.6%	Unlikely	25.93
State Issued		4,502	612	13.6%	13.0%	4,213	465	11.0%	YES	0
Region Total		4,705	718	15.3%	14.3%	4,418	583	13.2%	YES	0
EPA Region 3										
	DC**	12	3	25.0%	22.4%	12	3	25.0%	Possible	0.31
	DE	41	2	4.9%	4.9%	41	8	19.5%	Unlikely	6.00
	MD	564	229	40.6%	35.3%	546	239	43.8%	Possible	46.23
	PA	3,952	508	12.9%	12.4%	3,914	621	15.9%	Possible	137.22
	VA	2,835	1,943	68.5%	58.4%	1,103	20	1.8%	YES	0
	WV	1,459	647	44.3%	38.4%	1,393	638	45.8%	Possible	103.07
EPA Issued		12	3	25.0%	22.4%	12	3	25.0%	Possible	0.31
State Issued		8,851	3,329	37.6%	32.8%	6,997	1,526	21.8%	YES	0
Region Total		8,863	3,332	37.6%	32.8%	7,009	1,529	21.8%	YES	0
EPA Region 4										
	AL	1,385	140	10.1%	10.1%	1,416	127	9.0%	YES	0
	FL	348	69	19.8%	18.1%	333	51	15.3%	YES	0
	GA	784	0	0.0%	0.0%	786	0	0.0%	YES	0
	KY	1,860	84	4.5%	4.5%	1,809	90	5.0%	YES***	0
	MS	1,841	326	17.7%	16.4%	1,873	429	22.9%	Possible	122.32
	NC	1,344	192	14.3%	13.5%	1,262	69	5.5%	YES	0
	SC	495	73	14.7%	13.9%	486	83	17.1%	Possible	15.32
	TN	1,321	224	17.0%	15.8%	1,311	71	5.4%	YES	0
EPA Issued		NA	NA	NA	NA	NA	NA	NA		
State Issued		9,378	1,108	11.8%	11.5%	9,276	920	9.9%	YES	0
Region Total		9,378	1,108	11.8%	11.5%	9,276	920	9.9%	YES	0

Backlog Status Report for Minors (Individual Permits Only) - May 2001

		August 2000				Actual For May 2001				
		Total Facilities	Expired*	Backlog	Goal for May, 2001	Total Facilities	Expired*	Backlog	On Target to Meet December 2004 Goal (1)	Permit Deficit****
EPA Region 5										
	IL	1,787	373	20.9%	19.0%	1,768	416	23.5%	Possible	80.24
	IN	1,174	150	12.8%	12.3%	1,151	120	10.4%	YES	0
	MI	532	57	10.7%	10.6%	510	66	12.9%	Possible	11.99
	MN	1,019	509	50.0%	43.0%	1,030	507	49.2%	Possible	63.73
	OH	2,571	680	26.4%	23.6%	2,638	572	21.7%	YES	0
	WI	859	165	19.2%	17.6%	824	132	16.0%	YES	0
EPA Issued		NA	NA	NA	NA	NA	NA	NA		
State Issued		7,942	1,934	24.4%	21.9%	7,921	1,813	22.9%	Possible	80.87
Region Total		7,942	1,934	24.4%	21.9%	7,921	1,813	22.9%	Possible	80.87
EPA Region 6										
	AR	729	56	7.7%	7.7%	733	57	7.8%	YES***	0
	LA	3,640	2,910	79.9%	67.8%	3,697	2,774	75.0%	Possible	265.99
	NM**	221	203	91.9%	77.7%	148	113	76.4%	YES	0
	OK	560	176	31.4%	27.7%	488	141	28.9%	Possible	5.73
	TX	2,666	719	27.0%	24.0%	2,547	541	21.2%	YES	0
EPA Issued		221	203	91.9%	77.7%	148	113	76.4%	YES	0
State Issued		7,595	3,861	50.8%	43.8%	7,465	3,513	47.1%	Possible	245.70
Region Total		7,816	4,064	52.0%	44.7%	7,613	3,626	47.6%	Possible	220.90
EPA Region 7										
	IA	1,660	568	34.2%	30.0%	1,652	628	38.0%	Possible	131.98
	KS	1,161	753	64.9%	55.4%	1,213	353	29.1%	YES	0
	MO	3,015	972	32.2%	28.4%	3,073	1,007	32.8%	Possible	134.58
	NE	1,184	806	68.1%	58.0%	872	438	50.2%	YES	0
EPA Issued		NA	NA	NA	NA	NA	NA	NA		
State Issued		7,020	3,099	44.1%	38.2%	6,810	2,426	35.6%	YES	0
Region Total		7,020	3,099	44.1%	38.2%	6,810	2,426	35.6%	YES	0
EPA Region 8										
	CO	418	212	50.7%	43.7%	394	200	50.8%	Possible	27.94
	MT	147	45	30.6%	27.0%	146	57	39.0%	Unlikely	17.51
	ND	127	16	12.6%	12.1%	126	19	15.1%	Possible	3.69
	SD	380	82	21.6%	19.6%	377	123	32.6%	Unlikely	49.20
	UT	84	4	4.8%	4.8%	86	9	10.5%	Possible	4.90
	WY	1,149	87	7.6%	7.6%	1,229	61	5.0%	YES	0
EPA Issued		NA	NA	NA	NA	NA	NA	NA		
State Issued		2,305	446	19.3%	17.7%	2,358	469	19.9%	Possible	50.90
Region Total		2,305	446	19.3%	17.7%	2,358	469	19.9%	Possible	50.90
EPA Region 9										
	AS**	3	0	0.0%	0.0%	3	0	0.0%	YES	0
	AZ**	144	49	34.0%	29.9%	134	19	14.2%	YES	0
	CA	686	245	35.7%	31.3%	667	234	35.1%	Possible	25.47
	GU**	11	5	45.5%	39.3%	15	2	13.3%	YES	0
	HI	40	7	17.5%	16.2%	41	1	2.4%	YES	0
	JA**	1	0	0.0%	0.0%	1	1	100.0%	Unlikely	1.00
	MW**	1	1	100.0%	84.4%	(2)	(2)	(2)	(2)	(2)
	NI**	3	3	100.0%	84.4%	(2)	(2)	(2)	(2)	(2)
	NV	70	18	25.7%	23.0%	68	26	38.2%	Unlikely	10.36
EPA Issued		163	58	35.6%	31.2%	153	22	14.4%	YES	0
State Issued		796	270	33.9%	29.8%	776	261	33.6%	Possible	29.91
Region Total		959	328	34.2%	30.0%	929	283	30.5%	Possible	4.18

Backlog Status Report for Minors (Individual Permits Only) - May 2001

		August 2000			Goal for May, 2001	Actual For May 2001			On Target to Meet December 2004 Goal (1)	Permit Deficit****
		Total Facilities	Expired*	Backlog		Total Facilities	Expired*	Backlog		
EPA Region 10										
	AK**	282	262	92.9%	78.6%	275	259	94.2%	Unlikely	42.96
	ID**	277	262	94.6%	79.9%	224	209	93.3%	Unlikely	29.92
	OR	283	180	63.6%	54.3%	301	197	65.4%	Unlikely	33.48
	WA	654	519	79.4%	67.4%	623	425	68.2%	Possible	5.39
EPA Issued		559	524	93.7%	79.2%	499	468	93.8%	Unlikely	72.56
State Issued		937	699	74.6%	63.4%	924	622	67.3%	Possible	36.01
Region Total		1,496	1,223	81.8%	69.3%	1,423	1,090	76.6%	Possible	103.39
All Minors		51,812	17,237	33.3%	29.2%	49,008	13,635	27.8%	YES	0
EPA Issued		2,140	1,674	78.2%	66.4%	1,682	1,301	77.3%	Unlikely	183.88
State Issued		49,672	15,563	31.3%	27.6%	47,326	12,334	26.1%	YES	0

*Includes no data facilities

**Indicates EPA is the permitting authority. Maine became an authorized State recently (Jan 2001).

***Although the State is below the 10 percent goal, the State's backlog is beginning to trend upwards

****The number of permits that needed to be issued through the reporting period to remain on target to meet the December 2004 goal.

(1) "Possible" indicates that permit deficit is within 10% of the monthly target to meet the 2004 goal or is of 5 permits or less.

(2) Based on 9/30/2000 download, there are no individually permitted facilities in the Midway Islands.

Based on 1/31/2001 download, there are no individually permitted minor facilities in the Northern Mariannas.

Based on 3/31/2001 download, there are no individually permitted minor facilities in the Georges Banks.

RESOURCES TO REDUCE NPDES BACKLOG

Question. Provide the level of resources EPA is devoting to reduce the NPDES backlog from fiscal year 2001 and in the fiscal year 2002 request.

Answer. Both EPA and state permitting agencies have developed strategies that affirm permit issuance as a high priority task and in many cases, reorganize staff to reduce permit backlog.

NPDES permit issuance is a substantial undertaking in EPA Regional Water Divisions and in State water pollution control agencies. To help reverse the trend in rising backlogged permits, EPA has spent about $200,000 on assistance for EPA permit issuance in 2001 and we anticipate making the same level of assistance available in 2002. Additionally, in fiscal year 2001 EPA spent approximately $70,000 tracking the NPDES permit backlog and providing data to states and state organizations. A similar level of spending for these activities is anticipated for 2002.

In fiscal year 2001, EPA also made some if its contracts available to states to use in assisting them with permit issuance and data clean up. We anticipate continuing this practice which enables the states to use their Section 106 grant funds to secure contractor support for permit issuance by using EPA national contracts.

ENFORCEMENT TARGETING

Question. Describe EPA's efforts to strategically target its enforcement and compliance activities to address the most significant risks to human health and the environment.

Answer. There are several methods employed by EPA to target enforcement and compliance activities to address the most significant risks to human health and the environment. Below is a summary of some of these key activities.

Evaluation of risk impacts on a multimedia basis.—EPA uses several analytic techniques to evaluate risk—particularly at the sector-level. For example, EPA develops comprehensive sector rankings every two years, and factors this information into the enforcement/compliance planning process. EPA examines all major industrial sectors to assess noncompliance patterns, emissions by media, and relative risk posed by each industry to nearby populations. The risk model used to assist in this evaluation has been peer reviewed and approved by the EPA Science Advisory Board.

Stakeholder input to identify risks.—Through the Memorandum of Agreement (MOA) process, EPA solicits comment from a broad range of stakeholders on possible environmental problems. This information gathering process assists EPA in evaluating potential risks that may be missed by data analysis (because some problems are outside the scope of EPA data collection). In addition, OECA recently instituted a process for EPA personnel to nominate environmental problems for OECA's consideration.

Empowering staff to apply risk-based criteria. EPA has developed the Online Tracking Information System (OTIS) that assists EPA and state staff in applying risk criteria in their daily decisions. The web site provides a user friendly tool to examine regulated facilities in the context of compliance history, pollutant release, and demographics. In addition, OECA is now adding the capability to query data based upon watershed health—again allowing Regions and States to better target resources. Users can also look for facility clusters based upon the mapping application supported by OTIS. Because the site bridges pollutant releases, environmental conditions, and compliance data, Regions and States now have the capability to easily assess relative impacts when making compliance monitoring decisions.

Media priorities.—OECA implements many of its strategic priorities based upon studies and analysis that examine significant risks. For example, the EPA Clean Water Action Plan provides a set of specific steps for improving water quality. Many of the key priorities explained in this Plan are key components of OECA's MOA process. Additionally, evaluation of facility types (e.g., major permittees versus minor permittees) under the CWA, CAA, and RCRA program in relation to supporting compliance monitoring and enforcement policies focus Regional and state attention on facilities that pose a higher risk to human health and the environment.

Enhanced targeting.—Looking to the future, EPA is in the process of bringing together more extensive data that may assist in correlating health data (e.g., cancer rates) with enforcement data. This type of analysis, along with technical advances in risk modeling, will enable EPA to continue aligning the compliance and enforcement program with health and environmental risks.

NUMBER OF TMDLS REQUIRED BY SECTION 303(D) LIST

Question. What is the latest estimate of the number of TMDLs required under current state section 303(d) list? Please break this down by state.

Answer. The list below contains the number of impaired waters on each State's 1998 list and an estimate of the number of TMDLs that are required. This information is based on State information and, in some cases, EPA's estimate of the total number of TMDLs required. The number of TMDLs actually necessary may differ, depending upon how individual States submit the TMDLs to EPA (i.e., as a single TMDL per pollutant per waterbody or "bundling" a group of TMDLs within a waterbody or watershed).

State	Number of Waters	Number of TMDLs
Alabama	154	310
Alaska	58	79
Arizona	103	225
Arkansas	51	70
California	509	1,471
Colorado	79	197
Connecticut	223	312
Delaware	377	669
District of Columbia	36	86
Florida	712	1,973
Georgia	584	920
Hawaii	3	6
Idaho	710	1,619
Illinois	738	2,863
Indiana	208	373
Iowa	157	220
Kansas	1,107	1,692
Kentucky	231	367
Louisiana	196	607
Maine	226	267
Maryland	196	371
Massachusetts	906	1,450
Michigan	267	410
Minnesota	143	172
Mississippi	721	2,241
Missouri	180	216

State	Number of Waters	Number of TMDLs
Montana	869	2,350
Nebraska	114	216
Nevada	37	90
New Hampshire	226	263
New Jersey	1,059	1,648
New Mexico	186	330
New York	627	632
North Carolina	477	378
North Dakota	133	329
Ohio	881	2,281
Oklahoma	531	1,430
Oregon	1,183	1,769
Pennsylvania	1,039	1,711
Rhode Island	127	245
South Carolina	658	739
South Dakota	161	296
Tennessee	352	795
Texas	146	247
Utah	203	585
Vermont	196	248
Virginia	883	1,002
Washington	1,317	2,188
West Virginia	722	1,022
Wisconsin	551	942
Wyoming	63	122
American Samoa	1	1
CNMI	2	2
Guam	3	6
Puerto Rico	199	207
Virgin Islands	9	15
Total	21,845	41,318

(Seven states, Georgia, South Carolina, Montana, Michigan, New Mexico, Utah, and Wyoming have approved 2000 303(d) lists which are not yet have not been updated into the table).

STATE NON-POINT SOURCE DATA TO PREPARE TMDLS

Question. How many states have the nonpoint source data necessary to prepare all required TMDLs?

Answer. EPA recognizes that not all states have comprehensive data for nonpoint source loadings of TMDL listed waters. EPA expects that, where additional data is needed, it will be developed as part of the TMDL process.

TOTAL ESTIMATE OF COST TO PREPARE TMDLS BY STATE

Question. What is the latest estimate of costs to prepare all required TMDLs? Please break this down by state.

Answer. Congress directed EPA to provide a "comprehensive assessment" of both development and implementation costs of the "Total Maximum Daily Loads" (TMDL) program in the Conference Report 106–988 describing the VA/HUD and Independent Agencies Appropriations Act for Fiscal Year 2001. A draft of this report, "The National Costs of the Total Maximum Daily Load Program," was released for public comment in early August, 2001. Comments are due on December 7, 2001.

The draft report estimates that the total average annual costs to states and EPA of developing TMDLs, over the next 15 years, are estimated to be between $63–69 million per year. It will cost a total of approximately $1 billion over 10 to 15 years to develop 36,000 TMDLs in the over 20,000 waterbodies known to be impaired. EPA expects that states will increase the number of TMDLs developed each year, spending about $30 million in the year 2000, $43–48 million in 2002, and about $68–75 million starting in 2005 and each year thereafter until 2015.

The costs of TMDL development cited in the draft report are based on requirements of the existing TMDL program and the new provisions added, but not implemented, in the July 2000 rule. The costs of the additional requirements associated with the July 2000 regulations represent less than 10 percent of the total cost estimated in this report. The draft report does not contain estimates of the costs for preparing the required TMDLs broken down by state.

STATE RESOURCES TO PREPARE TMDLS

Question. What is EPA's estimate of whether the states have the resources necessary to prepare all required TMDLs? Which States does EPA believe do not currently have the resources necessary?

Answer. EPA does not have a state-by-state analysis of potential state costs. State funding for TMDLs has grown substantially over the past few years. For example, resources available under Section 106 Water Program Grants increased from $115 million in fiscal year 2000 to $170 million in fiscal year 2001. In addition, under section 604(b)(3) of the Clean Water Act, states may use up to one percent of State Revolving Loan Funds Grants funds (or $100,000, whichever is greater) for planning and related purposes, including development of TMDLs. In fiscal year 2001, the total funding available under this authority was $14 million. EPA has also revised the eligibilities for the section 319 funding to provide that up to 20 percent of each state's allotment (up to $47.5 million nationally) may be used to complete assessments of nonpoint sources contributing to impaired waters and to help establish TMDLs for those waters. Finally, EPA has budgeted $10 million in contract funds to support state efforts to develop TMDLs.

LENGTH OF TIME REQUIRED TO APPROVE ALL TMDLS

Question. If TMDLS are approved at historic rates, how long will it take EPA to approve all required TMDLs?

Answer. EPA's current policy is that all TMDLs should be established within 8–13 years from the time a water is initially listed as impaired. EPA believes that the pace at which states develop TMDLs and EPA approves them will continue to increase over the next few years. In 22 states, there are consent decrees or court orders which require that TMDLs be established within 4 to 13 years.

COST TO APPROVE TMDLS

Question. How much will it cost EPA in resources and FTEs to approve these TMDLs? Please break down by region.

Answer. While we have not delineated resources specifically for approvals, we can provide our estimates of total Regional TMDL resources, which includes support for TMDL approvals as well as for review and approval of CWA § 303(d) lists and support for development of TMDLs at the request of a state or where a state does not develop a TMDL called for in a consent decree. Specifically, in fiscal year 2001:

	FTE EXTRA-MURAL	Amount
Region 1	4	$600,000
Region 2	6	640,000
Region 3	5	1,100,000
Region 4	16	1,420,000
Region 5	6	1,170,000
Region 6	7	1,150,000
Region 7	4	740,000
Region 8	3	940,000
Region 9	9	870,000
Region 10	14	870,000
Undistributed	....	500,000
Total	75	10,000,000

ADEQUATE AGENCY FUNDS FOR TMDLS

Question. Is EPA budgeting the funds necessary to approve all required TMDLs?

Answer. EPA believes that there are adequate funds requested in the fiscal year 2002 budget to approve the required TMDLs.

ESTIMATED NUMBER AND COST SAVINGS FROM BUNDLING TMDLS

Question. What number or percentage of TMDLs does EPA estimate states will be able to bundle and how much time and money will this save?

Answer. The draft cost study examined a large sample of 1,096 TMDLs for 668 water bodies submitted to EPA. This sample indicates the extent to which states are already beginning to adopt approaches for efficiently developing TMDLs. More than half the TMDLs benefitted from the cost efficiencies that can be realized by coordinating the development of multiple TMDLs for a single waterbody and by coordinating the development of TMDLs for multiple water bodies within watersheds. Based on these findings, a national level analysis of interconnected waterbodies within watersheds was conducted and concluded that more than 80 percent of all waterbodies, accounting for 90 percent of all TMDLs, could potentially realize varying degrees of cost efficiencies; we expect that states will likely bundle 60–70 percent.

The cost of developing a TMDL for one pollutant is estimated to be $28,000 on average nationally, but may range from about $6,000 to $154,000. The lower end reflects the cost of a TMDL that is easiest to develop and has the benefit of maximum efficiencies (e.g., the TMDL for the second nutrient pollutant for a water body). The higher end represents the costs of TMDLs that are the most difficult to develop and for which there is no benefit of related work done on other TMDLs in the water body.

For a more detailed discussion of efficiencies, see the draft report, pp. 16–20, and the support document # 1, pp. II–5 to II–9.

ATTAINABILITY ANALYSIS TO DETERMINE CAUSE OF IMPAIRMENTS

Question. Does EPA agree that the states should review their use attainability analysis (UAAs) to determine whether individual impairments are caused by natural contamination or introduced pollution?

Answer. EPA agrees that states should periodically review their water quality standards to determine whether the existing designated uses and associated criteria for a specific waterbody are properly identified and attainable. Completing UAAs is one way that states (and EPA) can determine whether impairments result from natural sources or introduced pollutants.

TWO-TIERED LIST TO SET TMDL PRIORITIES

Question. Does EPA believe states should create two-tiers of TMDL with an action list for which data reveals an impairment and for which a TMDL should be developed and a second "preliminary" list for those water with less data available and the impairment is less certain? If not, why?

Answer. EPA agrees that it is important that the list of waters needing TMDLs be as accurate and scientifically valid as feasible. EPA is aware that in some instances existing states' lists of impaired waterbodies include waterbodies for which little or no data supports the listing. EPA supports efforts by states to develop clear, scientifically based methodologies which describe how waters are determined to be impaired. In some cases, states may use action lists and preliminary lists to aid in that decision. EPA realizes that there will be waters for which the states lack sufficient data on the nature, extent and source of the impairment to determine if a TMDL is the appropriate response to the water quality problem. EPA is preparing, in cooperation with states the Consolidated Assessment and Listing Methodology (CALM)) that will provide information on good monitoring practices and methods. EPA has also drafted an "Integrated Listing and Reporting Guidance" that provides an option for states to submit one characterization of all their waters, including those impaired as required by section 303(d). This integrated guidance allows states an opportunity to describe those waters needing additional monitoring to support a decision that a waterbody is impaired.

DISTRIBUTION OF IMPAIRED WATERS IN TWO-TIERED SYSTEM

Question. If states were to employ a two-tiered system, what percentage of waters does EPA believe the action list and preliminary list would occupy among the total waters?

Answer. EPA cannot estimate how currently-listed waters would be distributed if states were to establish a two-tiered list. This would depend on the methodologies used by the individual states to decide which waterbodies are impaired. EPA is developing guidance (Consolidated Assessment and Listing Methodology (CALM)) in cooperation with states, to help states develop and improve on these methodologies for the 2002 listing cycle.

IMPACT OF PLACING WATERS ON PRELIMINARY LIST

Question. Does EPA believe that placing waters with little data on a preliminary list would mean putting off action on these waters?

Answer. Placement of waterbodies on a preliminary list would defer TMDL development for these waters, however, supplemental monitoring would be scheduled and undertaken. If an impairment requiring a TMDL was confirmed, a TMDL would be scheduled and completed.

VOLUNTARY MONITORING PROGRAMS

Question. What volunteer initiatives could states implement to address water quality in waters for which impairment data is lacking?

Answer. A number of states manage and support statewide networks of volunteers who collect water quality data. When properly trained, these volunteer monitors can collect chemical, biological and physical data that can supplement professionally collected data. Some states utilize this quality-controlled volunteer data in developing Section 305(b) reports and Section 303(d) lists. Even where states do not support a statewide program through their water quality or natural resource agency, they often can use data collected by volunteer organizations associated with universities, schools, and watershed groups. While volunteers must be organized, trained, and supported, and the data they produce must be stored, managed, and evaluated, their efforts are cost-effective and have proven valuable in screening for problems and providing data for waters the states cannot otherwise monitor. EPA provides guidance and technical support to volunteer monitoring groups for streams and rivers and lakes and believes that this data is a valuable compliment to the data collected by state and federal agencies.

REINVENTION:

Question. What is the status of EPA's review of its reinvention programs?

Answer. On April 10, Administrator Whitman issued a memorandum charging EPA's Innovation Action Council (IAC) with formulating "recommendations for updating [EPA's] innovation strategy." In considering appropriate next steps, the IAC is looking at both the challenges (environmental, regulatory or programmatic) facing the Agency, and the innovative approaches and tools needed to meet those challenges. The IAC is receiving recommendations from a number of recent reports by outside groups and has had preliminary discussions with several state environmental commissioners as it develops its recommendations. Preliminary recommendations will be forwarded to the Administrator for her consideration and additional stakeholders will be consulted before the strategy is finalized.

Question. How will EPA improve its reinvention programs to reduce barriers or transaction costs for participants?

Answer. EPA is currently working on updating its Regulatory Innovations Strategy. As part of this effort, the Agency will work to streamline and simplify the processes of these activities. Project XL is one high profile program where this is happening. In a mid-course re-engineering, the XL program cut approval and negotiation times significantly. We were able to do so by clarifying program elements, helping sponsors develop better projects and proposals, improving stakeholder involvement processes and by streamlining internal review and decision-making. EPA will continue to place a high priority on reducing transaction costs for participants, co-regulators, stakeholders and Agency staff.

While reducing transaction costs is always an important goal, the appropriate evaluation of any activity considers both the costs and the benefits. Early analyses of XL projects, for example, demonstrate that participants are attaining benefits that far outweigh the costs of negotiating the agreement.

Question. How will EPA direct the program offices and Office of Enforcement and Compliance Assurance (OECA) to reduce barriers, transaction costs and approval time for reinvention projects?

Answer. Many of the innovation programs, particularly those providing regulatory flexibility, represent new ways of doing business for EPA. They have required EPA organizations and staff to establish new types of relationships with project sponsors, stakeholders, co-regulators and each other. These projects pose challenging issues that cut across EPA's organizational lines, thus requiring a new type of cross-Agency coordination and decision-making.

EPA has worked to establish procedures to ensure the timely development, review and approval of projects under innovation programs, and has made significant progress in improving the efficiency of these processes while retaining the necessary consideration of key legal and technical questions. For example, in Project XL EPA has now signed over 50 final project agreements—each one reflecting the input of relevant program offices, OECA and General Counsel (OGC). This involvement provides valuable technical and other expertise that benefit all parties in the projects.

EPA is committed to the continuous improvement of its processes for dealing with the complexity of innovation projects. The innovation update currently under development by the IAC is expected to explore ways to continue to reduce transaction costs and approval time while ensuring that all consideration have been factored in.

Question. Will EPA approve reinvention proposals to change current regulatory requirements if they provide improvements in the environment?

Answer. Project XL currently accepts and implements proposals to change the regulatory requirements for the project participants. If evaluation of the project demonstrates that the regulatory change results in benefits—environmental or economic—that outweigh the cost or risks, EPA will consider making those changes available to broader segments of the regulated community. To date, XL projects have resulted in, or have contributed to, new hazardous air pollutant regulations (MACT), new approaches to air permitting (New Source Review), and a national policy regarding the disposal of lead-containing construction debris.

Question. How will EPA ensure innovative approaches to improve environmental protection are incorporated into the daily operations of the agency rather than limited to experiments outside the mainstream of the Agency's programs?

Answer. All of EPA's innovation pilots are intended to provide innovative approaches that can be used to develop standard EPA regulatory practices that are cheaper and more flexible. Innovative approaches are being adopted already in regulatory programs (i.e., to date, XL projects have resulted in or have contributed to new hazardous air pollutant regulations (MACT), new approaches to air permitting (New Source Review), and a national policy regarding the disposal of lead-containing construction debris). In developing recommendations for the Administrator to update EPA's innovations strategy, the Innovation Action Council plans to address how to make the process of moving good ideas from "pilots to practice" more routine and systematic. Also, recently announced plans to improve the rule-making process include an increased emphasis on considering a wide array of options at the outset, and involving EPA senior management in the early regulatory planning process. EPA is also exploring ways of making information on innovations more widely available throughout the Agency and to states (e.g., a catalogue or electronic clearinghouse).

Question. How will EPA reflect the efforts to institutionalize reinvention activities into day-to-day activities in its resource allocation for fiscal year 2002 and fiscal year 2003?

Answer. As part of the effort to update EPA's innovations agenda, the Agency's senior leadership is reviewing options for incorporating innovation into budgeting and planning processes and is committed to strong management of its innovations program. The fiscal year 2002 President's request for EPA reinvention programs is focused on developing and coordinating sector-based approaches, facility-based pilots, small business assistance and performance incentives. The Agency is continuously building upon its innovation programs by institutionalizing reinvention activities into its day-to-day activities. The Agency will consider the forthcoming recommendations for updating EPA's Innovations Strategy while developing its fiscal year 2003 request.

PBT LIST:

Question. Has EPA made a final decision on whether it is scientifically appropriate to apply its PBT methodology to metals and, if it is, how that should be done? If EPA has made such a decision, when was it made, where is it explained, and why did the Agency conclude there was no need for independent peer review of the issue by the SAB?

Answer. The Agency's PBT methodology was developed by the Agency to identify whether a substance is persistent, bioaccumulative and toxic (i.e., a PBT). The PBT methodology, the basis for its development, and its application are explained in the proposed (64 FR, 687–729, January 5,1999) and final (64 FR, 58665–58753, October 29, 1999) PBT chemical rules.

In addition, EPA uses a methodology called the EPA's Waste Minimization Prioritization Tool (WMPT), which is being used to identify PBT chemicals for a number of EPA projects. WMPT is a peer-reviewed chemical hazard screening tool that uses persistent, bioaccumulative, and toxic properties of a chemical, to evaluate its potential hazard. The WMPT has been peer-reviewed by outside experts, and focus group meetings were held with industry, government, and public interest groups among other review activities.

Recognizing there are continuing issues on the application of the PBT methodology to lead and other metals, the Agency has committed to seek peer review from its SAB. As stated in the Final TRI Lead Rule, "The external peer review would address the question of whether lead and lead compounds should be classified as highly bioaccumulative. The external peer review would address the issue of how lead and other, as yet unclassified, metals, such as cadmium, should be evaluated using the PBT chemical framework, including which types of data (and which species) are most suitable for these determinations."

Question. If EPA has made a final decision that it is scientifically appropriate to apply its PBT methodology to metals, is there a difference in the way EPA applies its PBT methodology to metals versus organic compounds? If so, what is the difference and where is it explained?

Answer. The Agency's PBT methodology was developed by the Agency to identify whether a substance is persistent, bioaccumulative and toxic (i.e., a PBT). The PBT methodology, the basis for its development, and its application are explained in the proposed (64 FR, 687–729, January 5, 1999) and final (64 FR, 58665–58753, October 29, 1999) PBT chemical rules.

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Question. If EPA has not made a final decision whether it is appropriate to apply PBT criteria to metals, do you intend to take any steps to discourage states and localities from using the Agency's draft PBT list for regulatory purposes, particularly insofar as the draft list includes several metals?

Answer. As stated in the Federal Register Notice, EPA developed the draft RCRA Persistent, Bioaccumulative and Toxic (PBT) List for use in the voluntary hazardous waste minimization programs, not for regulatory purposes. EPA headquarters provided regional and state partners draft waste minimization chemical priorities at its RCRA National Meeting in August 2000, stressing that regions and states should focus on these draft waste minimization chemical priorities rather than the draft RCRA PBT List. Emphasis on using the draft waste minimization chemical priorities in regional and state waste minimization activities is further enhanced through monthly conference calls and meetings between EPA headquarters and regional representatives and state partners.

Question. Why did EPA disregard the fiscal year 2001 VA/HUD Conference Report language and the bipartisan recommendation of the House Science Committee and proceed with applying the PBT methodology to metals, in the form of increased reporting of lead, before seeking independent SAB peer review of the appropriateness of applying its PBT methodology to metals?

Answer. EPA carefully considered the fiscal year 2001 VA/HUD Conference Report language and the bipartisan recommendation of the House Science Committee when it proceeded with finalizing the TRI lead rule. EPA has committed to seek peer review from its SAB as discussed in the preamble to the that rule.

Question. What is the scope of the review that EPA plans to ask the SAB to conduct? Will the review be consistent with the request in last year's VA–HUD Conference Report that asked for a broad review of the "scientific appropriateness of applying PBT criteria and methodology to metals?" If not, why not?

Answer. As stated in the final TRI Lead Rule, the Agency has committed to seeking SAB peer review as follows: ". . . The external peer review would address the question of whether lead and lead compounds should be classified as highly bioaccumulative. The external peer review would address the issue of how lead and other, as yet unclassified, metals, such as cadmium, should be evaluated using the PBT chemical framework, including which types of data and which species are most suitable for these decisions."

Question. What procedures are in place to ensure that the charge sent to the SAB fully covers all relevant issues concerning the application of EPA's PBT methodology and criteria to lead and other metals?

Answer. To ensure that the charges sent to the SAB are consistent with the statements in the final TRI lead rule regarding SAB review, the Agency has placed the development of the SAB charges under the purview of EPA's Risk Assessment Forum, which has established both an intra-Agency steering committee composed of senior EPA managers and an ad-hoc intra-Agency technical panel composed of senior EPA scientists to develop the charges and background document. Several of the EPA staff who were involved with the development of the lead rule and other EPA activities that are using the PBT framework are involved with the development of the SAB charges. These individuals are very familiar with the relevant issues raised during the public comment periods on those activities and the interagency review period with respect to the commitment the Agency made in the final TRI lead rule regarding SAB peer review.

Question. When does the Agency expect to transmit a charge to the SAB on these issues?

Answer. EPA is actively preparing for peer review from its SAB. EPA expects to have the specific SAB charges delivered to the SAB by Fall of 2001. EPA's preparation for the SAB peer review includes preparing a background document, developing the charges to the SAB, assembling the materials necessary for the SAB review, and involving all the affected offices within the Agency.

Question. Will the SAB review comply with the Agency's criteria for independent peer review as set forth in its Peer Review Handbook?

Answer. The SAB review will satisfy the requirements of the Agency's peer review policies.

Question. What is the expected completion date of the SAB review? Does EPA expect to reconsider any decisions based on application of its PBT criteria and methodology to metals if the SAB concludes that applying the Agency's PBT criteria to metals is scientifically inappropriate?

Answer. Generally, the SAB tries to complete its assessment and provide EPA with a written reply within four months of receipt of the charges. EPA will carefully review and consider the advice provided by the SAB to the charges put forth by EPA. EPA will then make a determination on how to proceed based on that review.

Question. What plans, if any, does EPA have in place to evaluate criticisms of its analysis of economic impacts on small business in the TRI lead rule during the time the SAB review is underway?

Answer. The General Accounting Office (GAO) evaluated the analytic methods that EPA used. They concluded that the methods used and the conclusions drawn "were within the discretion provided by both the RFA and EPA's guidance." EPA has no plans at this time, to do an additional analysis of the impact of the TRI lead rule on small businesses.

SMALL BUSINESS

Question. How did EPA include small business concerns into its current review of EPA rulemaking processes?

Answer. The recently completed review of the Agency's rulemaking process was an internal review led by a Task Force consisting of the Agency's Assistant Administrators. Four subgroups were set up to address particular elements of the process: science; economics; policy (e.g., RFA/SBREFA); and process. The Small Business Ombudsman/Small Business Division in the Office of Policy, Economics and Innovation and the Small Business Advocacy Chair contributed to the recommendations of the policy subgroup. Representatives from the Agency's Compliance Assistance program also participated and represented small business concerns during the review.

Question. How is EPA using that process to ensure that small business issues are addressed from the beginning of the rulemaking process?

Answer. The Agency's process contains several elements that help ensure small business issues are addressed from the beginning of the EPA rulemaking process. First, the Agency offers training and guidance to rule writers that includes material on the Regulatory Flexibility Act (RFA) and the Small Business Regulatory Enforcement Fairness Act (SBREFA) requirements, as well as the Agency's policy to conduct outreach and provide accommodations in ANY rule that imposes ANY impact on small entities. Second, the Agency uses a tiering process for rule development. To initiate a rulemaking, a program office completes a tiering form that provides an overview of the action, including whether or not the action is expected to have an impact on small businesses. The Agency has developed comprehensive guidance on determining the impact on small businesses ("Revised Interim Guidance for EPA Rulewriters: Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act" (March 29, 1999)). Third, one of the first tasks in developing significant rules is preparation of an "analytic blueprint." The Agency uses the analytic blueprint to help guide early development of appropriate information and early consultation with small businesses and other stakeholders. The blueprint helps the Agency ensure that relevant information (e.g., potential small business impacts) is developed and brought into the decision-making process. Finally, the Agency provides checklists to rulewriters, including references to the requirements of RFA/SBREFA.

Question. How is EPA increasing its knowledge of the impacts of its regulatory requirements on small business?

Answer. EPA is continually learning from its past and current work experiences, as well as seeking new ways to increase its knowledge of the impacts of its regulatory requirements on small businesses. The Administrator or Deputy Administrator meet periodically with representatives of small business trade groups to discuss issues of particular concern to small businesses. The meetings have now become a tradition at EPA and serve to improve understanding on both sides of issues and, at times, lead us to change practices that are unduly burdensome to small businesses. The Agency has also reviewed some of its past assessments, as well as the methods used at other federal agencies/departments.

Question. How is EPA increasing its knowledge of the impacts on small business of rulemakings under consideration?

Answer. EPA has developed a comprehensive guidance manual for rulewriters to facilitate the evaluation of potential small business impacts ("Revised Interim Guidance for EPA Rulewriters: Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act" [March 29, 1999]). Specific tools used by EPA to increase its knowledge of impacts of rulemakings under development include: SBREFA panels; meetings with industry trade groups; small business trade groups and consultations with small businesses.

Question. How is EPA increasing delivery of information about its regulatory requirements to small businesses?

Answer. EPA has a long history of developing materials to aid the regulated community in its compliance efforts. These documents include such items as Sector Notebooks, Plain English Guides, and Fact Sheets. EPA makes these and numerous other resources easily accessible through the main EPA Internet home page (www.epa.gov). Moreover, beyond the confines and oversight of the Agency, EPA provides support and maintains meaningful affiliations with many other programs and personnel advising small entities by working through industry partnerships, grants, cooperative agreements, as well as the Small Business Assistance Programs run by the states under section 507 of the Clean Air Act. Finally, the Agency, with its stakeholders, has developed a host of internet-based Compliance Assistance Centers to provide technical information specific to particular industries. These centers are funded by EPA, but are managed by university and industry partnerships.

Specific programs include:

—(1) the Asbestos and Small Business Ombudsman located at EPA Headquarters;

—(2) Regional small business liaisons, who serve as local resources to assist small entities who contact the EPA regional offices;

—(3) various hotlines and clearinghouses that serve entities of any size, including large percentages of small entities; and

—(4) technical and program staff located throughout Headquarters and the regions who are available to answer questions in their subject area or refer small entities to the appropriate state and local resources.

Question. How is EPA ensuring that program offices considering rulemakings determine potential small business impacts in areas which they may not already be aware?

Answer. The Agency focuses on consideration of potential small business impacts early in the process. The Analytic Blueprint is a tool the Agency uses to map out the information that will be available to decision makers to inform development of, and selection among, policy options. The Agency's RFA/SBREFA guidance informs development of the blueprint and analytic planning. A screening analysis under RFA/SBREFA requires analysts to examine the following questions to make an initial assessment of the potential of a rule to have a significant economic impact on a substantial number of small entities (SISNOSE):

—What types of entities are subject to the rule (regardless of size)?

—Are any small entities included?

—Are any small entities adversely affected?

—Is the rule likely to have a significant economic impact on a substantial number of small entities, considering both qualitative and quantitative information?

EPA establishes a SBREFA Panel to learn from small entity representatives of any small business impacts if the screening analysis indicates there may be SISNOSE. Further, the Agency's policy to conduct outreach and provide accommodations in ANY rule that imposes ANY impact on small entities encourages the consideration of potential small business impacts early in the regulatory development process. Finally, EPA continues to develop its relationship with the Small Business Administration's Office of Advocacy as a means to identify the concerns of small businesses.

Question. How is EPA ensuring that program office economic analysis of small business impacts do not omit small businesses or industry sectors it believes may be impacted by the rulemaking but on which the agency does not currently possess impact information?

Answer. The Agency's screening analysis under RFA/SBREFA requires analysts to examine the following questions to make an initial assessment of the potential of a rule to have a significant economic impact on a substantial number of small entities (SISNOSE):

—What types of entities are subject to the rule (regardless of size)?
—Are any small entities included?
—Are any small entities adversely affected?
—Is the rule likely to have a significant economic impact on a substantial number of small entities, considering both qualitative and quantitative information?

If the answer to the last three questions is "no," then the Agency will certify the rule as having no SISNOSE. If the answer to the final question is "yes", then the Agency will proceed to prepare a Regulatory Flexibility Analysis (RFA) and convene a Small Business Advocacy Review Panel.

If the Agency does not have enough information to determine with confidence that it can certify that there is no SISNOSE, then the Agency assumes the answer to the above final questions is "yes" and will prepare an RFA and convene a Small Business Advocacy Review Panel. This ensures that small business or industry sectors that may be impacted by a rulemaking, but for which the Agency does not currently possess impact information, are not omitted from the analysis. If, in the course of initiating the formal analysis of potential economic impacts on small entities, the Agency determines that impacts are not significant, then the Agency can decide to certify no SISNOSE at any time before proposal.

EPA's policy is to make an assessment of the rule's impact on any small entities, to engage the potentially regulated entities in a dialog regarding the rule, and minimize the impact to the extent feasible—even where the Agency certifies that a rule will not have a significant economic impact on a substantial number of small entities. This policy also ensures that impacts on small business or industry sectors are not omitted.

Question. How is EPA ensuring that self-imposed deadlines for rulemakings are not used to skip collection of information on small business impacts?

Answer. EPA is committed to collecting and analyzing appropriate information to support its actions, including information related to small business impacts. Data collection and information needs are explicit elements of the analytic blueprint EPA develops for significant rules. EPA is renewing its emphasis of the Analytic Blueprint and up-front identification of information needs and scheduling constraints. EPA is also reviewing its Action Tracking System to identify areas of improvement, including how to manage interim deadlines and milestones.

ACRYLAMIDE RULEMAKING

Question. What is the status of EPA's consideration of whether to regulate acrylamide grouts?

Answer. EPA is currently gathering and reviewing new data to determine whether the underlying data and assumptions it used in support of prior regulatory analyses are still reasonable.

EPA is reviewing data on key factors including chemistry, economics, and exposure control options. It is reconsidering both regulatory and nonregulatory options for protecting grouting workers. Much of the current data was collected by consulting technical literature. EPA also contacted some businesses and local governments to gather information. The economic data update is focusing on the chemical grout marketplace. It addresses the relative costs, market share, and desirability to users of acrylamide and its substitutes. The information EPA has collected is also relevant to the question of how many people are exposed and therefore how extensive is the risk from the use of acrylamide grouts. EPA is also collecting and reviewing data on currently available personal protective equipment to determine whether there is an adequate and affordable means of providing exposure protection to grouting workers.

Once EPA has completed the data gathering and analysis phase, it will revisit the question of whether to protect workers who use acrylamide grout and how to do so. EPA expects to have decided upon a course of action by the end of September 2001.

Question. Has EPA determined that a nonregulatory approach may be sufficient to adequately protect human health?

Answer. No, EPA has not yet made a decision. EPA is collecting and reviewing data on currently available equipment for providing worker protection. The effectiveness and cost of such equipment are key factors in the decision. Other important factors are whether the equipment is compatible in terms of durability, comfort, and function with grouting conditions in the field. EPA will consult with the Occupational Safety and Health Administration (OSHA) and other affected stakeholders before making a final decision.

WIPER RULEMAKING

Question. What is the status of EPA's rulemaking on the handling and disposal of solvent-contaminated wipers?

Answer. EPA is currently evaluating an option that would exempt solvent-contaminated reusable and disposable wipes from RCRA hazardous waste regulations provided that specified conditions are met, such as the absence of free liquids, and proper labeling and storage. This option includes conditions identified in some state policies, and addresses disposable wipes containing hazardous solvents.

Question. Does the wiper rule provide EPA with the opportunity to level the economic playing field for small businesses who want to use nonwoven wipers and rags, in a way that benefits small businesses and the environment?

Answer. Yes. EPA is evaluating an option that would provide regulatory relief for small businesses using disposable or nonwoven wipes and rags, provided specified conditions are met, such as the absence of free liquids, and proper labeling and storage.

Question. Does the wiper rule provide EPA with the opportunity to create uniform standards for the disposal of laundered shop towels, nonwoven wipers and rags and thereby eliminate contradictory state rules and minimize confusion and excessive costs on the use of these products?

Answer. Yes. The option that EPA is evaluating would create uniform standards for industrial wipes, rags and shop towels, reduce the costs of compliance with RCRA regulations for many generators, and address inconsistencies that exist in current state policies with respect to these materials.

Question. How many small business industrial launderers oppose this rule versus the number of small businesses which would benefit from the rule either through supplying nonwoven wipers and rags or using such products?

Answer. EPA does not know the number of industrial laundries opposing this rule. However, we do know that the two trade associations representing many industrial laundries oppose this rule. Conversely, we are aware of other industrial laundries who favor this rule.

Question. Is the wiper rule an example of a rule which impacts small businesses, but not substantially, therefore not requiring a small business advocacy panel?

Answer. EPA is completing an economic impact analysis on small businesses. At this time, we are unable to provide information as to whether this rule will require a small business advocacy panel.

NEW SOURCE REVIEW

Question. What is the status of EPA's new source review litigation effort? Provide a brief summary of EPA action, litigants, factual background including degree of actual environmental impact, legal issues, current status, expected next step, and settlement if obtained?

Answer. As you are aware, the Department of Justice (DoJ) is currently reviewing the existing enforcement actions against certain utilities and other defendants for violations of New Source Review requirements under the Clean Air Act. In the meantime, both the Environmental Protection Agency and DoJ are proceeding with settlement discussions with some companies, and in litigation with others. The Eleventh Circuit Court of Appeals has informed us that it will hear argument in September on the Tennessee Valley Authority's appeal of the EPA's Environmental Appeal Board decision last fall finding TVA liable for substantial violations of NSR.

In the meantime, EPA has concluded global consent decrees with four petroleum refining companies covering 27 facilities representing about 28 percent of total domestic refining capacity. These agreements, which resolve alleged violations of NSR and other important provisions of the Clean Air Act, are expected to reduce emissions of sulfur dioxide, nitrogen oxide, and other criteria pollutants by at least 130,000 tons per year. All four of these consent decrees have been lodged with federal courts; we expect all four will be entered by the end of the fiscal year. This month, EPA announced another settlement of alleged NSR violations at a refinery owned by Clark Oil Company in Illinois; we expect the agreement to reduce sulfur oxide emissions by nearly 5,000 tons annually. Last October, EPA entered into a consent decree with Tampa Electric Company to resolve alleged NSR violations, and in November announced agreements in principle with Dominion Resources (VEPCO) and Cinergy. Assuming the VEPCO and Cinergy agreements lead to consent decrees, the three settlements together are expected to reduce sulfur dioxides and nitrogen oxides by a combined total of 750,000 tons per year.

Attached is a summary of the most significant recent settlements or active cases involving alleged violations of NSR, which includes some information about projected environmental benefits from these actions.

ATTACHMENT: NEW SOURCE REVIEW SNAPSHOT

POWER PLANTS

Companies settling, in active discussion or in litigation—49 percent of Total Coal-fired Capacity

Global Settlements.—Tampa Electric Company—Injunctive Relief: Approximately $1 billion; SO_X/NO_X Tons Reduced: 190,000 per year when fully implemented.

Global Agreements in Principle.—Vepco and Cinergy (Announced); Combined Injunctive Relief: Approximately $3 billion; Anticipated SO_X/NO_X Tons Reduced: 750,000 per year when fully implemented.

Current Negotiations.—Global settlement discussions with three additional companies.

Complaints Filed.—8 companies (AEP, Dayton Power & Light, Duke, First Energy, Illinova, SIGCORP, Southern Co., TVA); AEP, Southern, TVA together emit 5.5 million tons of SO_X/NO_X, or about 20 percent of emissions from all coal-fired capacity nationwide (1996 data).

Litigation Update.—EPA claims against TVA largely upheld by Environmental Appeals Board (EAB) in the fall of 2000; 11th Circuit scheduled to hear TVA's appeal of the EAB decision in September of 2001; Summary Judgment pending for AEP.

REFINERIES

Total cases settled, in negotiation, or under investigation:

Global Settlements.—Koch, BP, Motiva, Marathon-Ashland; 28 percent of U.S. Refining Capacity; Combined Injunctive Relief: Approximately $1.3 Billion; Anticipated SO_X/NO_X Tons Reduced: 130,000 tons per year when fully implemented; Additional reductions in VOCs, benzene and other pollutants.

Single Facility Settlements.—Cenco, CA; Clark, Illinois (4,700 tons per year of SO_X, reduced).

Current Negotiations.—Negotiating global settlement with three companies representing up to 25 percent of additional refining capacity.

Under Investigation (114's and NOV's).—Notices of Violation issued to Exxon-Mobil and Citgo facilities.

Active Litigation.—Murphy Oil trial appellate decision expected in July 2001.

WOOD PRODUCTS

Global Settlement.—3 companies (Georgia Pacific, Louisiana Pacific and Willamette); Willamette settlement reduced VOCs and other pollutants by 27,000 tons per year.

State Settlements.—Weyerhaeuser.

Current Negotiation.—Boise Cascade: 2 NOVs issued, 8 facilities addressed.

PULP AND PAPER MILLS

Complaints Filed.—Two single-facility judicial complaints (Westvaco, Gladfelter).

Current Negotiation.—One company.

Under Investigation.—At least 5 additional facilities.

IRON & STEEL (MINI-MILL)

Global Settlement.—Nucor Steel; Injunctive Relief: $85 Million; VOC/NO_X Tons Reduced: 9,400 per year when fully implemented.

Ongoing Disclosure Initiative.—Invitation to Audit 42 mini-mills.

OTHER SIGNIFICANT CASES

Buckeye Egg Farms; NOV issued for PSD/PM violation at large egg-laying facility.

Question. Provide examples of how EPA may have used litigation to obtain clarification of New Source Review (NSR) requirements instead of through legislative or rulemaking processes.

Answer. EPA believes its enforcement actions have proceeded from a consistent understanding and interpretation of New Source Review requirements by the Agency, and were based on noncompliance uncovered in investigations. EPA has not used litigation to obtain clarification of NSR requirements.

An Enforcement Alert, published in January of 1999 (before filing of EPA's complaints against power companies), represents one of our efforts to publicize concerns about noncompliance with NSR requirements. A copy of the Enforcement Alert (January, 1999, Volume 2, Number 1) is available on the Internet at http://es.epa.gov/oeca/ore/enfalert/psd.pdf.

Question. How can EPA improve the New Source Review program to protect air quality but ensure utilities and refiners do not face disincentives to install more efficient production technology?

Answer. In May 2001, the National Energy Policy Development Group, in its National Energy Policy Report, recommended that the Administrator of the EPA, in consultation with the Secretary of Energy and other Federal agencies, examine the New Source Review (NSR) regulations and report to the President on the impact of NSR on investment in new utility and refinery generation capacity, energy efficiency, and environmental protection. During July, as part of the NSR review and report to the President, EPA met with interested stakeholders and held a series of public meetings to solicit information about the impact NSR might have on refiners or utilities. These meetings will help us to formulate the recommendations that will be included in the report to the President. Thus, EPA believes that it is premature to make recommendations prior to completing the review.

Question. How can EPA improve the New Source Review (NSR) program to protect air quality but ensure actual emissions are the focus and not potential or theoretical emissions?

Answer. EPA took comments on its method for calculating emission increases under the NSR program in 1996 and again in 1998. We are still in the process of deliberating over whether changes are needed and, if so, what changes are most appropriate.

Question. How can EPA improve the New Source Review program to protect air quality but reduce the time and burden needed to obtain NSR permits?

Answer. The New Source Review (NSR) program is typically administered by State and local air pollution permitting authorities. EPA provides guidance to these authorities for implementing the program. EPA proposed several process improvements as part of the 1996 NSR proposal. Because disputes arise over what control technologies are considered available, the permit review process can become lengthy. EPA proposed several measures designed to streamline and provide more certainty concerning the control technology review requirements for NSR. Additionally, EPA proposed measures to clarify the roles, responsibilities and time frames for review by Federal Land Managers of sources potentially affecting air quality near national wilderness areas and parks. We are still in the process of deliberating over these changes.

CLARIFY AND DEFINE CONCENTRATED ANIMAL FEEDLOT OPERATION REGULATION

Question. How can EPA better clarify and define its proposed concentrated animal feedlot operation (CAFO) regulation?

Answer. EPA has held nine public information sessions around the country to help the public better understand the proposed regulations (Baltimore, MD; Ames, IA; Riverside, CA; Ft. Wayne, IN; Dallas, TX; Chattanooga, TN; Denver, CO; Boise, ID; and Casper, WY). We are engaged in an ongoing dialogue with major associations and their membership to discuss the proposal and EPA's goals. We are also working closely with USDA in order to further understand the potential impacts of the proposal on the agricultural community, to analyze underlying data that can help us refine the regulatory approach, and to examine options for meeting EPA's goal to protect water quality.

The comment period was extended to July 30 to give the public more time to prepare written comments on the proposal. New information received during the public comment period that EPA may use in the final rule will be published in a "notice of data availability" in late fall of this year. The public will then have an additional 30 to 45 days to comment.

EPA understands the concerns some have raised with respect to the regulation, and we continue to examine the issues as we work towards preparing options for the final rule scheduled for December 2002.

IMPACT OF CONCENTRATED ANIMAL FEEDING OPERATIONS RULE ON USE OF CHEMICAL PESTICIDES

Question. How will the CAFO rule increase the use of chemical pesticides [fertilizer] on crops by discouraging the use of manure?

Answer. It is not the intent of the proposed revised regulation to increase the use of commercial fertilizers nor discourage the use of manure. We understand that the proposed 100 foot setback provision for land application and the co-proposals concerning the off-site transfer of manure may inadvertently have such a result.

EPA is aware that 65 percent of manure produced by CAFOs is in excess of their on-site crop needs, and that as many as 350 counties generate more phosphorus from AFOs than is needed for crops. EPA is carefully studying this issue and is working to craft a solution to avoid disrupting manure markets.

WEATHER IMPACT ON CONCENTRATED ANIMAL FEEDING OPERATIONS REQUIREMENTS

Question. How does EPA ensure that CAFO requirements needed for wet climates are not overly burdensome in dry areas?

Answer. EPA believes that our proposal accounts for differences in climate. For example, we proposed that production areas be designed to contain manure, wastewater, and contaminated runoff for certain periods, i.e., beef and dairy feedlots must be designed for a 25-year, 24-hour storm (as defined by the National Oceanic and Atmospheric Administration), and that swine, poultry and veal areas be designed for zero discharge except in catastrophic events. In wet climates, the resulting design would be more rigorous than would be required in a dry climate. For land application areas, permits would incorporate the state-adopted NRCS 590 standard which includes methods for determining rate of manure application. These methods take into account rainfall, slope, soil conditions, and other factors that accommodate climactic differences in determining optimal conservation practices.

EPA has also proposed that both the co-permitting and the off-site transfer certification requirements could be waived if the State has an effective program for managing and redistributing excess manure nutrients. It may be the case that a State with dry climates could more realistically tailor its program to achieve such waivers, than a State with wet climates, because of the greater challenge to prevent nutrients from entering waters of the U.S. resulting from wet weather events.

COST OF DETERMINING HYDROLOGIC ISSUES

Question. How did EPA consider the costs associated with determining hydrologic issues, such as whether ground water at a facility is linked to federal waters?

Answer. Under one technology option, EPA and USDA developed a methodology to assess geological features that would most likely constitute a direct hydrological connection to surface water. The method results in an estimated 24 percent of facilities nationally that would incur costs to prevent discharges to groundwater. In the proposed rule, EPA has provided an opportunity for facilities to obtain a hydrologist's report that no hydrological connection exists, and therefore no further action would be necessary. EPA also included the cost of installing monitoring wells, lagoon liners, and solid storage pads at these facilities in its Regulatory Impact Analysis of the proposed rule.

PREVENTING DUPLICATIVE REPORTING AND RECORD KEEPING REQUIREMENTS

Question. How does EPA ensure that its federal reporting and record keeping requirements are not duplicative of existing state requirements in given states?

Answer. Forty-three States are authorized to administer the NPDES program for CAFOs. In these cases, States could coordinate the reporting and record-keeping requirements of any programs under their control, including their non-NPDES programs for AFOs and CAFOs.

CONCENTRATED ANIMAL FEEDING OPERATION

Question. How is EPA addressing concerns over co-permitting, nutrient management plans, and the financial resources necessary to establish the regulatory infrastructure needed to implement and enforce the proposal?

Answer. EPA is working with USDA, representatives of the regulated community, and our State co-regulators to refine our proposals in light of our goal to protect water quality, and to identify solutions that are effective, affordable, and flexible. We understand that whether we rely on voluntary programs, regulatory programs, or both, the animal production industry and States need the financial resources to implement the management practices needed at both the production areas and the land application areas, or for developing other uses for excess manure. We are seeking to participate in the dialogue over the Farm Bill to help address these concerns.

CLEAN AIR VIOLATIONS FROM BAKERIES

Question. What is the status of EPA's information request from bakers regarding their handling of refrigerant in their appliances?

Answer. EPA has sent Section 114 information requests to large baking companies regarding their compliance with ozone layer protection requirements governing ozone depleting refrigerants used in industrial process refrigeration and other equipment. EPA has requested additional information where initial responses were unclear, and has received several follow-up responses from the baking companies. EPA continues to analyze these responses. Responses received to date indicate serious compliance difficulties at many of the baking facilities, involving excessive emissions of ozone depleting compounds as well as record-keeping-related violations.

Question. How could EPA reach a comprehensive settlement with this industry which would allow participating bakers to devote the maximum amount of resources to coming into compliance and protecting the environment?

Answer. EPA representatives have initially met with the main trade association for the baking industry, the American Bakers Association, to discuss a comprehensive settlement of all violations discovered by self-audits. EPA has pledged to continue these discussions and explore ways of resolving any such violations while achieving the greatest environmental benefit consistent with EPA's self-auditing policy.

Question. How is EPA addressing municipality concerns that a zero discharge standard for overflows from collection systems would impose a technologically impossible and scientifically unsupportable burden on municipalities?

Answer. Section 301(a) of the Clean Water Act (CWA) establishes a zero discharge standard for unpermitted discharges. This strict liability standard requires that dischargers obtain an NPDES permit for their discharge according to the standards in section 301(b). EPA recognizes that some overflows from sanitary sewer collection systems are unavoidable, even at the best run systems. EPA is currently considering how best to address this reality in its regulations. One approach is through the existing "upset" and "bypass" provisions, that recognize exceptional incidents. The "bypass" provision prohibits the intentional diversion of waste streams from any portion of a treatment facility, but provides a framework for identifying the limited circumstances when EPA will not bring enforcement action. The "upset" provision provides a framework for identifying the limited circumstances when the permittee may establish an affirmative defense. These provisions could be tailored to specifically address SSOs. Another approach would be to authorize by permit a limited number of partially treated discharges in circumstances where the discharge is beyond the reasonable control of the operator. EPA is currently considering these and other approaches.

IMPACT OF ZERO DISCHARGE STANDARD ON CWA TECHNOLOGY-BASED STANDARDS

Question. How would EPA avoid circumventing the required process for developing CWA technology-based standards if it imposed a zero discharge standard?

Answer. Section 301(a) of the Clean Water Act (CWA) establishes a zero discharge standard for unpermitted discharges. This strict liability standard requires that dischargers obtain an NPDES permit for their discharge according to the standards in section 301(b). EPA recognizes that some overflows from sanitary sewer collection systems are unavoidable, even at the best run systems. EPA is currently considering how best to address this reality in its regulations. One approach is through the existing "upset" and "bypass" provisions, that recognize exceptional incidents. The "bypass" provision prohibits the intentional diversion of waste streams from any portion of a treatment facility, but provides a framework for identifying the limited circumstances when EPA will not bring enforcement action. The "upset" provision provides a framework for identifying the limited circumstances when the permittee may establish an affirmative defense. These provisions could be tailored to specifically address SSOs. Another approach would be to authorize by permit a limited number of partially treated discharges in circumstances where the discharge is beyond the reasonable control of the operator. EPA is currently considering these and other approaches.

BEST MANAGEMENT PRACTICES FOR SECONDARY STANDARDS FOR COLLECTION SYSTEMS

Question. How can EPA work within existing regulations which recognize that some discharges are better addressed through best management practices, to develop a secondary standard for collection systems?

Answer. EPA is considering whether to publish a rule that would require NPDES permits for municipal sanitary sewer collection systems to contain a standard provision for better operation and management of systems to avoid SSOs, increased attention to system planning, and better notification to the public in the event of an overflow. As an alternative to modifying the existing regulations, EPA could issue guidance or a policy on applying existing NPDES regulations, including the bypass and upset provisions at 40 CFR 122.41(m) and (n) and the secondary treatment regulations at 40 CFR 133, to municipal sanitary sewer collection systems and SSOs.

PUBLIC COMMENT ON ALTERNATIVE REGULATORY PRINCIPLES

Question. How can EPA provide an opportunity for comment on alternative regulatory principles?

Answer. EPA is reviewing the proposed rule. One option would be to propose a framework for: evaluating the specific circumstances of a discharge from a municipal sanitary sewer collection system; and determining whether to potentially excuse those discharges, either though the exercise of enforcement discretion or through establishment of an affirmative defense. Another option would be to propose a framework in which a limited number of partially treated discharges could be authorized by permit in circumstances, such as extreme wet weather, where the discharges were beyond the reasonable control of the operator. The proposed rule will provide an opportunity for interested stakeholders to comment on whatever framework is proposed, as well as, alternative approaches to deal with these discharges.

INFORMATION MANAGEMENT

Question. Provide the status of each Reinventing Environmental Information initiative and milestone, either still standing alone or as incorporated into more recent efforts.

Answer. The original elements of the Reinventing Environmental Information initiative (REI)—Data Standards, Electronic Reporting, State Participation (The One Stop Program), Systems Reengineering (the 13 REI systems), Locational Data Improvement (Geospatial efforts), and Facility Identification (the precursor to the Facility Registry System)—have been incorporated into the Agency's information integration efforts and are the core components of the infrastructure needed by EPA to participate, as a partner, in the National Environmental Information Exchange Network (NEIEN). The following is an update on the status of each of these projects:

Data Standards.—The REI Action Plan committed EPA to create a data standards program for the Agency. Specifically, this plan directed EPA to: (1) Promulgate interim standards for Date, Facility Identification, SIC/NAICS, Latitude/Longitude, Biological Taxonomy, and Chemical Identification; (2) Develop Business rules and promulgate final standards; (3) Establish a central Agency support program; and (4) Implement standards in national systems. In addition, the REI Action Plan called for the Agency to institutionalize the data standardization process and develop standards and protocols for electronic reporting. EPA has either met or has made significant strides in achieving these goals. As of November 2000, data standards and business rules for all six of the areas originally identified in the REI initiative have been completed and implementation dates for the 13 national systems have been set. These dates are:

DATA STANDARD	DATE COMPLETED BY EPA	IMPLEMENTATION DATE FOR REI SYSTEMS
Calendar Date	1/20/99	9/30/99
SAIC/NAICS	1/20/99	9/30/02
Facility ID	11/21/00	9/30/03
Lat/Long	11/21/00	2/28/02
Chemical ID	11/21/00	3/31/03
Biological ID	11/21/00	3/31/03

In addition to finishing these standards, the Agency has established a central support program for implementing them in major EPA systems. This support program involves conducting periodic surveys of implementation status; general communication and outreach to program offices; and convening meetings with program information management officials and system managers. As a result, EPA system managers have begun implementing these standards in 12 of the 13 national systems identified in the REI Action Plan (we are working with the last system to address technical obstacles to conformance). The Calendar Date standard, the only standard for which the implementation date has passed, has been implemented by most of EPA's 13 national systems. Most of the national systems are on track for the Latitude/Longitude and SIC/NAICS data standards which have implementation dates next year. Progress has also begun on the remaining data standards which have implementation dates into 2003.

Significant progress has also been made in institutionalizing the data standardization process. Specifically, the Environmental Data Standards Council was created and has forged a firm partnership with EPA, State, and Tribal organizations; it is about to circulate two new jointly developed draft data standards (Permitting, and Enforcement and Compliance) for broad public review and comment. The Council is deliberating on a new round of standards based on State, EPA, and Tribal needs with priority consideration of electronic format data exchanges slated for the National Environmental Information Exchange Network.

Electronic Reporting.—EPA has drafted a rule to address an electronic reporting process and remove existing regulatory barriers to electronic reporting. At this time, the rule is in Administration review. EPA has also initiated several electronic reporting activities with States and the regulated community, and has begun to receive official submissions of air emission and Toxics Release Inventory (TRI) data electronically.

Locational Data Improvement Project.—The Agency is continually improving the quality of locational data (latitude and longitude coordinates) of regulated entities stored in the Agency's Locational Reference Table (LRT). During 2000, approximately 100,000 new or improved locational data points were submitted to the LRT.

Facility Registry System (FRS).—FRS development was completed in fiscal year 2000. As of July 2001, FRS contains over 500,000 authoritative facility identification records. FRS is available by clicking on "facility information" under the "Queries, Maps and Reports" option located at www.epa.gov/enviro TRI.

Question. In fiscal year 2002, which 15 States will use the Central Data Exchange (CDX) infrastructure to provide data to EPA?

Answer. The original projection of 15 States has been exceeded in fiscal year 2001. Specifically, in fiscal year 2001, a total of 34 States are using CDX to report data to EPA, across the following program areas:

—Annual Air Emissions Inventory submissions under the Clean Air Act were received through CDX from 34 States, including: AL, AZ, CA, CO, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, MO, MS, NC, ND, NE, NH, NJ, NY, OH, OK, PA, RI, SC, TN, UT, VA, VT, WA, WY. We also received submissions from county air boards in states including: KY, NC, NE, NV, PA, TN, WA. Several other states, such as Hawaii have indicated they plan to use CDX before the end of this fiscal year.

—TRI Form R submissions under the Emergency Planning and Community Right to Know Act (EPCRA) were received from over 600 facilities in seven states: OH, IL, MI, TX, LA, CO, WA.

—For exchanging data with States under the National Pollution Discharge Elimination System (NPDES), established by the Clean Water Act, we are currently working with VA and plan to expand testing to NJ.

In fiscal year 2002, we plan to further expand CDX implementation as follows:

—to all states and counties submitting air emissions data to EPA;

—to all state and local drinking water authorities involved in reviewing data provided by laboratories under the Safe Drinking Water Act's Unregulated Contaminant Monitoring Rule (UCMR);

—to all facilities nation-wide required under EPCRA to report TRI data to the TRI program;

—complete testing with VA and NJ, expand to offer CDX to 5–10 states that submit to EPA's Permit Compliance System in support of the NPDES program; and

—CDX will also conduct testing with State programs involved in the exchange of data under the Resource Conservation and Recover Act (RCRA), and Water Quality Monitoring Data provided to EPA's STOrage and RETrieval System (STORET).

Question. How much of the $25 million for the National Environmental Information Exchange Network (NEIEN) will go to getting these 15 States on-line?

Answer. The original fiscal year 2001 projection of 15 States being on-line with the Central Data Exchange (CDX) has been increased to 34 States using CDX to report data to EPA across various program areas. The $25 million for the NEIEN Grant Program is proposed to have three broad components for which any of the 34 States would apply and potentially receive a portion of the funding. It is anticipated that the majority of the States will apply for Core Capacity Building Grants of which 45 percent to 50 percent of the total funding received will be dedicated to a competitive process.

Question. How much will it cost to get the remaining States to use the CDX/NEIEN system?

Answer. Although the Agency does not currently have estimates of the overall costs for States to participate in the Network, EPA and the States have several efforts underway that will provide information related to State costs. These efforts include: (1) a State Readiness Assessment, which is examining States' readiness to participate in the Network; (2) a State node pilot project, which is assessing what is involved in developing a State "node" or portal on the Network; and (3) a preliminary study of the costs and benefits of selected data flows through the Network. These efforts, taken together, will provide key information related to State costs.

Question. How much will the continued operation of the CDX/NEIEN annually cost EPA and the States?

Answer. Over the next several years, CDX will process an increasing volume of electronic reporting as well as assuming other data receipt processes (including paper, diskette, magnetic media and other forms of data submission). EPA's costs are expected to rise accordingly: $10 million in fiscal year 2002, $13 million in fiscal year 2003, and up to $21 million in fiscal year 2004.

We do not have projections regarding the costs states will incur to participate in the Network, but currently have several efforts underway that will assist in estimating State costs. State costs should decline compared to their present costs because the Network will feature electronic reporting to a single EPA portal.

Question. How will EPA collect information from non-CDX states?

Answer. EPA's long-term intention is to obtain all of its regulatory compliance data through CDX. CDX is being implemented on a program by program basis, with States joining when their systems allow. States which are not able to send data through CDX are using the same procedures in place prior to CDX implementation—they are submitting data to EPA's program legacy systems.

Question. How will the CDX system address data quality issues from the standpoint of data entry and the quality of the data put into whatever system is currently used?

Answer. The CDX process allows the Agency to address data quality in two ways:

(a.) Avoiding Data Entry Errors by:

—Establishing "intelligent" edit checks in our electronic forms at the point data is entered by users.

—Leveraging data already provided by the user to pre-populate forms, thereby reducing amount of re-keying.

—Introducing "error detection' measures into our data receipt and processing functions that automatically detect and send detected errors back to the submitter.

(b.) Enhancing Error Detection and Correction by:

—Providing viewing features' for States/industry to review and correct data in information systems before it is made available to the public. It is this last feature of CDX that helps address the inherent quality of the data being entered into State and EPA information systems.

Question. How is EPA integrating standardization and other information management improvements into the new CDX/NEIEN systems?

Answer. CDX uses data standards as one of the data receipt error checks when possible. In addition to flagging errors and returning them to the submitter for correction, CDX is providing the capability for submitters to review the data they have submitted to CDX before it is transferred to its legacy system and made available to the public. This allows the data submitter to verify the accuracy of data which passes automated edit checks. CDX also incorporates Agency data standards into all file submission specifications it releases to its user community.

Question. How is EPA moving from better collecting, processing and using currently required data to requiring and using only a smaller core of essential environmental information?

Answer. Although the Network does not directly address this issue, the use of standardized electronic formats should make it easier to identify duplicate submissions and other opportunities for streamlining. Through the More Efficient and Effective Reporting (MEER) Initiative, the Agency is exploring opportunities to streamline and consolidate environmental reporting requirements by both reducing the submission of similar data multiple times and consolidating related reports.

Question. Who is responsible for correcting errors identified in information contained in the CDX/NEIEN system?

Answer. Data errors in the content of the submitted data must be corrected by the submitter. Obvious errors (e.g., missing values) will be identified upon receipt in CDX and the submitter will be immediately notified. EPA believes that the CDX process will not introduce any additional errors. EPA will continue to facilitate the identification and correction of data errors through the error correction process that is a feature of our national data systems and many websites.

Question. How will the Agency integrate information collected through the CDX/NEIEN into programmatic or enforcement information systems or otherwise meet the requirements for which those systems were designed?

Answer. CDX receives data from its source submitter (State or regulated facility) and transmits these data to their programmatic or enforcement system in a format acceptable to the system.

Question. What is the status of the Agency's efforts to modernize its programmatic information systems?

The Agency is continuing its ongoing, significant efforts to develop, maintain, and enhance its programmatic information systems. As the systems' requirements evolve to reflect changing customer expectations and changes in programmatic emphases, the system managers plan incremental or more major modernization projects. For the first time ever at EPA, the system managers are now able to plan such projects in the context of an overall Agency Enterprise Architecture. Several of EPA's Program Offices (e.g., OW, OSWER, OECA) are undertaking architectural and information strategic planning exercises within their programmatic domains, in coordination with EPA's Enterprise Architecture program. These programmatic planning exercises will help establish the additional detail needed for efficient and effective modernization of programmatic information systems.

EPA annually oversees, and periodically evaluates, its major IT investments to determine whether the systems are delivering what was expected. This year's information technology Capital Planning and Investment Control (CPIC) process tracked 26 programmatic systems, in great detail. Each programmatic system investment proposal described the system's: (1) required management approvals; (2) conformance with data standards; (3) plans for ensuring data quality; (4) approach to data integration; (5) extent of architectural alignment; (6) commitment to security planning and controls; and, (7) consideration of deployment costs. The modernization work documented in each proposal clearly reflects the Agency's major information management priorities, and the investment proposals present a comprehensive annual status snapshot for the Agency's major systems.

Question. How is the modernization of the Agency's programmatic systems integrated with the NEIEN efforts?

Answer. An important element of the Agency's Reinventing Environmental Information effort was modernizing 13 major program systems. Beginning in fiscal year 2000, the modernization efforts were linked to the Agency's information integration efforts and, in turn, the NEIEN. EPA's Information Technology Management Reform Act (ITMRA) review process explicitly includes program consistency with the Agency's integration effort as important criteria for funding.

As a result of these efforts, EPA program offices are focusing on the Agency-wide integration efforts—for example, several program offices have redirected major data flows through the CDX, and a schedule for a series of these redirected data flows affecting all Agency program offices is being developed, collaboratively with OEI, the States, and the Program Offices. EPA Program and Regional Offices also are actively working on other integration efforts including implementing the approved data standards, using the Facility Registry System, and developing the NEIEN.

Question. Describe the role OEI is playing in agency information management resource decisions, including implementing cuts to program offices needed to develop the operating plan?

Answer. Under ITMRA of 1996 ("Clinger-Cohen Act"), EPA and other Federal agencies are given responsibility for overseeing the acquisition, use, and disposal of information technology (IT) in order to improve the productivity, efficiency, and effectiveness of Federal programs. These Congressional requirements have provided a valuable tool for OEI to ensure that EPA's IT investments are cost effective. OEI has been aggressively undertaking its Clinger-Cohen responsibilities, including those relating to the review of IT investments, and intends to continue to improve its IT investment management process and results.

With regard to implementing cuts to program offices needed to develop the Agency's operating plan, OEI performs an important role by issuing the Chief Information Officer's independent advice to the EPA Administrator. This letter, which is required by the Clinger-Cohen Act, provides the Administrator with information on what major investments/systems should be funded in the Agency's budget.

Question. What is the status of OEI strategic planning for EPA information management? Please provide the most recent materials in this area.

Answer. EPA has initiated a process to develop a strategic plan to manage the Agency's information resources (e.g., data, technology, people, policies, funding). As a preliminary first step, OEI is currently holding internal discussions with senior officials in its Regional and Program Offices to develop a vision and goals to guide EPA's management of information. Following an internal review of the vision and goals document (during the First Quarter fiscal year 2002), the Agency will meet with its State and tribal partners and stakeholders to solicit their input (Second Quarter fiscal year 2002). EPA then will develop an action plan to implement the vision and goals (Third Quarter fiscal year 2002). At this point, a strategic information plan has not yet been developed. When the Agency produces such materials, we would be happy to share them with you.

TRI

Question. To what degree has EPA increased the number of TRI chemical forms submitted in digital format?

Answer. The proportion of chemical submissions received electronically (diskette or web-based electronic reporting) has risen from about 60 percent of Reporting Year 1994 submissions (received in 1995) to 83 percent of Reporting Year 1999 submissions (received in 2000). (Each Form R is used to report one chemical. Since 1998, a Form A—used to certify that a facility is not subject to Form R reporting for a specific toxic chemical—may be used to report multiple chemicals. Thus, each chemical listed on a Form A counts as an individual chemical submission.

Since 1987, EPA has offered an electronic means of reporting TRI submissions. The Automated TRI Reporting Software (ATRS) provides a means of completing a Form R and/or Form A electronically, with field and batch level validation checks. A reporting facility can submit via a diskette to both EPA and more than 40 states. Beginning last reporting year (Reporting Year 1999), the TRI program co-sponsored a web-based electronic reporting pilot with EPA's Office of Information Collection. The pilot provided the TRI reporting community with the option to complete their Form R and/or Form A submission(s) with the ATRS software, and then transmit their submission(s) via the internet. About 90 facilities participated, reporting more than 600 chemicals.

For Reporting Year 2000, EPA continues to encourage electronic reporting with two new options. The first is the Toxics Release Inventory-Made Easy Software (TRI–ME). TRI–ME is an interactive, intelligent, user-friendly software tool that guides facilities through the TRI reporting experience. Like ATRS, TRI–ME submissions can be sent to EPA on diskettes. The second is an expanded version of the web-based reporting pilot from last year; several thousand facilities have been invited to participate in web-based reporting this year, using either ATRS or TRI–ME. Additionally, some facilities that participated in last year's web-based electronic reporting pilot were given the option to digitally sign their submission(s) to EPA. This eliminates the need to separately mail a diskette and a signed certification statement to EPA.

The TRI Program plans to continue to expand and enhance electronic reporting to reduce facility's reporting burden, improve data quality, and speed publication of the TRI data.

Question. How does the technical information contained in the TRI database provide local families and communities with the actual risk they may face to their health?

Answer. TRI data, together with other data, can provide a valuable starting point in evaluating risk. However, the information contained in the TRI database alone is not sufficient to determine potential adverse effects on human health and the environment. The determination of potential risk depends upon many factors, including the toxicity of the chemical, the fate of the chemical after it is released, the locality of the release, and the populations that are exposed to the chemical after its release. Information on releases and other waste management activities of toxic chemicals from the TRI database is an important resource for determining the potential chemical exposure; as it provides local communities with information on the quantities released to the various environmental media in their communities.

Question. Does the TRI database provide local communities with a determination of whether it is safe to live in their communities?

Answer. The TRI database alone does not provide local communities with a determination of whether it is safe to live in their communities. TRI data, in conjunction with other information, can be used as a starting point in evaluating exposures that may result from releases and other waste management activities of toxic chemicals. The determination of potential risk depends upon many factors, including the toxicity of the chemical, the fate of the chemical after it is released, the locality of the release, and the populations that are exposed to the chemical after its release. As you may be aware, EPCRA section 313(h) states that the purpose of the information collected is to ". . . provide information to the Federal, State, and local governments and the public, including citizens of communities surrounding covered facilities" and ". . . to inform persons about releases of toxic chemicals to the environment; to assist government agencies, researchers, and other persons in the conduct of research and data gathering, to aid in the development of appropriate regulations, guidelines, and standards; and for other similar purposes."

Question. Does the TRI database provide local communities with a description of the degree to which their health is hurt by living in their communities?

Answer. TRI reports reflect releases and other waste management activities of chemicals, not exposures of the public to those chemicals. TRI data, in conjunction with other information, can be used as a starting point in evaluating health impacts associated with local conditions.

Question. Does the TRI database provide local communities with a description of the degree to which their health is affected by local industry use of chemicals which are not released into the surrounding community ?

Answer. TRI reports reflect releases and other waste management activities of chemicals, not exposures of the public to those chemicals. The use of chemicals by a facility determines whether the facility must report. Facilities in the specified industries that have the equivalent of 10 or more full-time employees and meet established thresholds for manufacturing, processing, or otherwise use of listed chemicals must report their releases and other waste management quantities (including quantities transferred off-site for further waste management).

Question. How is EPA determining whether noncompliance with TRI provisions may be a widespread unawareness or misunderstanding of the requirements before taking enforcement action?

Answer. EPA looks at several factors when examining noncompliance with TRI provisions before taking an enforcement action:

1. Fair notice given to the regulated community: the amount and types of EPA outreach and compliance assistance including printed material distributed to regulated entities, free workshops provided by EPA Regional Offices, guidance documents on the EPA website, including questions and answers on specific chemicals required to be reported.

2. The clarity of the instructions in the TRI reporting forms: EPA guidance as to what is required to be reported and how to calculate emissions for the TRI reporting.

3. The commencement date of the reporting requirements: chemicals which were required to be reported for many years are more likely to trigger an enforcement response than chemicals that have recently been added to the TRI.

4. The magnitude of the violations: EPA considers the amount and types of toxic chemicals that have not been reported to the TRI when considering an enforcement response.

5. The possible reasons for noncompliance: EPA examines the noncompliance rates for various chemicals and tries to determine the underlying reasons for high non-compliance rates.

6. The use of EPA compliance incentive policies to encourage companies to examine their compliance. Two such policies, "Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations" (Audit Policy), and "Policy on Compliance Incentives for Small Businesses" (Small Business Policy), provide incentives to conduct environmental audits by substantially reducing or eliminating penalties for entities that voluntarily discover, disclose, expeditiously correct and prevent violations of federal law.

Question. What is the status of EPA's incorporation of the recent National Mining Association (NMA) v. EPA decision into its reporting obligations for the mining industry?

Answer. EPA posted on its website a summary of the decision and a copy of the response letter sent to counsel for NMA, explaining the Agency's position on the extent and effect of the Court's Order. In a June 14, 2001 letter, and a June 28, 2001 letter to counsel for NMA, EPA explained that mining facilities currently have a statutory obligation to determine whether they exceed reporting thresholds, in compliance with the requirements of EPCRA section 313 and consistent with the court's decision.

As a consequence of the NMA decision, the Agency is considering a rulemaking to clarify the status of mining extraction and beneficiation activities.

Question. How will the reporting requirements for 2000 include the court's ruling that mining extraction and benefication are not "processed" under EPCRA?

Answer. The Court in NMA ruled only on a very narrow issue-specifically, the Court overturned the interpretation adopted in the 1997 rule, that the extraction and beneficiation of naturally-occurring, undisturbed ores is "processing," on the grounds that these ores had not been "manufactured" within the meaning of EPCRA section 313. As a result of this decision, EPA is not requiring mining facilities to report based on the interpretation adopted in the 1997 rule.

Mining facilities currently have a statutory obligation to determine whether they exceed reporting thresholds, in compliance with the requirements of EPCRA section 313 and consistent with the court's decision.

Question. Will EPA require industry to include, in their calculations of the amount of toxic chemical that are processed or manufactured at mining facilities, toxic chemicals that are present in ores during extraction and beneficiation?

Answer. Mining facilities currently have a statutory obligation to determine whether they exceed reporting thresholds, in compliance with the requirements of EPCRA section 313 and consistent with the court's decision. In addition, under current requirements, if a facility exceeds a threshold for a chemical at that facility, it must report on all non-exempt releases of the chemical that occur at the facility. This requirement was not addressed by the Court's decision in NMA. Further, the Court explicitly declined to reach the question of whether manufacturing that occurs during the course of extraction and beneficiation is an EPCRA section 313 threshold activity. As a consequence of the NMA decision, the Agency is considering a rulemaking to clarify the status of mining extraction and beneficiation activities.

HWIR RULEMAKING

Question. What is the status of EPA efforts to identify additional targeted exemptions to the Hazardous Waste Identification Rule (HWIR)?

Answer. EPA is currently developing two proposed rules that are related to targeted exemptions to the definition of hazardous waste. Both proposals are expected to be signed within the next year.

The first proposal is an expansion of the current "headworks" exemption for solvents destined for wastewater treatment. It will address: (1) possibly exempting the four solvents (benzene, 2-ethoxyethanol, 2-nitropropane, and 1,1,2-trichloroethane) that were added to the solvents listing in 1986, but not added to the exemption, and (2) possibly allowing the alternative of direct monitoring to demonstrate compliance with the exemption (as opposed to requiring a mass balance be performed).

The second proposal is a new conditional exemption for certain slagged combustion wastes. Wastes that have been slagged to liquefaction (typically at temperatures above 2100° F) are presumed to have all hazardous organic chemicals eliminated. The proposal will address the presence of metals in such wastes.

In addition, we have also started work on scoping analyses for four possible additional exemptions, using readily available data: (1) biological treatment residues exemption, (2) scrubber water combustion residue exemption, (3) exemption for leachate managed in a wastewater treatment unit, and (4) expanding the current de minimis exemption. Depending on what our preliminary analyses reveal, and on available resources, we may develop additional proposals in the 2002/2003 time frame.

Question. How will the Agency proceed, including working with stakeholders, in the exploration and development of additional Hazardous Waste Identification Rule (HWIR) exemptions?

Answer. EPA has met several times with industry representatives to better understand their perspective on the burdens imposed by hazardous waste identification and how best to address that burden, and we will continue this dialogue. We have invited states to participate in our rulemaking workgroup discussions, and plan to continue working closely with states to address implementation issues. We have also notified waste management industry and environmental groups about our rulemakings, and will encourage broader participation by these groups as the proposals progress.

SNAP RULE

Question. What is the status of EPA's proposed rule to further restrict the use of hydrofluorocarbons in the manufacture of foam products? When will EPA finalize this rule?

Answer. The July 2000 proposed rule generated a broad range of comments and viewpoints on the feasibility of EPA's proposed restrictions and on the availability of non-ozone depleting alternatives for the various end-uses within the foam industry. To reliably assess the factual basis of these comments, the Agency commissioned an extensive analysis of the foams industry and the technical and economic constraints faced by the various components of the industry, including chemical and equipment manufacturers, chemical formulators, and foam manufacturers and applicators. EPA also met with various industry representatives and received additional technical information to fill other information gaps identified in the original comments.

In May 2001, EPA published a Notice of Data Availability in the Federal Register (66 FR 28408) to provide the public with an opportunity to review all of the additional information collected by the Agency since the end of the comment period. Comments on this additional information are now being reviewed and the Agency hopes to issue a final rulemaking by the end of this year that will take account of all comments and information received since the proposal.

Question. How could EPA split the rule to move forward with the original purpose of the rule to regulate HCFCs without accelerating the existing phase-out schedule of current substitutes?

Answer. The purpose of the proposed rule is to implement Section 612 of the Clean Air Act and facilitate the transition away from ozone-depleting chemicals in instances where safe and effective alternatives are available.

In developing the final rule, the Agency will consider, based on comments received and available information, whether the proposed restrictions on HCFC use in the various foam end-uses are appropriate. The final rulemaking may be divided into two or more components in the event that some portions of the rule requires additional data generation.

EPA is reviewing the data collected to determine if there is sufficient information to issue a final rulemaking that will adequately address the range of issues confronting the industry. EPA has, and will continue to, investigate the best way to implement its statutory authority while providing clear and equitable direction to the affected industry.

WORKFORCE DEVELOPMENT

Question. How will EPA ensure that it has the right mix of skills, experience, talent and motivation in its workforce that it will need as it moves away from its traditional federal command, control, and enforcement approach to a more cooperative relationship with states and others?

Answer. EPA's efforts to meet what has been called the "Federal human resources crisis" has led to the development of Investing in Our People, EPA's Strategy for Human Capital 2001 through 2003. This strategy represents a comprehensive approach to the effective management of the Agency's human resources, with programs in areas ranging from family-friendly initiatives, developmental activities, and empowering human resources information systems. Part of the strategy is EPA's Workforce Assessment Project (WAP) which serves as a foundation for the Agency's workforce planning efforts. The WAP identifies the critical cross-cutting competencies that all employees need today and out to the year 2020 and serves as the first step for improving the effectiveness of its workforce and finding the best way to achieve the President's desire to "make Government more responsive to the needs of citizens, more efficient, and more accountable."

EPA offices already employ a number of methods to develop the skills its workforce needs. These include: mentoring programs; rotational assignments or "job swap" programs that often include cross-media training and experience; Individual Development Plans; and hiring through the Student Career Experience Program, and the EPA Intern Program. Finally, many offices use Intergovernmental Personnel Act (IPA) assignments that enable EPA employees to gain skills by serving in state or local governments or universities, as well as enable the Agency to acquire critical skills by bringing in external expertise for a specified period.

Workforce planning is a fundamental strategy to improve EPA's human capital. We are currently working with the Administration, particularly the Office of Management and Budget, to assess EPA's workforce, and restructure as appropriate. We will give full attention to these issues in the fiscal year 2003 President's Budget.

Question. How will EPA address the potential impending retirement of a significant percentage of its SES workforce?

Answer. EPA is concerned about the large number of senior leaders who are eligible to retire over the next several years. To prepare for this potential turnover, EPA has designed and is about to implement, a Senior Executive Service Candidate Development Program (SES CDP). This program will provide the process and structure for EPA to select a number of high potential GS–14 & 15 employees and provide them a series of developmental experiences that will help them build their skills and competencies in the core executive qualifications required of senior leaders.

This program has been approved by the Office of Personnel Management (OPM) and EPA anticipates selecting approximately 50 candidates in January 2002. Candidates will go through a developmental process that will last up to 18 months. Those who successfully complete their development will be recommended by EPA's Executive Review Board to the OPM's Qualifications Review Board for certification for non-competitive appointment into SES positions. This program will provide a well-qualified and motivated pool of senior leaders who can replace those who will be retiring over the next several years.

Question. How will EPA establish a sound credible employee development program for all sectors of the Agency's workforce? How will you measure improved productivity or other results from these programs?

Answer. In 1997, EPA initiated the Workforce Development Strategy (WDS). This strategy provides a comprehensive approach to help all Agency employees develop the skills and competencies required to achieve EPA's mission. The WDS has several components: (1) Workforce Assessment (completed in 1999) to identify the critical cross-cutting competencies that all employees need today and out to the year 2020; (2) Workforce Planning Initiative (just beginning) to develop a standardized methodology that will provide a basis for strategic recruitment, retention and development; (3) EPA Intern Program (operational) is a comprehensive, entry level, permanent employment and career development program designed to recruit and nurture the next generation of EPA leaders; (4) New Skills/New Options (being implemented this fall) is designed to help employees in administrative job series learn the skills and develop the competencies necessary to improve their performance and link them to the mission of their organizations; (5) Mid-Level Development Program (in implementation stage now) provides a curriculum addressing the cross-cutting skill sets that virtually all employees need to be effective; (6) Management Development Program (some components are implemented, others coming on-line over the next several months) focuses on creating leadership excellence at all levels of management through tailored training programs, support tools and 360 degree feedback; (7) SES Candidate Development Program (described in response to preceding question); and (8) Organizational Leadership Enterprise (being implemented in several organizations) provides an integrated leadership approach that improves overall organizational performance.

Some metrics for determining the success of the WDS include employee turnover rates, job satisfaction, promotions/job progression, number of employee complaints regarding managerial performance, customer satisfaction rates, length of time it takes to fill positions (particularly in the SES), popularity of training programs/developmental tools, ability to attract high-performing employees, and employee performance measures. All of these indicators tend to measure the relative "health" of the organization as an employer. We are also embarking on a project to determine success measures that relate more directly to mission outcomes and results. The results of this effort are some months away.

Workforce planning is a fundamental strategy to improve EPA's human capital. We are currently working with the Administration, particularly the Office of Management and Budget, to assess EPA's workforce, and restructure as appropriate. We will give full attention to these issues in the fiscal year 2003 President's Budget.

SUBCOMMITTEE RECESS

Senator MIKULSKI. And having said that, this subcommittee is recessed until tomorrow at 2 p.m. when we will take testimony from the Secretary of HUD.

[Whereupon, at 12:23 p.m., Wednesday, June 13, the subcommittee was recessed, to reconvene at 2 p.m., Thursday, June 14.]

DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2002

THURSDAY, JUNE 14, 2001

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:49 p.m., in room SD–138, Dirksen Senate Office Building, Hon. Barbara A. Mikulski (chairman) presiding.

Present: Senators Mikulski, Kohl, Bond, and Shelby.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

STATEMENT OF MEL MARTINEZ, SECRETARY

ACCOMPANIED BY:

DANIEL MURPHY, CHIEF OF STAFF

ROBERT WOODSON, DEPUTY TO THE CHIEF OF STAFF FOR POLICY AND PROGRAMS

RICHARD HAUSER, GENERAL COUNSEL

DAVE GIBBONS, DEPUTY CHIEF FINANCIAL OFFICER FOR BUDGET

PEGGY YOUNG, SENIOR ADVISOR TO THE CHIEF FINANCIAL OFFICER

OSCAR ANDERSON, SPECIAL ASSISTANT TO THE SECRETARY FOR LEGISLATION

CHRISTOPHER BOESEN, SPECIAL ASSISTANT, OFFICE OF LEGISLATION

NANCY SEGERDAHL, PRESS SECRETARY/SENIOR COMMUNICATIONS ADVISORS TO THE SECRETARY

JOHN WEICHER, ASSISTANT SECRETARY FOR HOUSING FEDERAL HOUSING COMMISSIONER

SEAN CASSIDY, GENERAL DEPUTY ASSISTANT SECRETARY, OFFICE OF HOUSING

MICHAEL MORAN, ASSISTANT GENERAL COUNSEL

JEFFREY LUBELL, DIRECTOR, POLICY DEVELOPMENT DIVISION, OFFICE OF POLICY DEVELOPMENT AND RESEARCH

OPENING STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. The VA/HUD subcommittee of appropriations will come to order. This afternoon we will be taking the testimony of our new cabinet officer, Secretary Mel Martinez of Housing and Urban Development.

First of all, this committee would like to apologize to the Secretary. We know that our hearing was supposed to start at 2:00 p.m., but because of a parliamentary thicket that has developed on the Senate floor, we are much delayed. The committee apologizes to you. It is not our usual and customary practice certainly to keep a cabinet-level officer waiting. And should there be votes and someone, and we have to temporarily recess. We invite you to use the facilities of our offices and phone calls or any other conveniences you might do.

Mr. MARTINEZ. Thank you.

Senator MIKULSKI. So Mr. Secretary, we feel embarrassed about this situation, but we welcome you most warmly. You have one of the most difficult jobs in government, providing housing assistance, trying to rebuild the neighborhoods, helping the elderly, the disabled, the homeless and all at the same time being fiscally responsible. We would like to—I would like to personally thank you for the way that we have begun with various issues that have come to our attention. We have found you most responsive and indeed quite collegial and we look forward to such a cordial relationship.

Since our first conversation the gavel has changed. But I want you to know that Senator Bond and I share many of the same values and goals when it comes to housing. And in fact probably in this committee it has been characterized by bi-partisanship. But certainly, particularly those areas on housing, we are very much in alignment. His goals—Senator Bond's goals—on affordable housing, helping neighborhoods and proper fiscal management are my own.

But as we begin our hearing I think with the new cabinet officer, I think this is the time to take stock, to look at HUD's core programs, and to make HUD a true partner with local government. I know you share my vision and I look forward to working with you.

As I look at the President's budget I see areas of common ground and areas of concern. In the area of faith-based initiatives, know that I have always been consistently supportive of faith-based initiatives. In our very first meeting you shared with me your own personal story about the role that Catholic Charities played in your life. I noted that I had been a Catholic Charities social worker. I guess in some ways I still am on this committee.

We want to be able to listen to the President's initiative; to really be able to flesh it out because in housing and urban development we have already had faith-based initiatives. Much of the housing for the elderly—my hometown of Baltimore is organized by the associated Jewish and Catholic charities, etc. The work of the homeless in particular has, I think, been a signature issue for faith-based activity. So we look forward to that.

So we want to hear more about it and we want to know how we can work with the administration. We will be insistent, though, that any new program be constitutionally compliant. And I know you as both a lawyer and a citizen would want the same.

Looking at Section 8—boy, is this a big issue for us to work on. Renewing Section 8 contracts continues to be our number one priority. Working families depend on this in the way of absolutely moving people from welfare to work, and to make sure that housing subsidies are not meant to be a way of life but to be a way to a better life.

So we want to hear several things: One, how you want to use Section 8. The issue of returned Section 8 vouchers. And number three how also that the Section 8 database is more reliable and consistent.

Another area, which we have already worked on, is predatory lending. We continue to be plagued by something called flipping or predatory lending. This is where through unscrupulous investors the poor are gouged, the taxpayer and FHA is defrauded, dreams are broken and opportunities are lost. I mean, really, we are dealing with scum; white collar crooks at the worst. And we want to continue our course on predatory lending. We want to thank you for the—Ms. Maggiano who you have assigned to work with predatory lending. We think in Baltimore we can be the laboratory for coming to a national solution.

But often what happens is that there are defaults when FHA housing, either through predatory lending or because of poor counseling for first-time homeowners. And then neighborhoods are left with something called HUD houses. And instead of being a great name, instead of it being something that everybody would want to buy, it becomes a vacant house that is often the very reason that neighborhoods deteriorate and destabilize. So we want to stop not only the predators. Also make sure that when people come into homeownership, they are ready for it. But also what are we going to do with those FHA houses?

We also want to talk about public housing. We are disappointed at the administration's decision to cut $700 million from the Public Housing Capital Fund. We want to talk about repair and maintenance and also about new construction. In the area of construction we are concerned that there has not been a lot of production. And Senator Bond feels very passionately about it, so do I and so does Senator Sarbanes.

I am going to leave in the interest of time him to elaborate on his own views on the topic, but know that they are really parallel views. And I hope we can work with Senator Bond, Senator Sarbanes, Senator Gramm, of course, but we three are the ones that really have a great passion on this area.

In the area of elderly housing, we know that we have to look at new ways to meet the aging population. We note that it is only a $6 million increase in elderly housing and we would like to know how you are going to meet the increased demand on this.

In the area of the digital divide, we note with enthusiasm your desire to create seven hundred computer learning centers. We really believe that these could be tools. E-villages in communities now riddled with despair could really be workforce readiness for adults in getting their kids ready for the future.

Also, one of the other areas that I want to discuss is the FHA multi-family loan limits. One possible way to create more housing is to raise the loan limits for FHA multi-family loans. I noted it in your testimony. People from the home builders and the mortgage bankers have already discussed this with me. So we are interested in what you think would be a prudent way to do this. But I recall that in 1986 when we passed yet another tax bill, they cautioned us that the change in the tax rules, and now the FHA limits that have not been raised in a number of years really has had a chilling effect in the creation of new multi-family private sector dwellings. And we would like to know your views on this.

So we have a lot to talk about, which is essentially though, how we can empower poor people that the subsidies we provide today are a way to a better life; a way to a life of self-sufficiency and economic empowerment. And with that I am going to conclude my statement and turn to Senator Bond.

STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Thank you very much Madame Chair. With the usual timing, the Senate apparently is going into a vote now, which goes——

Senator MIKULSKI. Let's see. Let's just see.

Senator BOND [continuing]. Which goes to prove my basic belief that Murphy's Law was unduly optimistic when it comes to scheduling the Senate. But I thank you Madame Chair and I join you in welcoming and apologizing to HUD Secretary Martinez to testify on HUD's budget for fiscal year 2002.

Senator MIKULSKI. Senator Bond, I am going to excuse myself and ask you to come in to captain the ship. That way I can run and vote and come back. Other members that are here will kind of be able to get this train rolling.

Senator BOND. I would be honored to do so. I like to keep in practice.

Senator MIKULSKI. He can have the microphone, but hide this.

Senator BOND. I am not going to touch it. I am not going to touch it. Thank you Madame Chair. As I started to say, I know this will be a very difficult year for the Department, but we really are gratified by your presence, Mel, as Secretary and what Chairman Mikulski has said. And I certainly echo that we are most impressed and gratified by your commitment to reforming and rebuilding HUD. Nevertheless—and this is where the 'however' comment comes in—we are deeply concerned. I am concerned that HUD's budget request of $30.4 billion may actually be a reduction from the fiscal year 2001 funding, and this budget reverses the progress made in the last several years by Congress on a strongly bi-partisan basis and ignores a number of priorities related to pressing housing and community development needs.

I do not place the administration's budget decisions on your doorstep—the ones to which I most strongly object. I know the delay and the transition and the fact that you did not have your people in place nor did you have, what I would think would be a reasonable time to review it. But clearly this is an OMB budget. Much of the work product was done by the professional staff who, from my perspective, may have overstayed their welcome. I urge you to take charge of the HUD budget process away from those who seem to have dismissed many of the congressional initiatives on which we had agreed. I will submit a more complete statement of my concerns for the record and we will go into them in questions.

Senator BOND. First I am concerned over a number of proposed budget cuts in public housing which include reductions of some $700 million from the Public Housing Capital Fund, as well as a complete elimination of the Public Housing Drug Elimination Program, which is funded at $309 million in fiscal year 2001. We made considerable progress over the last several years in meeting the long-term capital needs of public housing, and I have heard from the public housing community that a drastic cut of this nature may interfere with financing and other plans—long-standing plans, which they had. I am also pleased that we have been able to make progress in addressing crime and drug abuse in public housing and I hate to see us give up that effort.

Further I am concerned over the elimination of the Rural Housing and Economic Development Program—a very modest program that made a big difference in leveraging new funds for many distressed rural areas; something that Senator Harkin and I have worked on and we see a great need in rural America.

In addition, the HUD budget for fiscal year 2002 proposes to set aside a $200 million, taking it out of the HOME program for down payment assistance. This takes away from the flexibility of local governments to make the determination of about how to assure an adequate supply of housing stock. Homeownership is an important goal, but limiting State and local decision making in the HOME program makes no sense, especially since downpayment assistance is already an eligible activity.

Finally, program accountability and oversight are critical to the successful rebirth of the Department and there needs to be a re-emphasis on these requirements. As one example, the funding of empowerment zones in the HUD budget causes me real concern in view of recent HUD IG Reports suggesting the misuse of funds as well as, a lack of HUD oversight. However, the issue that needs to be addressed most urgently in this hearing, one that the Chair has already pointed out, is the Section 8 program.

I am a strong supporter of Section 8 project-based housing because it guarantees housing for low-income families in many tight housing market places where vouchers simply do not work. For example you can give somebody on a walker or maybe a wheelchair or crutches a voucher and tell them to go out and look. But if there are no places to go, that elderly person, that disabled person, is not going to be able to walk that far. And this is not only a problem for elderly and disabled persons, if there is no available affordable, low-income housing, then low-income families will be left homeless or in substandard housing. I remain very concerned that HUD still does not do enough to preserve Section 8 project-based housing as low-income housing when the Section 8 contracts expire. It is particularly troubling when we continue to lose housing for elderly and disabled Americans despite requirements in the fiscal year 2001 Act that HUD make every attempt to preserve this housing as low-income housing.

I also understand that the House is seeking to rescind some 114-plus million dollars in Section 8 assistance for fiscal year 2001 despite the fact that HUD must still meet rescission requirements of 1.8 billion from the enactment last year of the 2001 appropriations. While HUD has been the bank over the last few years for upwards of some $10 billion as offsets to fund any number of other administration and congressional priorities, the simple fact of the matter is that well may have run dry.

We need to ensure that families with Section 8 vouchers will be able to use these vouchers to obtain housing and that expiring Section 8 project-based contracts will be renewed. In other words, we should not be playing fast and loose through some shell game where HUD or OMB hold back critically needed housing funds to allow rescissions to pay for other activities at the expense of a poor family without housing. That is not acceptable. This contravenes the clear intent of Congress and is poor policy under any circumstances.

Finally, as you may know, and as I think actually we may have discussed, and certainly the Chair mentioned it, last year we introduced the Housing Needs Act of 2000 to provide block grant funding to develop assisted housing for extremely low-income families as a part of mixed-income housing. We are going to be working on introducing similar legislation because the housing needs of extremely low-income families remain a critical need. I believe I shared with you that fact that in St. Louis County, Missouri when the public housing authorities issues housing vouchers, for every hundred they issue they know they are going to get fifty back because there no available low-income housing. The housing voucher does not do much to keep off the rain if there is no wood or bricks or mortar for families to apply it to. This is going to be an important debate. We look forward to working with you, discussing this problem and having your guidance and leadership in crafting responsive legislation.

My concerns today are really about the failure of this OMB budget proposal to meet the housing needs of this Nation as well as an indictment of the last Secretary and his failure to put HUD on a firm footing to meet the housing needs of low and moderate-income families as well as the redevelopment and development needs of States and localities. HUD must seize the mantle of leadership in providing housing for American families and for developing and redeveloping our communities. Mr. Secretary I look forward to working with you on rebuilding and reforming HUD. It is a huge challenge but an important challenge. And speaking of leadership, I see now that the mantel of leadership is about to pass to the distinguished Senator from Wisconsin. It is my pleasure to turn the hearing over to you, Senator.

STATEMENT OF SENATOR HERB KOHL

Senator KOHL. Thank you, I will have a brief statement. Senator Bond, I want to thank you and Senator Mikulski for convening this hearing. I want to welcome Secretary Martinez. I very much look forward to working with you. As a new member of this subcommittee, this is the first time I have had the opportunity to review the HUD budget in great detail. I have been fortunate to have much input from the people of Wisconsin. So let me say there was much disappointment in two areas and others which I will address later, the reduction in capital funds and decision to terminate the Drug Elimination Grant Program.

I have heard from public housing authorities in Wisconsin who are deeply concerned about the proposal to cut $700 million in the Public Housing Capital Fund. In Milwaukee alone, there is a backlog of $100 million of capital needs. Although the administration has said there is unspent money in the Capital Funds pipelines, these funds have been obligated and public housing authorities expect to spend them as planned. The vast majority of Wisconsin housing authorities have spent their funds now in a timely fashion.

Capital funds address critical needs such as fire protection systems in high-rises, replacements of roofs and new heating systems. We cannot allow these basic improvements to our public housing stock to be delayed because of a misunderstanding about how much capital is truly available. I hope the subcommittee will investigate this issue thoroughly and ensure there are sufficient funds to meet the basic needs of public housing residents.

The Administration's proposal to terminate the Drug Elimination Grant Program is surprising. This program has been hailed for its successes and has been credited with helping to reduce crime in public housing developments across the Nation. In Wisconsin the Milwaukee Housing Authority has used its grant to fund public safety programs and activities for children and youth, including education programs. The results speak for themselves. In the year 2000, violent crimes in that area dropped by 43 percent and non-violent crimes dropped by 36 percent. Madison has had similar successes. East Madison's communities centers' Positive Options Program, which is funded by a Drug Elimination Grant, won an award from the State of Wisconsin for being an outstanding and effective service. Just as the program is being hailed, its funding is now threatened.

Frankly the argument that HUD should not be in the law enforcement business does not carry much water with me. If this program ensures that our public housing is safer and more secure then it is a program which is helping us meet the program needs in our community, which is after all a core mission of HUD.

I thank you very much.

Senator BOND. Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you. Secretary, as you well know we are voting and we will probably continue to vote. If Senator Kohl has not voted he will vote on this.

Secretary, the FHA multi-family credit subsidy, which you are very familiar with, is an important program that helps address some needs, the housing needs of thousands and thousands of American families. It seems that this program consistently encounters funding shortfalls. I believe that the Administration's decision to include 40 million in the supplemental appropriations bill is a sound one that will provide clear benefits. I guess what I am getting at is, in the short term, how far do you believe these funds will go to help to deal with the shortage of affordable housing in America? Do you believe additional funds will be needed to get us through this fiscal year 2001?

Mr. MARTINEZ. Senator, let me just say that I had a prepared statement which will be offered for the record, and I will spare you going through anymore prepared remarks and just try to deal with your questions and the obvious issues that have arisen in the statements from the Senators.

The credit subsidy program is that recurrently seems to have shortfalls in funding. HUD began the fiscal year prior to my Administration with a $12.5 million deficit in that program. So with the appropriated funds for this current year, there was already a $12.5 million catch-up. So it is no surprise that along with that and basically a demand-driven program that it has run out of money again. Three or four times in the last 6 years this occurred.

The $40 million is an amount equal to the sum, which was put into the budget as an emergency appropriation, or to be available as an emergency. We did not think it was appropriate to declare an emergency when if fact what we have is a need program, but not an actual housing emergency as such. I would liken that to events like we might have had in Oakland and San Francisco after the earthquake a few years ago, or maybe a hurricane or some other natural disaster, which would trigger an emergency. But the fact is the grant subsidy program does serve a portion of the market of 80–100 percent of median income, which is, you know, in many respects affordable housing.

Senator SHELBY. In a way it creates a dynamic for others, doesn't it?

Mr. MARTINEZ. Correct. So it is a good thing. What we are proposing is that in addition to the $40 million subsidy, which we know is not enough to cover the demand, is that we do something that is going to put this program on a stable footing for years to come——

Senator SHELBY. The future.

Mr. MARTINEZ.—which is raise the premium of the FHA premium to 80 basis points which will give us an opportunity to fund all that is in the pipeline—certainly in the pipeline the 40 million will do. But all that is going to be in the demand driven pipeline for this year and then it also allows to put it on a solid footing for years to come. So that, I think there is some benefit in the predictability that the marketplace will have.

Senator SHELBY. Don't builders need predictability?

Mr. MARTINEZ. I think they do. And I think it is something that is helpful——

Senator SHELBY. You cross that fine line.

Mr. MARTINEZ.—-that you also need to be able to make the deal when they put the deal together. And when the program all of a sudden runs out of money, well, that creates tremendous disruption. So I believe that it is a healthy thing to put it on a pay-as-you-go basis. The 80 basis points that it will have, you know, an increase——

Senator SHELBY. How much money will that bring in? Do you have some numbers on that? Are you scoring that?

Mr. MARTINEZ. I do not have that.

Senator SHELBY. Could you do it for the record?

Mr. MARTINEZ. I am told it would be the equivalent of another $40 million, so that would be probably an $80 million infusion into the program which——

Senator SHELBY. Which will probably be good.

Mr. MARTINEZ. It would be very good. It is almost as much as——

Senator SHELBY. You are the Secretary. You have got a background on all this. You know how this works.

Mr. MARTINEZ. Yes, sir. It would be almost as much as was initially appropriated for the whole year. So we are talking about $80 million just to complete this year.

Senator SHELBY. Correct me if I am wrong on this. Was last year's $40 million set-aside in last year's appropriation, has that money been spent? Has it been released?

Mr. MARTINEZ. No.

Senator SHELBY. You are saying no.

Mr. MARTINEZ. No.

Senator SHELBY. What about that money? Couldn't you use that money in some way?

Mr. MARTINEZ. It would call upon me to ask the President that we had a housing emergency which I, in good conscience, do not know that we have.

Senator SHELBY. So I had to show you had one.

Mr. MARTINEZ. Right.

Senator SHELBY. Could you have one in this area of low-income and maybe not over the whole housing market?

Mr. MARTINEZ. I think we have housing needs. We have housing demand. We have housing goals and hopes. But I think that what happened to the people of El Salvador, who lost 20 percent of their housing in the country because of an earthquake is an emergency.

Senator SHELBY. Real or immediate?

Mr. MARTINEZ. An immediate, urgent emergency is not what I see. But the raising of a premium in addition to the $40 million I think gets us where we want to go. It is something that some of the industry finds onerous because it is an increase in their cost. But the fact of the matter is that is going to be predictable and is going to be stable. And for years to come, I think, it is going to provide a program that the builders out there can count on.

Senator SHELBY. The builders need predictability for the future.

Mr. MARTINEZ. And to get financing, to put deals together. Now one other thing we will do is—if upon review of the premium's charge, we find that what we are charging is more than should be charged—we would be inclined to reduce that premium based on the experience. This would be a business proposition. It would be a pay-as-you-go. We look at the premium charge and if it was too much, we would reduce it.

Senator SHELBY. Thank you. Madam Chairman, thank you.

Senator MIKULSKI. You are more than welcome and I understand you have also had a chance to speak and ask questions. Senator Kohl, you as well?

Senator SHELBY. Madam Chairman, excuse me if you would. I have asked that my opening statement be made part of the record.

Senator MIKULSKI. Absolutely. Without objection, so ordered, yes. Senator Kohl, have you spoken?

Senator KOHL. I have made an opening statement and asked some questions.

Senator MIKULSKI. Good and we are going to move on now. We have really kept our Secretary waiting. Why don't you go ahead and start on your opening statement and Senator Bond will join us and we all have had a chance to read your statement but we——

Mr. MARTINEZ. I will try to summarize.

Senator MIKULSKI. But we want you to have the—but you take whatever time. You do it whatever way you want. We really are apologetic for this afternoon.

Mr. MARTINEZ. Madam Chair, you are very kind and I am delighted to be before you. I noticed that swing of the gavel since I began my tenure as Secretary. But let me tell you that I value bipartisanship that seems to reign in this Committee. I believe as it relates to housing and urban development and the needs of the people of America who are served by HUD, we do need to approach it on a bi-partisan basis. So in that same spirit, I look forward to working with you as Chair of the Committee try to do some things that I know we share as goals for the people of our country.

We at the Department of HUD face great challenges as we work to improve the Nation's housing and expand opportunities for America's families. President Bush and I are committed to restoring the confidence of the Congress and the American people in the operation of this agency. Our fiscal year 2002 budget is a first step for restoring that confidence.

Let me say at the start that even though we are focused today on the budget, our ultimate success will not be measured by how much money we spend. I want this Department to be judged on the numbers that are far more important which is how many families get a chance to buy their first home and how many children grow up in the kinds of neighborhoods we would all want our children growing up in.

The Administration has set that the overall growth of Federal discretionary spending at 4 percent, a level that is responsible and appropriate. But the President recognizes this Department's mission of improving housing and community development opportunities brings with it a special set of obligations. That is why the Department of Housing and Urban Development's proposed budget increases by nearly 7 percent for fiscal year 2002.

I am very pleased that the President has made increasing home ownership and the freedom that comes with it, a top priority of his Administration. Home ownership plays a vital role in creating strong communities by giving families a stake in their neighborhoods while helping them to build wealth. And yet even though almost 70 percent of all families in America have realized the dream of home ownership, minorities and low-income families lag far behind. That must change and this Department is firmly committed to reducing that gap in home ownership.

The cost of down payments remains the single, biggest barrier to home ownership. The American Dream Down Payment Fund provides $200 million in matching assistance to help more than 130,000 low-income families purchase a home. I am also happy to announce that Section 8 voucher holders will now be able to use up to 1 year's worth of assistance towards a down payment on a home because of the good work of Congress in passing the American Homeownership and Economic Opportunity Act. We now at HUD are implementing the function of that Act, and we will see families being able to accumulate those Section 8 vouchers towards homeownership.

Another of our proposals is the $1.7 billion Renewing the Dream tax credit that will support the rehabilitation or new construction of some 100,000 homes for purchase in low-income neighborhoods. A fourth initiative will expand access to home ownership by reducing payments in a first years of a mortgage. Each of these efforts will compliment HUD's existing home ownership programs.

Of course we recognize that homeownership is not an option for everyone. Today more than four million households rely on a variety of HUD programs to help them with their high cost of rental housing. This budget preserves and expands our commitment to every American seeking the freedom to live in decent and affordable housing.

I want to specifically note the President's proposal to increase the limits for FHA multifamily insurance by 25 percent. We need to spur to the construction and rehabilitation of affordable rental housing in high-cost areas and increasing the limits is a critical step in that direction. Building stronger communities means helping low-income families increase their skills and earnings. Helping families become self-sufficient is also part of it.

The Community Technology Centers, which the Chair spoke of, delivers on both counts. For fiscal year 2002, HUD will provide $80 million in competitive grants to help communities create or expand Computer Technology Centers in low-income areas.

Unfortunately, too many Americans looking for a home instead find themselves victimized by housing discrimination and outright fraud. The people of HUD are committed to vigorously enforcing our fair housing laws to help ensure that all Americans have equal access to rental housing and home ownership opportunities. For the fiscal year, the Department plans to increase by 16 percent over current levels the amount of funding available for fair housing enforcement and educational activities.

We are also taking additional steps to crack down on predatory lending. For example the abusive practice of property flipping that destroys neighborhoods and the dreams of American families. We intend to eliminate this practice as far as HUD is concerned by denying FHA insurance to properties resold within a certain period of time.

I know this is of great concern to the Chairwoman in her hometown of Baltimore. HUD has taken a number of positive steps to combat flipping and predatory lending. We have helped assemble a local predatory lending task force with local and State organizations to address flipping in the FHA single family program. I assigned several senior HUD staff to this particular task force. We were pleased to provide an update of the recent activities of the task force at last month's field hearing in Baltimore. Our efforts in Baltimore should act as a testing ground for nationwide reform.

I have not touched on many of our other notable efforts. Among them are work to improve the quality of life with the elderly, assist those with disabilities, reduce lead based paint hazards and aid the homeless. Perhaps we will have a chance to discuss some of those as your questions direct.

As you know last year's HUD budget increased by 16 percent. I do not believe we can continue that rate of growth. If we did, our budget would be over $180 billion by the year 2010. While most of our programs are being funded at last year's record-high level or even slightly higher levels, I will mention two important reductions, and these have already been mentioned. The budget provides nearly $2.3 billion for the Public Housing Capital Fund. Let me make this clear. The Capital Fund will still have over half a year's funding in reserve to address any backlog needs. This budget funds 100 percent of the money necessary to cover the modernization and maintenance needs for fiscal year 2002. The PHAs have over $8 billion in backlog funding if you include those funds already released for the year 2001.

So what I am saying basically—and Senator Kohl very specifically to your concerns—is that there will not be any of these encumbered expenses for maintenance and modernization that any housing authority would have in the pipeline or would even conceive in doing in this coming year that will be hampered by this reduction in the funding, given the $8 billion backlog that currently exists, much of which is an unencumbered or unasked for funds at this time.

HUD has also proposed terminating the Public Housing Drug Elimination Program. While a well-intentioned effort, it suffers from a large number of abuses. This effort also duplicated the efforts of many other cabinet departments and required the Department of Housing and Urban Development to take on a law enforcement role that I believe to be clearly outside our core mission.

I have met with Attorney General Ashcroft to determine how Federal law enforcement resources can be best utilized to fight crime in public housing authorities. I also believe, and if I can expand on this a moment, that I am greatly concerned about the abdication of responsibility for law enforcement and housing authorities by local law enforcement. I believe that the Drug Elimination Program, while it has had successes in some instances, in many instances, it has not. It has been devoted to additional cops on the beat in public housing authorities or lighting or issues like this. It has very often been used for things far afield from fighting drugs.

The fact is that these people that live in housing authorities are not outside the scope and the responsibility of local law enforcement. They are also not beyond the scope and responsibilities that the Federal Government has in all its other grant programs and other programs that are available.

So my hope is that we can bring the housing authorities into the mainstream of opportunities that exist with $19 billion of drug monies that are available from this year's budget alone and that we can have a more sensible program that is geared toward law enforcement administered by those who are accustomed to administering law enforcement grants through the Justice Department, which I think in the end will have a beneficiary effect and get us to a better place in terms of our drug elimination issues.

A $150 million of what was budgeted last year for this program will continue to go to the housing authorities as part of the at-large grants or general grants they could utilize for these programs if they so chose. My hope is that they would be focused on good programs, on sincere honest efforts to eliminate drugs, but not on some of the other things we have seen utilized in the past, and which we think go really far afield from the goal of drug fighting.

PREPARED STATEMENT

I have often spoken candidly about the need to resolve HUD's serious management challenges. Throughout the years, Congress has repeatedly told the Department to improve its management and restore its focus—in other words, get its own house in order. This Administration is listening and we have dedicated ourselves during this first year to riding the ship of state. As we seek to fulfill our mission this Department is committed to continuing a strong relationship with the Congress so that together we can make the Department of Housing and Urban Development an efficient and effective fighter on behalf of America's housing and community development needs.

Thank you very much.

Senator MIKULSKI. Thank you, Mr. Secretary. And it's quite an agenda we have to work on.

[The statement follows:]

PREPARED STATEMENT OF MEL MARTINEZ

Chairwoman Mikulski, Ranking Member Bond and distinguished Members of the Committee, thank you for this opportunity to discuss the Department of Housing and Urban Development's budget for fiscal year 2002.

The Department of Housing and Urban Development faces a big challenge in the coming years as we find ways to improve housing and expand opportunities for families seeking to improve their quality of life. President Bush and I are committed to restoring the confidence of the Congress and the American people in the operation of this Agency.

Our fiscal year 2002 budget is the first step toward restoring that confidence. This is a compassionate and responsible budget that will allow us to serve people more effectively and empower individuals and communities across the Nation.

This Department's success will not be measured by how much money we spend, but by how many families get the chance to buy their first house and by how many children get the chance to grow up in the kind of neighborhood we all want to live in.

The Administration has set the overall growth for Federal spending at 4 percent. This is a responsible and appropriate level. But the President also recognizes that this Department has a special obligation to help fulfill this Nation's housing and community development needs.

That is why the Department of Housing and Urban Development's proposed budget increases nearly 7 percent for fiscal year 2002. This will allow the Department to meet its priorities in improving housing and community development opportunities for American families. This budget will help low-income families become home owners, increase the amount of affordable rental housing, help low-income individuals build the skills they need to compete in the modern workplace, support community development, meet the needs of special populations, strongly enforce our fair-housing laws, and provide the adequate resources to improve the management of the Department.

HELPING LOW-INCOME FAMILIES ACHIEVE HOMEOWNERSHIP

Housing—particularly homeownership—is at the heart of that mission. President Bush has made increasing homeownership—especially for low-income families and minorities—a top priority of his Administration.

Homeownership plays a vital role in creating strong communities by giving families a stake in their neighborhoods and helping them to build wealth. Although a period of sustained economic growth has helped to raise the overall homeownership rate to a record level, the homeownership rates of minorities and low-income families lag far behind those of other families.

The most recent data show that the homeownership rate for Hispanic and African American households is under 50 percent. By contrast, the homeownership rate for the Nation as a whole is 67 percent. This Department is firmly committed to reducing this gap by increasing the homeownership rates of minority households.

The data indicate that homeownership rates are also lagging in central cities (51.4 percent) and among households with incomes below the area median (51.5 percent).

Since minority households are more likely to fall into these categories, it is clear that their homeownership rates can be raised by improving access to homeownership in central cities and among low-income families.

For fiscal year 2002, the Bush Administration has proposed a number of new or expanded initiatives to improve homeownership rates among low-income and minority families. Since the biggest single obstacle to homeownership is the inability to afford a downpayment on a home, two of the initiatives—the American Dream Downpayment Fund and the Section 8 Homeownership program—focus directly on overcoming this obstacle. A third initiative—the Single-Family Housing Tax Credit—will subsidize the costs of homes that are rehabilitated or newly constructed for purchase by low-income households, while a fourth initiative—FHA's Hybrid Adjustable Rate Mortgage—will expand access to homeownership by reducing mortgage payments in the initial years of a mortgage.

The American Dream Downpayment Fund will provide $200 million within the HOME program to match downpayment assistance provided by third parties. This proposal will help 130,000 low-income families overcome the biggest obstacle to homeownership—putting together a downpayment.

Another proposal that will help families own their own homes is the expansion of the use of Section 8 vouchers for homeownership. Under soon-to-be-published regulations, voucher-holders will be able to use up to one year's worth of Section 8 assistance for the downpayment on a home. HUD expects this program to be of use to existing voucher holders who can afford the ongoing costs of a mortgage, but who do not have enough savings to cover a downpayment.

Based on legislation enacted in the last Congress, HUD is also implementing an alternative approach to Section 8 homeownership under which the voucher can subsidize ongoing homeownership costs. As part of a pilot program to accommodate the needs of disabled households, HUD will apply higher income eligibility limits to these households.

A third proposal—the Single-Family Housing Tax Credit—is a $1.7 billion tax credit that will support the rehabilitation or new construction of an estimated 100,000 homes for purchase in low-income neighborhoods over a 5-year period. The program will subsidize up to 50 percent of project costs and benefit low-income families.

In addition to working closely with the Department of Treasury in designing this tax credit, HUD will conduct a thorough review of policies and regulations that may constitute a barrier to the development of affordable single-family homes and consider ways to streamline the development process.

For fiscal year 2002, HUD seeks authority to allow the Federal Housing Administration (FHA) to offer families a hybrid adjustable-rate mortgage. These mortgages reduce the initial homeownership costs by combining a low fixed rate in the early years of the mortgage with a rate that adjusts with the market thereafter. HUD estimates that the introduction of hybrid adjustable rate mortgages will allow FHA to provide mortgages to an additional 40,000 families in fiscal year 2002. It also will yield additional income of $99 million for the FHA and $13 million for the Government National Mortgage Association (Ginnie Mae).

These initiatives will complement HUD's existing homeownership programs. The main HUD programs that help families achieve homeownership are the HOME Investment Partnerships Program (HOME), the FHA Mortgage Insurance and the Community Development Block Grant (CDBG) program. HUD also works to expand homeownership opportunities through the efforts of Ginnie Mae, programs for Native American Communities, the Self-Help Opportunities Program (SHOP), Housing Counseling and oversight of the Government Sponsored Enterprises (GSEs)—Fannie Mae and Freddie Mac.

In fiscal year 2002, HUD will provide $1.796 billion in total HOME funding, the same as in fiscal year 2001. HOME is a flexible block grant that provides support for local affordable housing efforts. Funds are allocated directly to large cities, counties, or consortia of smaller areas (known as "participating jurisdictions") and to states for distribution to other cities and towns. There are currently 594 participating jurisdictions, although that figure is expected to rise in fiscal year 2002.

Recipients of HOME funds have substantial discretion to determine how the funds are spent. To date, approximately 45 percent of HOME funds have been spent on assistance to homeowners and new homebuyers, with the balance going to activities that help make rental housing affordable. HOME funds can be used to expand access to homeownership by subsidizing downpayment and closing costs, as well as the costs of acquisition, rehabilitation, and new construction. To date, HOME grantees have committed funds to provide homeownership assistance to more than 320,000 low-income households.

In fiscal year 2001, the HOME program received a substantial increase of nearly $200 million (12 percent) over the prior year's level. For fiscal year 2002, HUD will dedicate this money to the American Dream Downpayment Fund, described above, which is funded as a set-aside within HOME.

FHA insurance continues to be one of the Nation's principal tools for increasing homeownership for moderate-income and first-time homebuyers. FHA insurance helps make homeownership affordable for families who may not qualify for conventional mortgages.

FHA offers a range of different insurance products. In fiscal year 2002, an estimated 1.15 million families will finance their homes through FHA's Mutual Mortgage Insurance Fund. Other FHA homeownership products include insurance for rehabilitation loans, condominiums, energy-efficiency loans, and reverse mortgages for elderly homeowners. In addition, FHA provides mortgage insurance for multi-family developments and health-care facilities.

Many of FHA's single-family programs operate at a surplus, which means that income from premiums is more than enough to cover expected losses from defaults. For example, new mortgages insured by the Mutual Mortgage Insurance Fund in 2002 are expected to generate $2.5 billion over the life of the loan.

In fiscal year 2002, FHA plans to make a number of programmatic reforms to strengthen its financial position. For example, to address losses in the General Insurance and Special Risk portfolios, FHA will raise premiums and review its underwriting criteria in a number of the programs in these portfolios. This will reduce the amount of credit subsidy required to support these programs from $101 million in fiscal year 2001 to $15 million in fiscal year 2002.

Ginnie Mae helps to ensure the availability of mortgage funds for low- and moderate-income families served by FHA and other Federal government programs. Ginnie Mae guarantees securities backed by pools of mortgages insured by FHA or guaranteed by the Rural Housing Service (RHS) or the Department of Veterans Affairs. Through this guarantee, Ginnie Mae has helped to finance homeownership opportunities for more than 24 million families.

Ginnie Mae operates a Targeted Lending Initiative in which the guarantee fees it charges lenders are reduced for mortgages in any of the Nation's 72 Empowerment Zones, Enterprise Communities, and adjacent eligible central city areas. Since its inception in 1996, this incentive has led to over $11 billion to finance more than 121,000 loans in central cities.

The Department's fiscal year 2002 budget also has three programs that are specifically designed to help promote homeownership among Native American communities.

First, the Indian Housing Block Grant provides tribes or tribally designated housing entities with a flexible source of funding for affordable housing and related activities. As provided in the Native American Housing Assistance and Self Determination Act (NAHASDA), block grant funds may be used for a wide range of homeownership and rental activities. The fiscal year 2002 budget provides $649 million, the same level as enacted in fiscal year 2001.

Second, the Title VI Federal Guarantees for Tribal Housing Activities provides loan guarantees for Indian Housing Block Grant recipients who need additional funds to engage in affordable housing activities, but who are unable to borrow from other sources without the guarantee of payment by the Federal Government. The fiscal year 2002 budget provides $6 million in funds set aside within the Indian Housing Block Grant Program as a credit subsidy to guarantee $53 million in private sector loans.

Third, the Indian Home Loan Guarantee Program (Section 184) helps Native Americans to access private mortgage financing for the purchase, construction, or rehabilitation of single-family homes by providing loan guarantees to lenders. The fiscal year 2002 budget provides continued funding of $6 million in credit subsidies to guarantee a total of $234 million of such loans.

To support its homeownership programs for Native American communities, HUD will again provide $2 million to the Native American Indian Housing Council which delivers technical assistance and training to tribally designated entities, conducts research, and provides information on Indian housing and economic development issues.

In addition to the programs discussed above, the fiscal year 2002 budget includes funding for a number of other programs that help families achieve homeownership.

One such program is Housing Counseling, which provides comprehensive housing counseling services, including pre-purchase, default, and renter counseling to eligible homeowners and tenants. By educating families on the homeownership process and the responsibilities and benefits of homeownership, Housing Counseling helps to expand homeownership opportunities. For fiscal year 2002, HUD plans to continue funding this program at $20 million as a set-aside within HOME.

Another such program is the Self-Help Homeownership Opportunities Program (SHOP). SHOP provides grants to national and regional nonprofit self-help organizations to subsidize the costs of land acquisition and infrastructure improvements. Homebuyers must contribute a significant amount of sweat equity or volunteer labor to the construction or rehabilitation of the dwellings. For fiscal year 2002, HUD is requesting $22 million for SHOP as a set-aside within the Community Development Block Grant account, an increase of $2 million over fiscal year 2001. The increase reflects the early successes of this program. Fiscal year 2002 grants will help to produce more than 1,400 new homes.

HUD also sets affordable housing goals for two key housing financial institutions over which it has oversight responsibilities: Fannie Mae and Freddie Mac. These Government Sponsored Enterprises (GSEs), play a vital role in financing affordable owner-occupied housing in the Nation through their participation in the secondary mortgage market. Last year, HUD announced new affordable housing goals for the GSEs that will substantially increase the availability of financing for affordable housing. In fiscal year 2002, HUD will continue to monitor the compliance of the GSEs with these goals and work in cooperation with them to find new ways to expand homeownership for all Americans.

In fiscal year 2002, HUD plans to continue to fund a $3 million cooperative agreement with the Housing Assistance Council (HAC). HAC is a nonprofit corporation that works to increase the availability of decent and affordable housing for low-income people in rural areas throughout the United States. In fiscal year 2002, HAC will focus on the affordable housing needs of people living in the "Colonias." These are poor rural communities and neighborhoods along the U.S.-Mexican border that lack basic infrastructure and services, as well as decent and affordable housing.

AFFORDABLE RENTAL HOUSING

While seeking to expand homeownership opportunities, HUD recognizes that homeownership may not be a practical option for all families, especially those at the bottom of the income scale. To help low-income families afford the high costs of rental housing, HUD provides rental subsidies to more than four million households nationwide through a variety of programs.

To spur the construction of more affordable rental housing, HUD has proposed that the limits for FHA multi-family insurance be increased by 25 percent. Increasing the limits will help to spur the availability of private financing for new production and substantial rehabilitation of residential rental housing in high-cost areas.

The fiscal year 2002 budget seeks to strengthen HUD's current rental assistance programs rather than proposing any new ones. During fiscal year 2002, HUD will focus in particular on improving the utilization of Section 8 vouchers and public-housing capital funds by housing agencies.

This budget funds the project-based and tenant-based Section 8 programs under a single account, known as the Housing Certificate Fund. In the Section 8 voucher program, families live in modestly priced rental housing that they find in the private market. In the project-based Section 8 program, by contrast, families live in specific developments that have a pre-existing contractual relationship with HUD. In both programs, families are expected to contribute 30 percent of their adjusted income for housing costs (rent plus utilities). HUD provides subsidies to cover those rental costs not paid by the tenant.

In fiscal year 2002, HUD will obligate $15.1 billion in new budget authority to renew all expiring Section 8 contracts for one year, an increase of $2.2 billion over fiscal year 2001. The increase is explained largely by the fact that Section 8 contracts were previously funded on a long-term multi-year basis. As long-term Section 8 contracts expire, the number of contracts that need to be renewed each year (and the funding required to do so) increases. Fiscal year 2002 funds will be used to renew expiring contracts for 2.7 million units.

For fiscal year 2002, the Department has requested $197 million for approximately 34,000 additional "incremental" Section 8 vouchers. These vouchers will enable HUD to make progress in reducing the number of low-income renter households with worst-case needs, which stood at 4.9 million in 1999. Rather than targeting the vouchers to any specific purpose, HUD will distribute them through the Fair Share allocation system to public housing agencies (PHAs) that have demonstrated an ability to use effectively their existing vouchers, as measured by high voucher-utilization rates. This process will maximize the ability of housing agencies to meet locally defined needs.

HUD recognizes that in the past, it has not moved as quickly as it should have in issuing incremental vouchers to PHAs. If Congress funds its request for incremental vouchers, HUD will act expeditiously to distribute the vouchers to PHAs.

To further speed assistance to low-income families, HUD has targeted for improvement in 2002 the utilization of existing Section 8 vouchers by PHAs. The most recent available data indicate that housing agencies are utilizing approximately 92 percent of the vouchers under contract for one year or more. By working to improve PHAs' utilization of vouchers, HUD will be able to serve tens of thousands of additional families within existing funding levels.

In addition to funding contract renewals, the Housing Certificate Fund provides funds for a number of additional activities. One of those is the Tenant Protection Program. This program protects families who live in a project-based subsidized development whose owner either chooses to opt-out of the program or is terminated for cause. Such families receive "enhanced" vouchers to help them remain in their developments or tenant-based assistance to move to a new apartment. Housing vouchers are also provided to public-housing tenants displaced by the demolition of distressed public housing. In fiscal year 2002, funds are requested for an estimated 30,000 tenant protection vouchers.

HUD is also requesting funds to continue its performance-based Contract Administrator Program, which funds contracts with designated State or local housing agencies, sometimes in partnership with other public or private entities. Acting as HUD's agent, contractors oversee some 20,000 direct contracts between HUD and project owners for project-based Section 8 assistance. In fiscal year 2002, approximately $196 million will be required to continue these contracts, which run for three years.

HUD will shortly be submitting legislation to continue authority to restructure FHA-insured mortgages in conjunction with "marking" down of excessive rents for certain Section 8 project-based developments to the rents charged in the surrounding market. Authority for the Mark-to-Market restructuring program expires at the end of fiscal year 2001.

PUBLIC HOUSING

The public housing program is funded through the Public Housing Operating Fund, the Public Housing Capital Fund, and the HOPE VI program.

While no longer supporting the development of new public housing on a major scale, HUD remains committed to sustaining and improving the Nation's public housing by funding public housing operating and capital expenses. Through the HOPE VI program, HUD also funds the demolition of obsolete public housing stock and its replacement with vouchers or new public housing that blends into the community.

The fiscal year 2002 budget provides $3.385 billion for the Public Housing Operating Fund, an increase of $150 million over the fiscal year 2001 enacted levels.

In light of higher-than-expected energy costs, some PHAs are facing a shortage of funds in fiscal year 2001. To address this problem, the Department has moved quickly to provide $105 million of fiscal year 2001 funds to affected agencies. If this increase is not sufficient to cover costs associated with the sharp and unexpected rise in energy rates , PHAs will be reimbursed for excess utility costs due to rate increases as outlined in regulation.

The Public Housing Capital Fund provides formula grants to PHAs to meet the accrual of new modernization requirements and to reduce the backlog of rehabilitation and modernization requirements.

The fiscal year 2002 budget provides $2.293 billion for the Public Housing Capital Fund, a decrease of $700 million relative to fiscal year 2001. This amount will be sufficient to meet all new modernization requirements. Because PHAs have a large amount of unspent capital funds from prior years, the budget does not provide any new funds to address the backlog of modernization needs. Two other reasons to cut this program include the facts that: QHWRA (Public Housing Reform) gives PHAs the ability to leverage federal funds with private investment to finance capital improvements; and HOPE VI removes the most severely distressed units which represent a disproportionate share of backlog need.

The purpose of the reduction in capital funds is to draw down capital funds that have been appropriated, but not expended, by PHAs. Recognizing that the funds are primarily for capital improvement projects, HUD expects PHAs to obligate these funds within 18 months and expend them in 36 months. Although not all PHAs are falling behind in scheduled modernization, the buildup of unobligated and unexpended funds by some PHAs indicates that modernization funds may not be reaching the PHAs with the greatest needs or capacity. For example, as of March 1, 2001,

$700 million in fiscal year 1998 funds remained unspent by PHAs. HUD plans to review the Capital Fund program and put procedures in place to ensure a more timely and effective reduction of the nearly $18 billion backlog of modernization and rehabilitation needs.

While we provide increased funding for the Public Housing Operating Fund, this Department also provides funds for the demolition and revitalization of severely distressed public housing under the HOPE VI program. The budget requests $574 million for HOPE VI grants in fiscal year 2002, the same as the fiscal year 2001 enacted level.

HOPE VI was launched as part of an effort to demolish 100,000 of the most distressed public housing units. As of the end of fiscal year 2000, HUD had approved applications to demolish nearly 113,000 units and PHAs had actually demolished approximately 60,000. Almost 35,000 of the completed demolitions were carried out in connection with HOPE VI revitalization grants.

The HOPE VI program will expire in fiscal year 2002 and must be reauthorized to continue. The Department is evaluating the HOPE VI program and will submit authorizing language during the coming year to extend and amend the program to target funds to the highest priority needs.

For fiscal year 2002, HUD has proposed the termination of Public Housing Drug Elimination Grant Program (PHDEP), which was funded at $309 million in fiscal year 2001. There are three main reasons for this termination. First, the program is duplicative of the Operating and Capital Funds in that all expenditures that are eligible under PHDEP are also eligible expenditures of one or both of these funds. Second, many other Cabinet Departments have anti-drug programs that can be brought to bear on the problems of drug use and violent crime in public housing. Governmentwide, over $18 billion in Federal funding is projected for fiscal year 2002 on anti-drug programs and illegal drug enforcement efforts. Finally, the Inspector General has severely criticized PHDEP for being the source of funds for such inappropriate activities as staff retreats, bank loans, and Christmas parties. Indeed, the Department itself diverted PHDEP technical assistance funds to implement a gun buy-back program, which the Comptroller General ruled was not a legal use of funds.

Although HUD is not requesting funds for PHDEP, it will fund Operation Safe Home and the Witness Relocation Program. The Inspector General operates a special task force—Operation Safe Home—which combines the expertise of Federal and local crime-fighting forces to combat violent crime such as illegal drug trafficking and gang-related activity in public and assisted housing developments. In fiscal year 2002, $10 million will be set aside within the Public Housing Operating Fund and transferred to the Inspector General for additional law-enforcement staff.

The Witness Relocation Program assists families that have cooperated in efforts to combat crime in communities. It is a crucial part of Operation Safe Home. Since the initiation of Operation Safe Home, the Inspector General has relocated 650 witnesses whose testimony was essential to the prosecution of perpetrators of violent crimes.

BUILDING ASSETS AND SKILLS AMONG LOW-INCOME FAMILIES

Central to HUD's mission of promoting stronger communities are programs to help low-income working families acquire skills that will increase their earnings and to help families on welfare make progress towards self-sufficiency. HUD also seeks to help low-income families accumulate assets so that they can achieve homeownership, pursue educational opportunities, start a new business, and attain other important goals.

HUD's basic programs contribute to this objective by providing low-income families with the housing stability they may need to focus on obtaining work or increasing their earnings. HUD's homeownership assistance programs also help families accumulate assets. In addition, HUD has a number of programs that focus directly on building assets and skills among low-income families.

The Community Technology Centers program is one such initiative. For fiscal year 2002, HUD will provide $80 million in competitive grants to help communities create or expand computer technology centers in low-income areas. The centers will provide free Internet access and help families acquire computer skills, access educational information, and search for work.

Through the Neighborhood Networks program, HUD has helped to create more than 700 computer technology centers in multi-family assisted housing developments and HOPE VI sites throughout the country. Hundreds of additional computer centers operate in public housing and Native American housing. HUD supports the development of these centers by providing guidebooks and other technical assistance, sharing information on best practices, and allowing the centers to occupy space in affordable housing developments.

Another such program is the Family Self-Sufficiency (FSS) Program. Currently serving some 55,000 families in the tenant-based Section 8 and public-housing programs, FSS promotes the development of local strategies to help families obtain or increase employment so that they can build assets and achieve economic independence and self-sufficiency. FSS helps to link participating families with local opportunities for educational services, job training, counseling, and other services while they are receiving housing assistance. As participating families increase their work effort, the amount of increased rent attributable to increased income from employment is deposited in an escrow account. Families that comply with program rules and become independent of welfare assistance by the end of the 5-year program term can use the funds in the escrow account to purchase a home, pay for higher education, start a business, or other agreed-upon goals.

In fiscal year 2002, HUD will work to increase participation in FSS by providing funding for FSS service coordinators at local housing agencies, helping to spread awareness of successful practices, and promoting partnerships between local housing and welfare agencies. The fiscal year 2002 budget provides $46.4 million for FSS coordinators within the Housing Certificate Fund.

The Administration plans to offer additional incentives to encourage savings and asset accumulation by low-income households through the Individual Development Accounts (IDA) initiative. This new program will improve access to savings institutions by creating a mechanism to subsidize the savings of eligible participants. Financial institutions would be allowed a tax credit in exchange for matching contributions to participants' deposits. Individuals would then be able to withdraw their contributions and matching funds, along with earnings, for qualified purposes, such as education expenses, first-time home purchases, and business start-up expenses, that help facilitate entrance into the country's economic mainstream.

The Resident Opportunity and Self-Sufficiency Program (ROSS) provides a range of supportive services to families in public housing through competitive grants to PHAs, resident groups, Indian tribes and other qualified organizations. The services funded through ROSS are designed to help families make progress towards self-sufficiency; enable the elderly and persons with disabilities to live independently through service coordinators and other activities; and support resident management, business development, capacity building and conflict resolution activities.

Funding for ROSS in fiscal year 2002 is continued at $55 million, the same level enacted in fiscal year 2001. Consistent with prior practice, it is funded as a set-aside in the CDBG program.

Through its Youthbuild program, HUD provides young high-school dropouts (aged 16–24) with education and job training services, counseling and other support activities and onsite paid training in housing rehabilitation or construction work. This will help these youths find well-paying jobs. The average wage earned by Youthbuild trainees is $7.50 per hour and an impressive 84—percent of the graduates obtain full-time employment or re-enter school on a full-time basis. A wide range of groups are eligible to compete for Youthbuild funds, including nonprofit organizations, State and local housing agencies and State and local governments.

In fiscal year 2002, HUD will continue Youthbuild at last year's level of $60 million and will continue the program as a set-aside within the CDBG program. HUD estimates that this funding will provide training to an estimated 3,774 youths.

HUD has also been active in helping to make "Welfare-to-Work" a reality. The fiscal year 1999 VA–HUD Appropriations Act included funds for up to 50,000 Section 8 vouchers to help families make the transition from welfare to work. Housing vouchers can help families make progress towards self-sufficiency by providing them with the residential stability they may need to focus on obtaining or retaining work as well as the opportunity to move closer to a new job. Although implementation of the Welfare-to-Work Voucher program has been delayed due to the challenges of designing a new program and of coordinating the efforts of local housing and welfare agencies, substantial progress has been made in recent months.

The costs of renewing the existing Welfare-to-Work vouchers are included as part of the overall Section 8 contract renewals in the Housing Certificate Fund. As requested by Congress, HUD's Office of Policy Development and Research is in the process of evaluating this program.

COMMUNITY AND ECONOMIC DEVELOPMENT

Beyond housing issues, HUD's other core commitments involve community and economic development. Our fiscal year 2002 budget will continue to support these programs, which play an essential role in helping communities address locally determined development priorities and maintaining long-term prosperity.

Much of HUD's community development work is done under the auspices of the Community Development Block Grant Program (CDBG). CDBG provides local communities with a flexible source of funds to help them attract private investment, maintain a high-quality housing stock, rebuild infrastructure and community facilities, provide critical community services, and create new high paying jobs. CDBG funds are provided directly to approximately 1,000 large cities and counties (known as "entitlement communities") and to States for distribution to smaller communities. For fiscal year 2002, HUD has requested a total of $4.8 billion in CDBG funds. This is composed of $4.4 billion for CDBG formula grants and $403 million in set-asides for specific programs. The amount requested for the CDBG formula is the same as the level enacted in fiscal year 2001. This represents a record level of formula funding and a $160 million increase over the amounts appropriated in fiscal years 1999 and 2000.

During fiscal year 2002, the Department will continue to work to increase communities' timely expenditure of previously allocated CDBG funds. Although HUD's efforts over the last few years have led to a 34 percent reduction in the number of communities that are failing to meet their timeliness obligations, there are still a number of communities that are not spending their CDBG funds in a timely manner.

The Department intends to work closely with communities to ensure that comprehensive plans are implemented fully and funds are used expeditiously under the consolidated plan review process.

Although funding for the CDBG formula is maintained at fiscal year 2001 levels, HUD has proposed a substantial reduction in funding of set-asides within CDBG. The enacted level of set-asides within CDBG in fiscal year 2001 was $713 million. The requested level for fiscal year 2002, by contrast, is $403 million, a reduction of $310 million. The principal source of the reduction is the proposed elimination of funding for the Economic Development Initiative and the Neighborhood Initiative Demonstration. These programs, which together totaled $401million, were earmarked for "special purpose" grants in the appropriations act.

The growth in special purpose grants has been dramatic over the past few years. In fiscal year 2001, the appropriations act contained over 800 individual projects. Administering these individual grants is costly, time-consuming, and distracts HUD staff from its core programs. As most of the special purpose grants would be eligible expenses under the CDBG formula, these types of projects can be funded if deemed to be priorities by local recipients of CDBG funding.

The Section 108 Loan Guarantee program provides a means by which local communities can leverage their CDBG grants to obtain financing for large community revitalization projects. Under this program, the government acts as the guarantor of loans secured by current and future CDBG funds. Section 108 financing is at work in hundreds of communities across America. Over 1,200 projects have been funded since the program's inception in 1978.

In every year since fiscal year 1997, the total loan volume authorized for the Section 108 program has been $1.2 billion. Only about one-third or less of this loan level has been used each year, however, with an average annual utilization of $375 million. To reduce the level of the government's outstanding commitment to levels that reflect actual usage, while at the same time ensuring that any upward surge in loan volume is fully accommodated, the fiscal year 2002 budget is requesting a loan volume of $609 million. HUD will reconsider the loan volume cap for fiscal year 2003 based on this year's demand for the program.

Another HUD program designed to assist in community development is the Empowerment Zones and Enterprise Communities (EZ/EC) Initiative. The EZ/EC initiative is an interagency effort to promote economic development and community revitalization in distressed areas by targeting tax relief and Federal funds to designated Empowerment Zones (EZs) and Enterprise Communities (ECs). EZs and ECs are eligible for an array of different tax credits and other incentives designed to spur investment and economic growth. EZs and ECs also receive some amount of Federal funding for revitalization activities. Grants are used for a wide variety of activities that assist residents and businesses, including workforce preparation and job creation efforts linked to welfare reform; neighborhood development; support for financing capital projects; financing of projects in conjunction with Section 108 loans or other economic development projects. Funds are also used for rental assistance and other housing assistance, policing and healthcare.

To date, there have been two rounds of EZ/EC designations, with a third round authorized but not yet made. In the first round, nine communities (six urban and three rural) were designated as Empowerment Zones and 95 communities were named as Enterprise Communities. Twenty new Empowerment Zones—15 urban and 5 rural—were designated in the Round II competition, along with 20 new Enterprise Communities, all rural.

In December 2000, Congress approved legislation to designate nine new EZs, seven in urban areas and two in rural areas. HUD will designate the seven new urban EZs in 2001, while the Department of Agriculture will designate the rural EZs. The legislation also authorized the designation of 40 Renewal Communities, 28 in urban areas and 12 in rural areas, to be designated by HUD by the end of 2001. Businesses in Renewal Communities will benefit from local regulatory streamlining and a variety of Federal tax incentives to stimulate economic growth.

HUD, originally proposed to provide each of the 15 Round II urban Empowerment Zones with $10 million in annual grant funding. Cumulative funding to date has not reached this level, but HUD is seeking funding of $150 million for fiscal year 2002, equaling the originally proposed annual amount.

This Department is also active in helping to redevelop brownfields. Brownfields are vacant or underutilized properties whose redevelopment is hampered by the real or perceived threat of environmental contamination. A recent survey of over 200 cities by the U.S. Conference of Mayors indicated that more than $2.7 billion in additional tax revenues and 675,000 new jobs could be created if brownfields sites were returned to productive use. For fiscal year 2002, HUD proposes to fund the Brownfields Economic Development Initiative at $25 million, the same level as enacted in fiscal year 2001.

The Brownfields Economic Development Initiative makes competitive economic development grants available to local governments in conjunction with Section 108 loan guarantees. The grants enhance the security of the Section 108 loan, facilitating the reclamation of brownfields. HUD works closely with the Environmental Protection Agency to implement strategies to return brownfields to productive uses.

In addition to the programs discussed above, several additional HUD programs help to support local community and economic development.

To help reduce the hazards of lead-based paint, the fiscal year 2002 budget requests a 10 percent increase in funding for the Lead-Based Paint Hazard Reduction and Healthy Homes Programs for a total of $110 million. Pursuant to Executive Order 13045, a multi-agency task force that included HUD, EPA, Justice, and the Centers for Disease Control and Prevention developed a comprehensive 10-year plan to eradicate the risk associated with lead-paint poisoning from American homes. HUD's grants are key to the achievement of this objective. The increased funding in fiscal year 2002 will be distributed through a competitive process to entities that match every Federal dollar with significant additional dollars. All funds, whether private or Federal, must be used for hazard reduction or public education on lead-poisoning prevention.

Included in this request is a set-aside of $10 million to continue the Healthy Homes Initiative, which helps to develop, demonstrate, and promote cost-effective preventative measures to correct multiple safety and health hazards in the home that can cause serious disease and injuries to children.

HUD is also funding the National Community Development Initiative (NCDI). NCDI is a partnership of public and private funders and intermediaries that works to expand the capacity of community development corporations and other community-based and nonprofit organizations to carry out community and economic development. HUD provides NCDI funding to national intermediaries, including Habitat for Humanity, the Enterprise Foundation, and Local Initiatives Support Corporation, which then provide capacity building services to the targeted organizations. The fiscal year 2002 budget requests $29 million for NCDI, an increase of $1 million over fiscal year 2001 levels. The additional $1 million will go to Habitat for Humanity to increase funding for their capacity building efforts to $4.4 million.

Colleges and universities can make an important contribution to the revitalization of America's cities and neighborhoods by bringing their intellectual and financial resources to bear on locally identified problems. HUD has several programs that encourage partnerships between colleges and universities and local governments and community-based organizations. These programs include: the Community Outreach Partnership Centers Program, the Historically Black Colleges and Universities Program, the Hispanic-Serving Institutions Assisting Communities Program, the Alaska Native/Native Hawaiian Institutions Assisting Communities Program, and Assistance to Tribal Colleges and Universities. In addition, the Community Development Work Study program provides stipends and tuition support for economically disadvantaged and minority graduate students who plan to pursue careers in community and economic development. The fiscal year 2002 budget funds all of the university programs at fiscal year 2001 levels.

In order to assist with the community and economic development needs of Native American and Insular Area communities, HUD funds Block Grants for Indian and Insular Area Communities within CDBG. The fiscal year 2002 budget provides $69 million for Indian community development block grants and $7 million for community development block grants to Insular Areas (American Samoa, Guam, the Northern Mariana Islands, and the Virgin Islands). Funding for Insular Areas is included within the set-aside for Section 107 grants.

A set-aside of $1.25 million in the Indian Community Development Block Grant will fund the Native eDGE program, an interagency initiative designed to facilitate sustainable economic development within American Indian and Alaska Native communities. eDGE includes a telephone call center, a publications clearinghouse, a web site, and a technical assistance information center. The web site links seventeen Federal agencies, educational institutions, and organizations through a single portal so that tribes, Native Americans, lending institutions, and private businesses can collaborate to promote economic growth.

MEETING THE NEEDS OF SPECIAL POPULATIONS

HUD programs provide housing and other essential support to a wide range of populations with special needs, including the elderly, persons with disabilities, homeless persons, and persons with HIV/AIDS.

In fiscal year 2002, HUD will continue its strong level of support by funding the programs targeted for these populations at or above fiscal year 2001 levels. Notable increases include $20 million in additional funding for the Housing Opportunities for Persons with AIDS (HOPWA) program and $20 million for the Improving Access Initiative, which will be used to increase access by disabled persons to the facilities of nonprofit organizations.

In fiscal year 2002, HUD plans to continue its strong support for the elderly by providing $783 million for elderly housing programs, an increase of $6 million over fiscal year 2001 levels.

The principal HUD program targeted specifically to the elderly is the Supportive Housing for the Elderly (Section 202) program. This program provides capital advances to finance the construction and rehabilitation of structures that will serve as supportive housing for low-income elderly persons and provides rent subsidies (known as Project Rental Assistance Contracts (PRAC)) for the projects to help make them affordable. For fiscal year 2002, HUD will provide $679 million for Section 202 grants, an increase of $3 million over fiscal year 2001. The fiscal year 2002 budget also includes $3 million for PRAC renewals.

In addition to providing funds for new Section 202 developments, the fiscal year 2002 budget includes $50 million to cover the costs of converting existing Section 202 developments to assisted living facilities and another $50 million for service coordinators that help the elderly maintain their independence. Both of these activities are funded at fiscal year 2001 levels.

More than 1.3 million elderly households are also served by public housing and tenant-based and project-based Section 8 programs.

In addition to programs for the elderly, this Department also places a strong emphasis on meeting the needs of the disabled. The Supportive Housing for the Disabled (Section 811) program provides capital advances to construct or rehabilitate rental housing with supportive services for very low-income persons with disabilities. (As noted below, a portion of Section 811 funds is used for tenant-based rental assistance.) For fiscal year 2002, HUD will provide $217 million for new Section 811 grants, the same level as in fiscal year 2001. The budget will also provide $1 million for PRAC renewals to help keep existing Section 811 developments affordable.

In recognition of the importance of providing non-elderly persons with disabilities with mainstream housing opportunities, the Department plans to continue to set-aside a portion of Section 811 funds to provide these households with tenant-based vouchers that they can use to rent private market apartments of their choice. Public housing agencies will also continue to have the authority to provide vouchers to non-elderly persons with disabilities pursuant to designated public housing plans.

Some 500,000 households with one or more disabled persons are also served by public housing and project-based and tenant-based Section 8 programs.

As part of a Governmentwide effort to improve the access of disabled persons to community services, HUD's fiscal year 2002 budget includes $20 million as a set-aside within the CDBG account for the Improving Access Initiative. This initiative will provide competitive grants to help organizations that are exempt from the Americans with Disabilities Act and have limited resources to make their facilities accessible to the disabled. Among other eligible organizations are civic organizations and religiously affiliated service providers.

Of particular importance to the Department of Housing and Urban Development are the needs of the neediest among us who lack even the most basic shelter. The fiscal year 2002 budget continues to provide strong support for homeless persons by funding HUD's homeless programs at fiscal year 2001 levels. In fiscal year 2002, a total of $1.12 billion is provided for homeless assistance grants and shelter plus care renewals.

The Department will focus on providing permanent housing solutions to those without homes and work closely with the Department of Health and Human Services and other agencies to identify and remedy the barriers to homeless persons' access to mainstream supportive services programs. As specified by Congress, at least 30 percent of Continuum of Care funding will be used to provide homeless persons with permanent housing.

The Continuum of Care process allows local communities to determine their own priorities for the use of HUD homeless programs funding. Under this process, communities submit Continuum of Care plans to HUD which describe local priorities and rank specific projects according to locally identified needs. HUD provides funding to communities that provide for maximum participation by local homeless providers and representatives of homeless clients, that clearly identify gaps in housing and service needs, and that coordinate homeless assistance with mainstream health, social services and employment programs.

The Continuum of Care funds three programs geared toward the needs of the homeless. The first is the Supportive Housing Program, which provides funds to develop supportive housing and services that will allow homeless persons to live as independently as possible. Funds are used for transitional housing (up to 24 months) and permanent housing for persons with disabilities.

The second is the Shelter Plus Care Program, which provides rental assistance for hard-to-serve homeless persons with disabilities in connection with supportive services funded from sources outside the program. This is a form of permanent housing. In fiscal year 2001, a special account was created to fund renewals of expiring Shelter Plus Care contracts. In fiscal year 2002, HUD will continue to fund these renewals at $100 million.

The third program under the Continuum of Care is the Section 8 Moderate Rehabilitation for Single Room Occupancy (SRO) Dwellings for Homeless Individuals Program, which provides rental assistance for homeless persons through the moderate rehabilitation of SRO dwellings.

In addition to funding these three homeless programs, HUD will provide approximately $150 million in Emergency Shelter Grants by formula. These grants are used for the rehabilitation or conversion of buildings into homeless shelters, as well as certain related social services, operating expenses, homeless prevention activities, and administrative costs.

Finally, the Department will continue to work in fiscal year 2002 to implement the Congressional mandate to develop and implement new systems to track homeless individuals as they enter and exit the network of homeless services programs and to provide unduplicated counts of the number of homeless persons served. HUD believes it essential to get a fix on the reach of HUD's homelessness programs so that the performance of these programs can be measured.

HUD is also concerned about the special housing needs of those suffering from HIV/AIDS. The Housing Opportunities for Persons with AIDS (HOPWA) program funds housing assistance and related supportive services for low-income persons with HIV/AIDS and their families. Grants are provided by formula allocations to States and metropolitan areas with the largest number of cases and highest incidence of AIDS. In addition, a small portion of funds is awarded competitively among projects proposed by State and local governments and nonprofit organizations.

In fiscal year 2002, HUD will provide $277 million for the HOPWA program, an increase of $20 million over fiscal year 2001 levels. This will support an increase in the number of jurisdictions eligible for funding based on increases in the number of persons with AIDS as reported to the Centers for Disease Control and Prevention.

ENFORCING FAIR-HOUSING LAWS

HUD is committed to vigorous enforcement of the fair-housing laws to help ensure that all households have equal access to rental housing and homeownership opportunities. For fiscal year 2002, the Department plans to increase the amount of funding available for fair-housing enforcement and education activities by 16 percent over current levels. The Department also plans further steps to decrease the incidence of predatory lending.

HUD contributes to fair-housing enforcement and education by directly enforcing the Federal fair-housing laws and by funding State and local fair-housing efforts through two grant programs.

The first grant program is the Fair Housing Assistance Program (FHAP), which strengthens nationwide enforcement efforts by providing grants to State and local agencies to enforce laws that are substantially equivalent to the Federal Fair Housing Act. For fiscal year 2002, HUD will provide $23 million for FHAP, an increase of $1 million over current levels.

The second program is the Fair Housing Initiatives Program (FHIP), which provides funds to public and private fair-housing groups, as well as to State and local agencies, for activities that educate the public and the housing industry about fair-housing laws—including accessibility requirements, investigate allegations of discrimination—and help to combat predatory lending practices and reduce barriers to minority homeownership.

In fiscal year 2001, FHIP was funded at $24 million, of which $7.5 million was dedicated to the National Survey of Housing Discrimination, a major study of housing discrimination being conducted by the Urban Institute. This left $16.5 million for FHIP grants. As no additional funding for the survey is needed in fiscal year 2002, the fiscal year 2002 level of $23 million provides an effective increase for FHIP grants of $6.5 million.

The additional $6.5 million in fiscal year 2002 FHIP funding will be directed towards increasing the number of organizations that receive funding for activities to enforce the rights granted under the Fair Housing Act and substantially equivalent State and local laws through education, outreach, prevention, and other enforcement activities. This funding increase will significantly expand the geographic distribution of FHIP awards to communities that are currently underserved or not served at all by fair-housing organizations. In fiscal year 2000, HUD was only able to fund 42 percent of eligible applicants. With the increase in funds, HUD will be able to fund 72 percent of the eligible applicants.

During fiscal year 2002, HUD also plans to continue its efforts to combat predatory lending. The Department will work closely with interested parties, including consumer groups, Federal, State and local regulators, and the industry to put an end to predatory lending practices, increase financial literacy, and expand access to homeownership and private mortgage credit. As part of this overall effort, HUD will consider ways to better enforce existing laws—which may include strengthening existing regulations—as well as assess the need for legislative action to better protect consumers and stop unfair lending practices.

IMPROVING HUD'S MANAGEMENT

Despite the progress of the last twelve years, much more needs to be done to resolve HUD's serious management challenges. Although HUD is no longer listed by the General Accounting Office as a "high-risk" agency, many of its major programs continue to bear this label. This Administration has made improving the management and restoring the focus of this Department its number one priority. It is a message that Congress has told HUD repeatedly throughout the years. And this Administration is finally listening.

The starting point for any improvement in how this Department operates is proper use of staff. During fiscal year 2002, HUD will review staffing levels against program needs to rationalize the distribution of staff resources. HUD's efforts will be aided by the new Resource Estimation and Allocation Process which will help the Department to assess where staffing should be increased or decreased to administer its programs effectively. HUD is also working to develop a long-term staffing strategy to meet the rapid increase in retirements expected over the next several years. Currently, the average HUD employee is 48 years old with 18 years of Federal service. To ensure HUD's continued ability to deliver its programs in an effective and timely manner, HUD must develop a strategy for dealing with this loss of talent and experience.

HUD will also continue its efforts to improve oversight of the local housing agencies and property owners who administer its housing programs. Although the Department recognizes that the physical inspections protocol used to assess public housing and multifamily assisted housing needs further refinement to ensure consistent and fair results, it plans to continue to assess the physical condition of HUD-assisted housing to ensure that it is decent and safe.

The Department will also take steps to improve income and rent determinations to reduce subsidy overpayments. HUD overpays hundreds of millions of dollars in low-income rent subsidies due to the incomplete reporting of tenant income, the improper calculation of tenant rent contributions, and the failure to collect fully all outstanding rent. During fiscal year 2002, HUD will implement a number of measures to resolve this problem, including the development of tools to assist housing agencies and housing owners in the determination of income and calculation of rent, and the introduction of a quality control program to monitor the performance of these intermediaries. HUD also plans to review the current laws and regulations regarding income and rent determinations to ascertain whether their simplification would facilitate program compliance.

The Department is greatly concerned that some recipients of HUD funding are either failing to utilize all of the funds provided by HUD or failing to obligate and spend the funds in a timely manner. These practices significantly diminish the effectiveness of HUD's programs. HUD will be reviewing the following programs to determine how to increase the rates of expenditure of funds: Section 8 vouchers and project-based renewals, the Section 202 program, CDBG, and the Public Housing Capital Fund.

Inadequate information systems have weakened FHA's ability to monitor lenders that use its guarantees and contributed to HUD's failure to obtain a clean opinion from its auditors in 1999. A fraudulent scheme known as "property-flipping" recently highlighted internal weaknesses in FHA's single-family systems and controls. To combat this scheme last year, FHA implemented emergency foreclosure moratoria to protect borrowers in areas where property flipping was prevalent. During fiscal year 2002, FHA will strengthen the integrity of its internal systems and controls to eliminate the need for foreclosure moratoria and other emergency responses. Actions will include improving the loan origination process and providing better monitoring of lenders and appraisers.

The Department is committed to the continued review and evaluation of its programs to determine what is working well and what needs to be improved. HUD is also committed to continuing to conduct surveys and research to collect the factual information on housing markets and conditions necessary to inform the policy decisions of HUD, Congress and State and local governments. To this end, the fiscal year 2002 budget provides $43 million in funding for basic research and technology, the same amount as in fiscal year 2001.

Finally, HUD recognizes the importance of the work being conducted by two Congressional Commissions: the Millennial Housing Commission and the Commission on Affordable Housing and Health Care Facility Needs in the 21st Century. HUD is prepared to assist Congress in assembling factual information on the extent of the Nation's housing needs, analyzing HUD's programs, and developing proposals for improving current housing programs.

This Administration is openly and strongly committed to focused programs and an efficient government that works. And my approach to the task will focus on four governing principles.

First, our mission will be to serve people, not programs.

Second, we will have the discipline to stick to our mission. Mission creep is mission death.

Third, we will be good stewards of our resources.

Fourth, we will observe the highest ethical standards. This means more than prosecuting graft. It means rejecting the subtler corruption of settling for good appearances rather than insisting on good results.

As we seek to fulfill our mission, this Department is committed to continuing a strong relationship with Congress so that together we can make the Department of Housing and Urban Development an efficient and effective fighter on behalf of America's housing and community development needs.

Thank you.

Mr. MARTINEZ. Yes it is.

Senator MIKULSKI. We are going to, in the interest of our colleagues here, our first round of questions will be five minutes each so that everyone has a chance to ask their questions if they want. And I know that Senator Bond and I will probably have a second round. Of course our colleagues are welcome for a second round.

PREDATORY LENDING

I would like my first set of questions to deal with the issue of predatory lending. And again, we want to thank you for assigning Ms. Maggiano to us. She is absolutely engaged in the Baltimore Task Force, which is the laboratory. And also your responsiveness in holding back those foreclosures until we get a real plan. And thank you for including it in your testimony.

Mr. Secretary, what steps do you think we can take in this year's legislation or even recommend to the authorizing to prevent flipping on a national basis? Because it is pretty bad in Baltimore, but Senator Stabenow, Senators Dorgan and Fitzgerald, many are very concerned about this nationwide.

Mr. MARTINEZ. Well, Madam Chairwoman, let me say that you are good to recognize the people at HUD who have been making this program work in a way that allows us to have the good news that we see to be coming out of Baltimore. And Ms. Maggiano was here today. I want to make sure we recognize her and Bryant Applegate, who is also with her, who have been working diligently on this. Because I think as we often talk about this Department and shortcomings and all of that, that we often overlook the people—the career people—that are there day in and day out who really try to do an outstanding job for the people who are hurting.

One of the things we have learned is that there cannot be this flipping practice without fraudulent appraisals. And that I would say would be key area of our focus. It is our focus administratively to do what we can to make sure that these appraisals that are the cornerstone of any fraudulent transaction do not take place. So I would say if we can focus our legislation on that issue and how we can best regulate appraisals. Also, I think the second issue might be the timelines of resales once an FHA deal is done.

We are also looking internally as to how some of the transactions took place in Baltimore and in other areas as well. One of the issues that we have to look at is our personnel allocations and how we are devoting personnel to oversee some of these areas. I think one of the problems we have had at HUD is that we have seen the numbers at HUD drop over the years of people. Sometimes that can be pennywise and pound-foolish because we have also seen that the oversight that is necessary for all of these vast programs around the country has not been there at times. So we will be looking at those issues as well. But I would say the issue of appraisals is at the heart of this.

Senator MIKULSKI. Well, I think, would you consider—this is just a recommendation for further discussion—do you think we should go back to a system where FHA approves the appraiser?

Mr. MARTINEZ. I think something like that would be very healthy and I would like to have further discussions on that. But I think a approval of a rated and a well-regarded appraiser is preferable to just allowing appraisals to come in that sometimes lack the credibility.

Senator MIKULSKI. Well the Baltimore advocacy groups feel that again the appraiser—and most appraisers are honest and meet very tough standards and so on, but then perhaps there needs to be like a HUD-approved list. We ask you to come up with those series of recommendations.

Let's go to the question, though, on—first of all, we look forward to the task force and the final mark up on this bill. We look forward to their recommendations we can implement now.

Mr. MARTINEZ. I think they will have some recommendations.

Senator MIKULSKI. Second, though, is this whole issue of property disposal of FHA. There are two issues. One, the way often the FHA house itself has been so rundown and the flippers—the ones that buy it for like $12,000 and sell it for $72,000 with the balloon payment. Essentially the plumbing is bad. The toilets are not working. The roofs are awful. The people default because they cannot keep it going.

Two questions: One, do you think—would you think we could use FHA money to rehab a HUD house before it goes back on the market? And how do you think we can look at property disposal of HUD houses when they have occurred essentially in almost blocks or in groups of neighborhoods? We are not talking about the single house in a suburban neighborhood where there has been a default on the mortgage. We are talking about—gosh there are blocks in Baltimore where there are twenty and thirty and so on houses.

Mr. MARTINEZ. Well, the whole issue of property disposition is so important because it obviously affects not only the particular homeowner or home involved, but also affects an entire neighborhood. As this happens, it is a blight on an area. But HUD has designed a program of accelerated claims disposition and we are currently preparing regulations to implement this program. We anticipate that those regulations will be in place in September.

Additionally, we will also conduct a demonstration program involving five thousand assets prior to finalizing the details of the administration of this program, which should be in July. We are committed to working with local governments and non-profits to ensure that HUD's property disposition program serves as a catalyst for neighborhood revitalization. We have designated over 800 hundred revitalization areas and have executed asset control agreements in 14 cities. We are working with our local partners to identify what additional areas of program improvements we could have. But we think those are good efforts in the right direction.

Senator MIKULSKI. Well, I think those are very good efforts. One of the things that I would like to be able to discuss with you further is the use of FHA funds or other funds to rehab the home. Let's say—let me just say that there are two hundred homes you would want to turn over to either Baltimore city government or Prince George's County's government or it could be to a community group, like St. Ambrose housing—a community development organization. But they do not have the bucks to then rehab it to then sell it and you see where it is.

Mr. MARTINEZ. I think we should look at that with you and see what possible returns there could be or where the returns would go if we can enhance the property value. But we should look into that and that is clearly part of the problem is that even turning the house over to a group you still need to have rehab money in order to make it happen.

SECTION 8

Senator MIKULSKI. Well, my time is up. Senator Bond.

Senator BOND. Thank you, Madam Chair. As I said everything goes wrong. As I got over there they said they are about ready to start another vote.

Senator MIKULSKI. So you waited.

Senator BOND. So I waited. And guess what? They vitiated the yeas and nays. But in any event, my apologies again. I appreciate the fact that you went ahead. The question I have is for you Mr. Secretary as well as Mr. Dave Gibbons. And I wondered if he might be able to join us at the table as HUD's Senior Budget Officer because we need to get to the bottom of this Section 8 problem. As you know, every year we go through some period during which we look to rescind what people call excess Section 8 funds. Rescission of Section 8 funds have banked many other congressional priorities over the last few years—floods, disasters of all kinds, anything that members and the Administration wanted to spend money on.

In this year's supplemental, the House is proposing to rescind one hundred and fourteen plus million dollars from Section 8 funds and the Housing Certificate Fund. In addition, last year we rescinded $1.833 billion. We really need to understand from your viewpoint what is available for rescission, when it's available, and why it is available.

And I am also very much concerned that HUD and/or OMB will maybe slowing down the availability vouchers to eligible low-income families in order to meet rescission requirements.

So, Mr. Gibbons, first can you please explain the status of the $114-plus million rescission that is being discussed?

Mr. GIBBONS. First of all, I have not seen the language. They have not shared the language with us so I am going to have to take this two different——

Senator MIKULSKI. Pull the microphone closer, sir. It's hard for us to hear you.

Mr. GIBBONS. To date we haven't seen the actual language of the rescission so I am going to have to approach this from a couple of different——

Senator BOND. Well first I guess we also need to know the status of the rescission of the $1.8-plus billion in excess section 8 funds from last year's fiscal year 2001 VA/HUD appropriations bill. Maybe start with that and we can build on that.

Mr. GIBBONS. That's fair enough. All total, the amount of recaptures that we are required to get pursuant to the 2001 appropriations bill is $3.4 billion, of which $1.83 billion was rescinded in the 2001 bill. The remainder had been assumed as form of recaptures in offsets to total renewal costs in 2001. To date, we have recaptured $2 billion in funds. Most of that was recaptured at the end of last year, at the end of fiscal year 2000, carried over into 2001 to help meet the total needs of the $3.3 billion to $3.4 billion that we must recapture. Of the $2 billion that we recaptured, $1.6 billion of it has been redirected back into the programs as is required.

We are amending both long-term project-based contracts as well as to meet renewal of tenant-based contracts. That leaves, at this moment, $400 million that we have available towards the $1.83 billion rescission. So we still need $1.4 billion in recaptures between now and September 30th of this year to meet the full requirements of the existing 2001 bill. If you add the additional $114 million we would need $1.5 billion between now and September 30th.

I have no idea whether all that additional $100 million is available. We will not do the recapture until late in August on both the tenant-based and project-based program. So we hope that it will be available but it may not be. There are four things that are working a little bit against it. You mentioned one of them in your opening remarks.

The first is utility costs for both project-based and tenant-based programs are a lot higher this year. And that has two effects. One, is that PHAs will use more of their funds which otherwise might be in excess and available to recapture. They will be sending more of those funds to the project owners so there will be less available than we might have anticipated due to higher utility costs.

The same is true for the project-based program. We have already seen an increase this year in project-based costs for project owners come in for additional resources of about $75 million to $100 million. So those funds which would normally be available due to expired long-termed contracts, are being plowed back into the program.

The third and fourth reason is, you remember, I think you pointed out earlier Senator that in the beginning we identified a total of about $10 billion which had been excess. None of those funds are left. They have all been rescinded. So we don't have that old pot to go back to as we have had in prior years if we were running short.

Senator BOND. In your best estimate are you going to be able to meet the $1.833 billion figure that was established last year? That is beginning to sound questionable from what you said.

Mr. GIBBONS. The way the language was written last year, you had to do the rescission. If you couldn't get it out of Section 8, then you went someplace else to get it. I do not know what the language says for the one——

Senator BOND. I am just talking about last year.

Mr. GIBBONS. We will absolutely get those funds. They will either come out of Section 8 or, according to the statute, that if we can't find them in Section 8 we are to go to some other heading in HUD and take it from unobligated balances in other programs. I do not know what the language says for the $114 million.

Senator BOND. Thank you very much.

Senator MIKULSKI. This is a topic we will return to because the issues raised by Senator Bond are issues that I was also going to raise. We will pick back up on it. But Senator Kohl, let me turn to you and then we will turn to Senator Shelby in turn.

ELDERLY HOUSING

Senator KOHL. Mr. Secretary, as a member of the Special Committee on Aging, I have taken a special interest in meeting the housing needs of seniors, particularly seniors in rural communities. Our programs have played a critical role in helping many urban and rural seniors age in place and provide an alternative to nursing homes and other expensive options. One program that has been helpful in Wisconsin is the Service Coordinator Program. This program is an excellent way to connect people who are frail with resources existing in their community in order to enable them to stay in their homes. The administration has included level funding of $50 million in its proposed budget for Service Coordinators and the Congregate Services Housing Program, which brings services to senior housing complexes. And yet there is a demand to expand this program, beyond renewing existing contracts, to allow more seniors to age in place independently and with dignity.

According to one study as many as 20 percent of seniors in 202 housing have no Service Coordinator. Given the tremendous pressure to provide more options to seniors to age in place, how do you propose we meet this need and would you support a proposal to prevent Service Coordinators to be included as part of a facility's routine operating expenses? Do you anticipate future increases in funding for Service Coordinators? And is this an area where there could be a collaboration with HHS?

Mr. MARTINEZ. I think the last part of the question hits the nail right on the head, which is the need for cooperation between HUD and HHS. I have begun a series of conversations with Secretary Thompson beginning with the issue of homelessness, but I think this issue of the elderly is very ripe for this as well. Clearly we need to try to assist our elderly population, our aging population, to age in place whenever possible and to have facilities that have sufficient support to allow them to avoid the need to be transported to a nursing facility and things like that. So I think the things you are raising in your question are precisely the kind of thinking we need as we go forward.

The Congress has impaneled a commission, to study aging, housing needs of the aging for the 21st century. And I think that, and certainly with my background in coming from Florida, I am well aware of the needs of this population as well as the forward thinking types of ideas we must have in order to allow folks to age in place.

In the 202 program, we clearly understand the need for there to be supportive services. What I would like to do is to bring in the services that are available through HHS and bring them to bear on this population in a way that can allow us to provide coordination of services and the counseling services and all the other services that are necessary in order for folks to age in place. So, I think your question is headed in precisely the right direction and I hope that we can move in that fashion.

HOMEOWNERSHIP COUNSELING

Senator KOHL. Okay. Mr. Secretary yesterday the New York Times ran a story—well two days ago—noting that the number of American's falling behind on their mortgage payments has increased sharply in this past year. The percentage of home owners with FHA mortgages with loan payments more than thirty days overdue went above ten percent for the first time ever. At the same time the President has embarked upon an initiative to increase first time house ownership among low income families. We need to do everything we can to ensure that these families have all the tools they need to stay in their homes.

So now Freddie Mac has just come out with a study that says that borrowers that get counseling have a 34 percent lower delinquency rate than borrowers without counseling. And yet this budget includes level funding of $20 million for housing counseling. So are you concerned about the rising delinquencies and shouldn't we be doing more in the counseling area to counter this trend, Mr. Secretary?

Mr. MARTINEZ. No question, I think that there is a great concern for the rising of delinquencies. We think that as we are striving to increase homeownership, particularly among our low-income and minority populations, anytime we have a foreclosure is essentially a failure or a set back. So anything we can do to continue to allow folks to own their homes is a very positive step.

The Lost Mitigation and Forbearance Program that FHA has works to prevent families from losing their homes by modifying the terms of their mortgage and delaying the foreclosure while there is reason to expect that they will be able to make good on the default. We have also put a moratorium on foreclosures in selected areas, including Baltimore, as we look into that area of predatory lending.

Yesterday I had a meeting with one of our largest private mortgage holders in the country and they were talking to me as I raised the issue with them because I think a lot of this happens in the private market as well. They were telling me, Countrywide happens to be the company I am speaking of, of the very aggressive efforts that they have of counseling and bringing assistance at a time when people seem to be having the same experience in the private markets that we are seeing in the FHA.

So the fact is that this is a sign of the times as we have had a little bit of an economic slowdown. But the fact is that not only through the FHA but also even in the private sector there seems to be a great deal of effort in counseling and helping families restructuring debt so we can help keep them in their homes.

Senator KOHL. Well, I quite agree with you. The facts seem to coincide with what you have just said, and yet your budget includes level funding of $20 million for housing counseling. All of the facts seem to indicate that the greater the degree of counseling, the lower degree of mortgage foreclosures. So, but I do not square what you are saying with the facts.

Mr. MARTINEZ. Well I just do not know that it is necessary for us to increase the budget in that area in order for us to continue the efforts that we have underway. I do not think it is a monetary problem. I think what we have to do is implement and be aggressive about what we are doing and so I believe we can carry out the function with the current funding level we have available.

You have to remember that it is about the quality of the counseling that takes. It is about the expertise of those people involved in the process and the help that they can provide to a family in need. So I am not sure additional funds in that area are going to make a difference. I think what we have available in the current funding levels will allow us to carry out the mission.

Senator KOHL. Well I thank you so much. Thank you Madam Chairman.

Senator MIKULSKI. Your questions were excellent Senator and very parallel to my own. Thank you. Senator Shelby, you have been waiting very patiently.

PREDATORY LENDING

Senator SHELBY. Thank you Madam Chairman. Mr. Secretary, I want to get back into the flipping of mortgages and the dynamic basically being created with a fraudulent appraisal, a misleading appraisal, or something like that. Has the Justice Department been called upon to get into these cases where there—and they are all over the country.

Mr. MARTINEZ. They have. I am just verifying that they have, but I am sure they have.

Senator MIKULSKI. Senator, through the U.S. Attorney's office.

Mr. MARTINEZ. There are investigations that go on and we do get success from time to time in this area. We need to do all we can there.

Senator SHELBY. But it is very, very important in your position, and in ours too, to help root out the fraud that will destroy good programs quickly such as this. The key to any loan, I suppose, whether it is in the private sector period or if it is a HUD FHA-insured loan, a VA guaranteed loan, would be the appraisal. What does the appraisal show? If there is a history of this, it seems to me like an investigation would uncover it fairly quickly and you could put a stop to it. I know it is easier said than done.

Mr. MARTINEZ. It is about our manpower and our ability to supervise. Before my phone starts ringing from all my appraiser friends, I think we should all—and as a lawyer I am always sensitive about good lawyers versus those who may stray outside the line—but there are many good appraisers out there. It isn't about the industry or the profession. It is about the people——

Senator SHELBY. Most of them are probably honest.

Mr. MARTINEZ. Absolutely. And it is just about those few that seek to step out for a momentary gain and we should prosecute those and have a sure prosecution for them.

Senator SHELBY. What they do, Mr. Secretary as you know, is they hurt good programs and they will destroy good programs if we don't root it out. And I have confidence in you to know that you are going to turn over every rock to get to it because it will destroy what you are trying to do.

Mr. MARTINEZ. Thank you Senator.

HUD LOCAL OFFICES

Senator SHELBY. Mr. Secretary in another area I think it is very important that your people on the regional level and in the national level here in Washington get along with people in various cities spread all across the country. We have had some evidence of that in my State of Alabama and you have worked some of that out and I appreciate that. But when local officials work well with the regional officials, when regional officials work well with your offices here, it just calls for a much better function in our offices, doesn't it sir?

Mr. MARTINEZ. Absolutely. Yes sir.

Senator SHELBY. And what are you doing to foster this?

Mr. MARTINEZ. Well, first of all, I think it is important to improve the morale in our Department and I have been working hard to do that. Also as I travel, this sounds simple but it is something that hasn't been done in many years, I visit our HUD offices in each of the localities.

Senator SHELBY. That's good.

Mr. MARTINEZ. And I got a clear message to our folks in HUD which is we need to work and cooperate with our local officials. I am trying also to give more authority to our field offices. I am trying to give more autonomy to HUD's regional directors and State representatives so they can have the ability to more closely work, not only with local government, but also with the private sector in their local communities; be able to make the decisions, be able to set direction and be able to work in the kind of cooperative way that I think you are describing.

Senator SHELBY. And hold them totally accountable for what they do, correct?

Mr. MARTINEZ. Absolutely. Absolutely hold them accountable. And you know there is no room for us to be the problem. I do not think that HUD should ever be the problem as it relates to dealing with the mayor's office or as it relates to dealing with a private developer who may be trying to do a project. All too often we hear that HUD is difficult to deal with; that you cannot get answers. Those are the kinds of things, frankly, I am determined to make a difference in and put an end to.

Senator SHELBY. Thank you Mr. Secretary. Thank you.

SECTION 8

Senator MIKULSKI. Mr. Secretary, I would like to come back to Section 8 and follow up on Senator Bond's questions. One of the things that both the Republican Chair and a Democratic Chair have faced is that whenever there was a shortfall they turned to HUD and usually the Section 8 accounts to pay the bill for other programs. Most often when FEMA, because they were responding to natural disasters, needed more money. So we were the bank. Senator Bond and I have been sending warnings now for a number of years and we are afraid now that we have really hit the bottom. And for the last several years Congress, as I said, has rescinded these large amounts. We hear that over in the House they are going to keep pushing this concept of getting more money out of "something called a rescission." Is there any amount of money currently available for rescissions? Just plain English.

Mr. MARTINEZ. I will let Mr. Gibbons give an answer to that question.

Mr. GIBBONS. No.

Senator MIKULSKI. That's pretty plain.

Mr. GIBBONS. Right now I have $400 million and I owe you $1.8 billion. So the answer is no, not at this time.

Senator MIKULSKI. So we could conceivably be in a situation where you are going to have to find $1.8 billion in other programs and none of them are cushy.

Mr. MARTINEZ. No. That is absolutely right. We do not have extra funds available. And the idea that HUD should be raided for the benefit of other programs, I just do not find that to be an attractive prospect and I will fight hard for that not to happen.

Senator MIKULSKI. Well we really encourage you to be in contact with the House about this particular situation. And then second, we are going to need a plan for this $1.8 billion. And I do not know what your thoughts are on that.

And let me come to the utilization rates which is also one of our problems. Year after year it seems that the same public housing authorities have difficulty utilizing vouchers and their funding is at risk of being recaptured, or they return these vouchers. Some of this is due to poor management and the other is due to simply because of prosperity and the lack of other apartments being built.

Mr. Secretary what we have discussed, landlords do not want to rent to Section 8. Now there is all kinds of reasons they do not want to rent to Section 8. Some are despicable and illegal. But others Section 8 does not pay enough when they can get higher rents. Could you tell us your views on this and how you intend to address this issue?

Mr. GIBBONS. Again, I will take the first part of your question. There is a scheduled recapture, additional recapture of the both tenant-based and the project-based in late August with the hope that it will garnish enough to meet the $1.83 billion that Congress rescinded in the 2001 appropriation bill.

Senator MIKULSKI. So we are counting on the return vouchers in August to be the bridge that brings us over these troubled waters?

Mr. GIBBONS. Yes that is correct.

Senator MIKULSKI. We will already have marked up our bill?

Mr. GIBBONS. This is from 2001's appropriation bill that we owe and we were due to recapture in August and we hope that there is sufficient recaptures available in the Section 8 program to fully meet that need. If there is not, then the Secretary will be required to go to another program in HUD that has unobligated balances, wherever that would be, and take whatever we do not have in the Section 8 program. If you add the $114 million to that amount then that, just as an additional $114 million that we will either have to get out of Section 8 or some other program by the end of September. But there is a scheduled recapture of funds again in August.

Senator MIKULSKI. Well the Committee really needs to be kept apprised of this. I know Senator Bond has a follow-up but what about the utilization issue?

Mr. MARTINEZ. Well, I was going to say that in utilization there are some things we are doing. Following up on congressional initiatives in the past but increasing the local flexibility to raise the subsidy levels. We think that is a very important initiative. Public housing authorities now have discretion to raise the subsidy levels to 110 percent of the local fair market rent. In addition to that, more surveys of localities so we can more accurately forecast and predict what fair market rents might be in different communities. As we do more surveys we will then have a better, more up-to-date list of what fair market rents should be. We think these things will help. In addition to that, the program is going to allow our Section 8 voucher holders to purchase a home with your Section 8 vouchers, I think all these things in concert will help the utilization rate.

Senator MIKULSKI. My time is up. Senator Bond.

Senator BOND. Thank you very much Madam Chair. Lots of tough issues to deal with. Let me hit on a number of them. In last year's Senate Report, we instructed the Department to develop transition plans to transfer the mark-to-market functions from the Office of Multifamily Housing Assistance Restructuring, OMHAR, to HUD's Office of Housing. What is the status of the transition? How is HUD going to ensure that it's restructuring deals are not affected? Do you have the staffing resources and capacity to continue the program?

Mr. MARTINEZ. Yes sir we do. There is still a need for the program. We are seeking the authority to extend the restructuring tools of the Mark-to-Market Program. HUD does plan to extend OMHAR for 3 years but bringing it in-house with two exceptions. The Office will not be PAS appointment and the office will be under the jurisdiction of the Assistant Secretary of Housing. So that is the way in which we intend to bring it about, but we are very much engaged in that transition, which I think, will take place in September. September is the time we anticipate—September 30th actually I guess the end of fiscal year would be the time for that.

Senator BOND. Mark-to-Market authorization expires at the end of this fiscal year. Your budget justification shows you intend to submit legislation to extend and modify the restructuring authorities. One area that troubles me is the inability of the Administration to force owners into full restructuring deals, leaving some of these properties at increased risk to fiscal and financial problems. A draft GAO report I have heard, found there were eleven properties identified as troubled and twenty three more as potentially troubled because the properties were not properly restructured by OMHAR.

Can you give us an overview of your position on the Mark-to-Market reauthorization and your views on how long the program should be extended, what specific areas the Administration intends to modify, and any forcing mechanisms you plan?

Mr. MARTINEZ. I think there is no question that the program needs to be continued. I think a 3-year timeframe is what we are talking about. Frankly, that may not be long enough. I think that as we talk about it we wonder whether we should really look at 5 years. But we are looking at a 3-year request right now and see where that puts us. I think there has been great success in some of the OMHAR restructuring. I have no doubt that from time to time they may miss the mark because they are dealing with properties that sometimes might be troubled at the front end and might be difficult to restructure them in a way that will make them solvent.

But we estimate that the savings in Section 8 for the next 5 years are really pretty significant. They are in the mid-$150 million range for the next several years. So we believe it is worthwhile to manage our program in a way that continues to make that stock of housing that is so needed available to Section 8 holders.

Senator BOND. I have a problem of particular concern in my State. Several months ago we heard that Section 202 property, the Boulevard Apartments were going to be shut down. The elderly were going to be moved out to a spot far away from their health care facilities and from the amenities that made living for the elderly there appropriate. We were delighted and everyone was excited when Washington University agreed to work with us on developing a new mixed-income multifamily property in the same neighborhood, so the current residents would not be adversely displaced. And all we had to do was have the cooperation of the Department.

Instead, for some reason, the Department is apparently bent on forcing the relocation of the residents and sale of the property by

September, which really has the residents upset. They are pushing them to an isolated and distressed area. It seemed to me that we had a tremendous opportunity. What happened?

Mr. MARTINEZ. Well, Senator, this is a project that apparently the conditions of the housing was such that it was deemed unsafe. There was fire hazard and so forth.

Senator BOND. We understand that.

Mr. MARTINEZ. What I am told is that HUD has never required a specific relocation to a certain place, but that we have given the folks a Section 8 voucher that they can utilize at their choice. So I do not think that has been a HUD requirement. We have had some regulations that have made it difficult or impossible for us to simply allow the program to go as we hope.

I have now special counsel who is reviewing the entire project and will continue to work with your staff to find a good resolution to it. I do not think our goals are any different. I just think we are constrained at times in the Department as to what we can do by the regulations that may be applicable.

Senator BOND. Well, actually they were actually directing them to be moved to Council Towers. Have you had any discussions with the current owners, or Washington University or Fannie Mae about working this out. These are all the partners that were willing to work out the development of this facility for the benefit of these disabled tenants.

Mr. MARTINEZ. Senator I have not. I think what we should do is try to find a way going forward to continue to work with your staff and the HUD staff to continue to do what we can to solve the problem in a way that is amicable to everyone concerned. I do not think HUD ought to be the problem in the deal. But there are some limitations in what we apparently can do. We cannot give preference to any given bidder as a preference to the outcome to the program. We may have a desired outcome we would like to see happen or seems to be the most sensible. But we just cannot give preferential treatment to anyone of the bidders. That would be outside what is possible or appropriate for us to do.

But I will pledge to you that we will certainly work closely with your staff to continue to move the project forward that makes the residents happy and allows us to get out of a property situation that was really a trouble property based on the safety situation.

Senator BOND. Well a lot of the entities I mentioned were willing to make significant concessions because of the importance of this to the area. Initially from our discussions with HUD and all the others, it looked like a tremendous win-win situation. So if you will make sure that everybody's is working together we will have a tremendous celebration when we move them all in.

Mr. MARTINEZ. Well, I would love to come to your place and have that celebration when we get it done. But rest assured that the direction has been to do what we can to make sure that this happens in a positive way, within the bounds of what I know we would all want to do which is the right thing legally speaking.

Senator BOND. Thank you Mr. Secretary. Madam Chair.

Senator MIKULSKI. I would like to return another point on Section 8. Exactly the point you made sir, you cannot tell anybody where to go under Section 8 because one, I think our Constitution prohibits it and two, our Fair Housing laws. But there is also another side to this. And what we are seeing is that now with the vouchers we are having new concentrations of poverty.

And you might recall that the point of HOPE VI in tearing down high-rise public housing was to get rid of—to deal with these concentrations, these zip codes of poverty. And because of the concentration, they went from poverty to also really systemic social pathology.

Okay, now what is happening is, we have gone from vertical poverty to horizontal poverty. That there are new concentrations emerging in Section 8 areas. I wonder, and I know you are going to be meeting also with the urban county people tomorrow—this is an issue they want to raise. Do you have any type of thinking going on number one to identify this and be able to track this? And then number two, are you working on some type of saturation index like we had once in tenant housing?

Mr. MARTINEZ. We do monitor that Senator and clearly what you say is a concern to us all. We don't want to end up in a situation like we had at one time, and still do in some areas, but not intended to continue the perpetuation of these high-rises with large concentrations of poverty. But we note your concern, and we have heard your concern on this, and our efforts have really focused on relocating families with information, and when we do at one of these HOPE VI housing projects on a range of different housing options, and assistance to help them access options they can afford.

We do have studies underway to track the outcome of families that do relocate from HOPE VI developments. As someone in the recent past in local government, I am a great believer in the HOPE VI program. I think it is a tremendous thing. Some of the things I have seen it do in my former community in Orlando have been very positive. The fact is that the relocation is something that has always concerned me as to what happens to these people. Where do they go? I think that is one of the weaknesses in the HOPE VI program and I think we need to strengthen that.

I think overall as the project comes up for reauthorization, I think it is a great program—one that we need to celebrate and enhance. But we need to pay close attention to what is happening to the relocations——

Senator MIKULSKI. There's a very eager staffer sitting in back of you writing notes—white shirt with the burgundy tie. Did you have something you wanted to add to amplify this? But you seemed to know that we were on the right track.

VOICE. We are very interested in working with you.

Senator MIKULSKI. What did you say?

Mr. MARTINEZ. He said he is very interested in working with the Chairwoman.

HOUSINIG PRODUCTION

Senator MIKULSKI. This then, of course though, takes us to—one of the issues that Senator Bond and I have been concerned about along with many members of the authorizers is the need for new housing production. We need to do something about the lack of affordable housing. We need to be able to increase production. Senator Bond, Sarbanes, and I looked at some of this. We wonder what are your thoughts on this? What plans do you have? What would you like to bring to the committee? And what perhaps could we do in this year's appropriations?

Mr. MARTINEZ. Well we appreciate your interest in production. I know that Senator Bond shares that passion. I am well aware of the statistics that point us in the direction to the fact that more housing production needs to be a part of our strategy. I had hoped that we would look at least in terms of my own thinking to have this year allow the Millennial Housing Commission, which is meeting—and I understand moving along very rapidly——

Senator MIKULSKI. Very hard working.

Mr. MARTINEZ. Very hard working under the leadership of Mr. Ravitch and also former Congresswoman Molinari. They are doing a great job and I am looking forward to meeting with them. I have had staff in conversations with them to see what they come up with and the range of options they bring back to us in terms of where we might go. I believe that in this year's budgetary cycle it would be very difficult for me to come to you and say here is where we can have additional funds for——

Senator MIKULSKI. So you think that is premature.

Mr. MARTINEZ. I think it is. I would prefer to work very closely with the Chairwoman and the ranking member as well as with this Millennial Commission as we look to next year in a concerted effort that we then might come up with a production program that I think we all could really see to fruition. That would be my counsel and my plea to you as we defer by a year.

FHA

Senator MIKULSKI. I think that's prudent though we are anxious about it. Let me just exercise a minute. One of the areas—I am going to go to private sector housing because we just talked about the tight squeeze in apartments, the rejection of Section 8 people. Rents are increasing. Utilities are going are up so rents are going to increase—just the nature of doing business.

I understand in the budget and also members of my rental community have talked to me that you made a proposed 25 percent increase in FHA multifamily loan limits. Am I correct?

Mr. MARTINEZ. That is correct.

Senator MIKULSKI. And that this has the strong support of mortgage bankers, realtors, AFL–CIO, mayors, home builders. Could you comment on that? And do you think that these are not the same issues but we need more production in the area of rental areas, we are doing it. Do you want to comment on it and then could you share with the committee do you think you can do this by regulation? Do you need our help?

Mr. MARTINEZ. First thing, let me say that I am delighted for that to be the one area where we have had very unanimous agreement between the mortgage bankers, the homebuilders, and myself, which I think is a great point of building on even more areas where we might agree. The fact is this is something that has not been raised for 9 years. I do believe that it will help spur production because I think that even though we may defer by a year the issue of production program, we do need to encourage more production.

So we do need legislative review for that and it would be our hope that this could happen in a timely fashion so that we can move forward in this area. I do believe that there is much that HUD can do, not only in the area, but also as we try to work more aggressively with local governments and local developers to increase housing production. I think we can increase affordable housing production even absent of a production program just by what we do and how we do it.

Senator MIKULSKI. We would like to work very closely with you on this. There have been no new FHA multifamily projects in several cities including my own in metropolitan areas. And what is being built is really very upscale or very kind of gentry oriented in downtown.

Mr. MARTINEZ. It's amazing the rents they are charging in some of those places. I saw a project in West Palm Beach, Florida, where the rents are incredible. It is great to see the economic and urban revitalization that is taking place in so many places around the country. But at the same time we need to mix in the affordable housing component, which seems to be absent in so many places as we do this.

Senator MIKULSKI. Senator Bond.

Senator BOND. Thank you Madam Chair. Mr. Secretary I know you have a lot of other things to do than read old conference reports but I have here a last year's VA/HUD conference report.

Senator MIKULSKI. Is that yours?

Senator BOND. Page thirty-six. I take it home and read it every night.

Mr. MARTINEZ. I'll start doing that now.

Senator BOND. I spilled an ice cream bar on it. Some other stains on it.

Mr. MARTINEZ. I have been looking for some summer reading.

Senator BOND. Page thirty-six, Section 233, not withstanding any other sections of law, to the extent that the Secretary determines that a multi-family property held by the Secretary is not feasible for continued rental assistance payments under such subsections (a), the Secretary may in consultation with the tenants of that property contract for project-based rental assistance payments with an owner or owners of other existing housing properties or provide other rental assistance. I wanted you to know that we have written into the law something that may be useful to you in dealing with the citizens in the boulevard.

Mr. MARTINEZ. I appreciate that and be assured that our staff is going to be in touch with yours. We are going to get this problem solved.

Senator BOND. Oh, I think they will talk about it.

Mr. MARTINEZ. You better believe it. You better believe they will. But, you see, we need to do more than talk about it. They got to get some solutions and I will push them on that.

Senator BOND. You know the Missouri slogan?

Mr. MARTINEZ. Show me. Is that it?

Senator BOND. That's right.

HOMEOWNERSHIP INITIATIVE

Mr. MARTINEZ. I thought it was.

Senator BOND. On the HOME set-aside, as I mentioned earlier, the Administration is proposing to set aside $200 million within the HOME program for downpayment assistance. The idea is interesting. I like homeownership. But I find it hard to support a set-aside in the HOME program when HUD is not proposing to add any additional funds. Taking an eligible activity and making it a requirement means a reduction of flexibility in local decision-making. Is there any good argument that I have missed why the decision making should be taken away from States and localities with regard to the use of these funds?

Mr. MARTINEZ. Well, I would point out, Senator, that in the past, a larger portion of the HOME funds have been used for downpayment assistance than what is being directed even now. So what I think the President is trying to do in this program is to very much focus the attention on downpayment assistance of a program that has already included down payment assistance as part of what it does. And while I agree with you, it does seem to go counter to a lot of what we would like to do, which is to give more local authority and more local autonomy. It does deal with a very important issue, which is home ownership, and to identify down payment as the key issue toward home ownership. I think it presents a very strong emphasis and priority into the issue of down payment assistance.

So HOME was already doing it. HOME was doing it largely to that extent anyway. So I just think it is now focusing the energies of it, and as we say, we propose and you dispose. And if more money was to go to that program we would use it wisely.

Senator BOND. Well we—I certainly share your emphasis and enthusiasm for homeownership, but we have a problem with production of housing generally and that I would hope we could focus on that. I had a question something that has been going on at HUD prior to your arrival—HUD's implementing the Single Family Property Disposition Program, the asset control areas or ACAs. And with regard to one ACA in Chicago, my staff learned, that in order to sell the foreclosed properties conveyed to a local non-profit, additional Federal subsidies in the form of a Special Purpose Grant was provided to pay for the needed repairs.

Now that is taking critically needed Federal housing funds out of one pocket and putting into another. It seems to me it is contrary to the intent of the 1998 property disposition legislation where HUD was to sell properties to local governments and qualified non-profits at a price that allowed adequate rehabilitation and resale to low-income home buyers without the need for additional subsidies.

And I do not understand why we are getting a Federal grant to pay somebody who has just made a bid on a HUD-owned single family property. Would you—I would like to have a written answer—but if you can figure out what is going on because something doesn't look right in that deal.

Mr. MARTINEZ. I know we are working on that issue and I would like to maybe give you a written answer to that. I think that would be the best way.

HOMELESS ASSISTANCE

Senator BOND. Okay. Supportive Services for homeless. Three years ago we required HUD to set aside 30 percent of the McKinney Funds for permanent housing. HUD had been and continues to spend a significant percentage of McKinney money on services instead of focusing the funds on housing. With the growing demand for permanent housing renewals there is likely going to be less money available for new construction and supportive services.

My view is that other agencies, like HHS, Labor, and VA, need to be stepping up to the plate to provide the services. The name of your agency starts with Housing. What are HUD's plans for funding services in permanent supportive housing so that we can end chronic homelessness?

Mr. MARTINEZ. Senator you are precisely correct and I look for your support and the Chairwoman's support on this issue as I try to move us into the housing business. If we do not provide the shelter, no one else will. There are other agencies of Federal responsibility that have, as part of the responsibility, the issue of services.

As I said, we have a task force working between HHS and HUD on this very issue and the clear indication from Secretary Thompson and myself to both of bureaucracies was fix this problem. We have got to get to a point where HUD dollars are going to housing, to shelter. What HUD was intended to provide. And to make sure that these people that are now under some sort of housing that HUD has provided are getting the kinds of services that they need for drug intervention, for mental illness, or for other societal issues that they are dealing with that really fall under the purview of HHS, or quite frankly as you mentioned so appropriately, Education or Labor.

I am determined that we should focus our efforts on housing while allowing these other social services to be provided by those agencies that provide it to the population at large. Frankly, I do not want to go back into this issue—I do not want to go back into it at all. But I will mention that it is a little bit like this Drug Elimination Grant Program. Law enforcement agencies, drug elimination programs around the country that are funded by the Federal government should also touch people in public housing. It should not be our role to be diverting what is going to public housing to do a function of law enforcement or drug intervention that really ought to be done by other agencies. So I don't mean to mix apples and oranges here and really even——

Senator BOND. Good point. You score one on that.

HOPE VI

Mr. MARTINEZ. Well good. Maybe I should quit right now.

Senator BOND. But no, I appreciate your focus on that.

Senator MIKULSKI. Coming back to the housing business and what happens like in Phase II. I want to talk about HOPE VI. HOPE VI expires in 2 years and my original thoughts around HOPE VI will be—was that we needed not only a new fiscal architecture but a new social architecture. Very much along your lines which was getting rid of the zip codes of poverty and pathology, enlisting the tenants in a way to community building and personal capacity building. And that we would be creating a new social architecture building on family, always building on family. Now the program expires in 2 years, but I would like to look ahead.

Now I am not into automatically renewing or rubber stamping or whatever. We have had a lot of experiences and I think most of it has been good. There has also been other problems. I wonder, what are you, what within the Department are you doing in terms of the anticipated expiration of HOPE VI? Are you looking to have a task force? Are you looking at lessons learned? Best practices? What it meant to people? What were some of the shadow sides like the reconcentration in neighborhoods and therefore creating hollow opportunities rather than real opportunities? I wonder what your thoughts are on proceeding.

Mr. MARTINEZ. Senator I agree with you that we should be looking forward and I must confess to you that having only a recent tenure at the Department that we really have not begun a serious process of analyzing HOPE VI. The fact is that is an area we should address. I think the issues that you bring to bear are all that should be on the table. We should look at all of those issues as part of how we approach continuation of HOPE VI.

But let me also add to that that I think it would be a great opportunity for us to look to the faith-based and community organizations that the President intends to engage in a more direct way, and partnership with us to look into this area as to how we might accomplish a better mix of residential areas within the communities of the relocation of the HOPE VI residents and even these new properties that are emerging.

I believe that there is a limited amount that government can do in order to make people live in certain places. I think community-based organizations and some of our faith-based organizations might be in a better position to provide assistance as we try to not only work on the relocations, but also work on the whole social structure that is necessary for these families to be successful.

I would hope that we can bring them into the equation as we look to the future. But I think clearly we should have a task force that would work closely with the Congress in going forward with a program that I think has been largely seen as incredibly successful. We also need to make sure it goes forward in a way that makes it even better and tweaks those areas that I think tweaking is needed.

Senator MIKULSKI. Well, first of all Mr. Secretary, those lights mean again that we are going to have a vote. And I anticipate we adjourn we would be through for the day. So let me just move quickly here. First of all on HOPE VI, there has been research done. Urban Institute done a lot of evaluation and Dr. Arthur Napperstack has put in a lot of time. I would hope that there would be a task force, just looking ahead.

And also, sir, I am looking ahead to the large urban counties. Often programs have been concentrated in cities. And in big cities we had the big public housing. This HOPE VI was in response to the distressed public housing and a task force on this.

Now when I go into my suburban communities, and particularly those that are so-called urban beltway communities, what we have found is that landlords are running public housing by proxy. They have taken large apartment buildings, rent only to Section 8. They take the money but they do not do any of the maintenance. They become again public housing by proxy.

I think the urban counties are going to talk with you about that again. This is a dialogue that will go on between you and I and the committee and the authorizers and so on. I am not looking for new programs, government as Big Brother, or permanent brother. But I think we need to look also at what is happening in our older communities and also where public housing exists by proxy in which there are these large apartment units, which now quite frankly I have got county executives—your kind of guy you know—that wants me to help them buy them and tear them down.

FAITH BASED INITIATIVES

So we have got a lot cooking. But before we break, first of all, thank you so much for the community tech initiative, I think it is empowerment. See I am a self-sufficiency advocate. So it is not only about housing. It is about personal capacity housing and strengthening neighborhoods. Now could you share with us, for my last question, what is the President's Faith-Based initiative for HUD?

Mr. MARTINEZ. Well let me say that I think is the most exciting thing that will be coming about as a result of this Administration. I think it is the opportunity to empower Faith-Based organizations to work in close partnership with government to provide those kinds of services as we have been discussing here today. I think that the President's intent is to ensure that as we set our Office at HUD and other offices in the various five agencies that are involved with the Faith-Based offices, that we will have a close connection with private sector, with the not-for-profit, and the community-based organizations—some of which might not be animated by faith—in order to deliver the services that government alone cannot do.

So it is about bringing in a close working partnership. It is not about taking a role of government and making it paramount or eliminating the role of government, but taking government to do what it can, but then also allowing these organizations—like Catholic Charities which you and I are so familiar with—to work in the fullness that they can.

We have been doing it for years in many ways as you pointed out. The Jewish communities, the Methodist communities, and the Catholic communities have had elderly housing that has been very successful. It is replicating that model again and again and again as we attempt to deliver the whole gamut of social services in our society. I think it has got great promise. I am very, very positive about it. Our faith-based office at HUD is already up and running. It is all still very embryonic, but I think the hope and the potential that it has, I think is tremendous.

Senator MIKULSKI. Is this new money?

Mr. MARTINEZ. Well, it's not now new money. There will be, I think, programs that will be geared to them. But it isn't new money in order to initiate the current offices. We do have certain dollars that we have earmarked for the office at HUD to be functioning. But it isn't new money in the sense of a new set of grants that are going to be awarded or something like that.

Senator MIKULSKI. Is this some kind of catcher's mitt? In other words, churches who say how can I get involved with HUD, build my community and so on, is this like a gateway into HUD?

Mr. MARTINEZ. It is. And it is also the reach out by HUD. It is the going to people like Reverend Lutz in Philadelphia who are doing so much to revitalize their communities, to engage them and say here is what HUD has available. How can we work with you?

Senator MIKULSKI. I want to give my colleague time.

Senator BOND. Thank you very much.

Senator MIKULSKI. We have a lot to talk about with that.

Senator BOND. Again this has been very helpful and we sincerely appreciate it. I just noticed in your written statement, Mr. Secretary, that you are happy to announce that Section 8 voucher holders will be able to use up to one year's worth of assistance toward a down payment on a home because of the American Homeownership and Economic Opportunity Act. Permit me to call your attention to Title 3, Section 301, paragraph A, sub-paragraph 7: Down payment assistance may provide assistance for the family in the form of a single grant as a contribution towards a down payment in connection with a purchase of a dwelling to the extent provided in advance in appropriations acts.

So if you wouldn't mind waiting until we appropriate funds for that before you go down that road, I think you would save us all some problem. We believe in homeownership, but we need to make sure that we can include that in the appropriations act before you do it.

Mr. MARTINEZ. Yes sir. We just wanted to be ready for when the money is there.

Senator BOND. Okay, we will work with you anyway we can. We very much appreciate it and looking forward to working with you. As we all know, even before this hearing, there are lots of interesting challenges which are going to make it a very rewarding and exciting several months. We thank you for your willingness to take on this very important responsibility.

CONCLUSION OF HEARINGS

Mr. MARTINEZ. I look forward to working with the Committee.

Senator MIKULSKI. Mr. Martinez, I do have one issue, which I will give to you—FHA loan limits in Howard County. They are being treated like Baltimore although they are closer to Washington. Let me hand this to you. This committee—first of all we thank you and we thank you for your patience. Again we apologize. This concludes not only this hearing but all of the hearings for VA/HUD for fiscal year 2002. And on this, the subcommittee stands recessed and we will be seeing everybody as we mark up.

[Whereupon, at 4:20 p.m., Thursday, June 14, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

NONDEPARTMENTAL WITNESSES

[CLERK'S NOTE.—The following testimonies were received by the Subcommittee on VA, HUD, and Independent Agencies for inclusion in the record. The submitted materials relate to the fiscal year 2002 budget request.

The subcommittee requested that public witnesses provide written testimony because, given the Senate schedule and the number of subcommittee hearings with Department witnesses, there was not enough time to schedule hearings for nondepartmental witnesses.

ENVIRONMENTAL PROTECTION AGENCY

PREPARED STATEMENT OF THE UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH (UCAR)

On behalf of the University Corporation for Atmospheric Research (UCAR) and the university community involved in weather and climate research and related education, training and support activities, I submit this written testimony for the record of the U.S. Senate Committee on Appropriations, Subcommittee on VA, HUD and Independent Agencies for the fiscal year 2002 budget.

UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

UCAR is a non-profit, university membership consortium composed of 66 North American institutions that grant the Ph.D. in atmospheric, oceanic, and related sciences. It is a Colorado-based corporation that manages and operates the National Center for Atmospheric Research (NCAR) and the UCAR Office of Programs (UOP). UCAR is supported by the National Science Foundation (NSF) with additional funding from the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), the Department of Energy (DOE), the Environmental Protection Agency (EPA), the Department of Defense (DOD), and the Federal Aviation Administration (FAA). In addition to its member universities, UCAR has formal relationships with approximately 100 additional undergraduate and graduate schools including several historically black and minority-serving institutions and 38 international universities and laboratories. The UCAR mission is to support, enhance, and extend the capabilities of the university community, nationally and internationally; to understand the behavior of the atmosphere and related systems and the global environment; and to foster the transfer of knowledge and technology for the betterment of life on earth.

INTRODUCTION

Now, more than at any other time in our nation's history, our security, our quality of life, and our economy depend on our investments in science and technology. The President's budget request states that, "Scientific knowledge is becoming the most sought after commodity in the world. The U.S. ranks only 6th among OECD nations in the share of GDP devoted to research and development." Yet the Administration's request for nonmedical scientific research for the nation does not even keep pace with the rate of inflation. The recently released report of the Hart-Rudman Commission on National Security supports that statement, as do leading economists, including Alan Greenspan, who agree that federal R&D investments have fostered the technological progress that has produced more than half our nation's economic growth over the past 50 years. Last year, Congress made genuine bipartisan commitments to strengthen science, engineering and long-term growth by significantly enhancing basic research investments across agencies. But the Administration's proposed budget for fiscal year 2002 falls short of constructing a strong and balanced science portfolio for the country.

NATIONAL SCIENCE FOUNDATION (NSF)

For educational progress to be continued and enhanced, and for new scientific achievements to be realized, the fiscal year 2002 NSF budget simply must exceed the Administration's total request. The Administration's budget request for NSF states, "The productivity of the U.S. scientific and engineering community—depends critically on NSF support of fundamental research." But the proposed budget includes only a very modest 1.3 percent increase for the agency, or $4.472 billion, an amount insufficient to cover even the cost of inflation. Last year, Congress wisely set a course to double the funding for the agency over five years when it provided a 13.6 percent increase. I ask the Committee to make a second installment on your fiscal year 2001 investment by supporting a 15.0 percent increase for a total NSF budget of $5.14 billion in fiscal year 2002. This is an increase that the science community has the capacity to use immediately and well. Each year NSF receives approximately 30,000 proposals and has the resources to fund about 9,000 of them. Nearly $2 billion worth of proposals rated very good to excellent through the merit review process go unfunded. Recent national competitions have produced success rates as low as 7 percent, not because of a paucity of excellent proposals, but because of lack of adequate funding. These low proposal success rates reflect a capacity for progress in this country that is not being realized.

A 15 percent increase can also be productive in terms of the NSF grant size and duration. Currently, grants average approximately $106,000 over three years. I am pleased to see the Administration directive to the Foundation for a study involving U.S. research universities in determining whether increasing the average grant size and duration will impact research productivity in a positive manner. UCAR and its university members look forward to the opportunity to work with NSF on the Administration's suggestion to examine this issue.

Within the NSF, I would like to comment on the following specific initiatives and programs:

Research and Related Activities (R&RA)

Regarding R&RA programs, the budget request language states, "These activities support areas of inquiry critical to long-term U.S. economic strength, security, and quality of life. Research activities spur new knowledge, ideas, tools and approaches that open doors to understanding and solving problems and offer increased opportunities for economic growth." Yet the request for R&RA, the heart of the nation's nonmedical basic research budget, is 0.5 percent below the fiscal year 2001 Current Plan numbers. This decrease is then reflected in the budgets of all the NSF Research Directorates. As the budget request states, "NSF investments in R&RA reflect the Foundation's three strategic goals: People, Ideas and Tools," the three cornerstones of education and opportunity for all citizens, scientific research achievement, and technological advancement. I urge the Committee to allocate for Research and Related Activities an amount that reflects an overall 15 percent increase for NSF as requested above.

Geosciences (GEO) Directorate

The fiscal year 2002 request for GEO is 0.6 percent below fiscal year 2001 Current Plan numbers. I do not understand how this decrease can possibly "support the operation and enhancement [my italics] of national user facilities," as the request language states. The GEO Directorate is this country's principal source of funding for university-based research in the atmospheric, earth and ocean sciences. GEO activities address the nation's ability to understand, predict and respond to environmental events and changes. Through involvement in such interagency programs as the U.S. Weather Research Program (USWRP), the National Space Weather Program, and the U.S. Global Change Research Program (USGCRP), GEO research advances our ability to predict natural phenomena such as severe storms, solar variability, and climate patterns that impact society. The potential threat of weather and climate disruptions to our economy is significant; both the Federal government and the private sector estimate that over $2 trillion of the U.S. gross national product is affected annually by weather and climate. Given the current struggles within our energy sector and within the economy as a whole, this is an unfortunate time to decrease research efforts that could help to anticipate weather and climate variability more effectively. I urge the Committee to allocate for the Geosciences Directorate an amount that reflects an overall 15 percent increase for NSF.

Atmospheric Sciences (ATM) Research Support.—The fiscal year 2002 request for ATM research support is 1.0 percent below fiscal year 2001 Current Plan numbers. This ATM activity funds university research that advances our understanding of the Earth's atmosphere as well as its interactions with the Sun. As our ability has increased to do more complex research on solar-terrestrial interactions and the interactions of the earth's systems, so has the cost of necessary research tools such as computation time and instrumentation. If enacted, the fiscal year 2002 request for ATM will compound this problem and cause a setback for university research including the improvement of models to advance predictions of atmospheric and Earth system processes, and the further examination of biogeochemical cycles and human impacts on weather and climate. I urge the Committee to allocate for Atmospheric Sciences Research Support an amount that reflects an overall 15 percent increase for NSF.

National Center for Atmospheric Research (NCAR).—Funded within ATM, this world-class center for atmospheric research supports the entire atmospheric and related sciences community through observational and computer facilities, instrumented research aircraft, and an extensive visiting scientist program. In fiscal year 2001, more than 1,500 researchers and students will use the NCAR facilities and approximately 150 visiting scientists will stay for extended periods. The Administration's request for fiscal year 2002 decreases the NCAR budget by 1.1 percent based on Current Plan fiscal year 2001 amounts. I urge the Committee to allocate for the National Center for Atmospheric Research an amount that reflects an overall 15 percent increase for NSF.

As a contribution within the GEO budget to the NSF Learning for the 21st Century overall priority area, we appreciate the $2.45 million being allocated for innovative approaches to education including the development of the geosciences community's Digital Library for Earth Systems Science (DLESE). We would also like to point out the UCAR program, Significant Opportunities in Atmospheric Research and Science (SOARS). SOARS, funded directly by ATM within GEO, is having a positive impact on the number of ethnically diverse atmospheric sciences graduate students through its model mentoring approach and research orientation. It is an excellent example of NSF's efforts to produce a diverse, internationally competitive workforce to meet the challenges of this new century.

Computer and Information Science and Engineering (CISE)

Within R&RA, CISE computer science research has contributed to advances in computers, software, and computer use that have benefited almost every academic discipline and revolutionized the manner in which much research is conducted. CISE provides advanced computing and networking capabilities needed by academic researchers for leading research in all science and engineering fields. The Administration's request for CISE is down 1.6 percent from the fiscal year 2001 numbers. I urge the Committee to allocate for Computer and Information Science and Engineering an amount that reflects an overall 15 percent increase for NSF.

Major Research Equipment (MRE) Programs

In the Tools section of the budget request, it is stated that, "Investments in research facilities are necessary for scientists and engineers to do world-class research." Yet the MRE account, the major NSF resource for nonmedical research facilities in this country, is cut by 20.6 percent from fiscal year 2001. I urge the Committee to examine the Major Research Equipment account cuts carefully and reconsider funding for programs that have been planned carefully and that promise tremendous advances in this country's research capabilities.

Terascale Computing Systems

As part of the Information Technology Research Initiative included within the MRE account, I urge the Committee to support the President's fiscal year 2002 request of $55.0 million for Terascale Computing Systems that will enable U.S. researchers to gain access to leading edge computing capabilities. Our nation lags behind other developed nations in high-end computing, a situation that has already adversely affected the atmospheric science community's ability to run the complex models necessary to understand and predict regional and global climate change. As the atmospheric sciences community strives to learn more about the effects of solar variability on the earth's atmosphere, space weather that impacts satellite communications, climate variability and weather patterns, the need for computational power exceeds capacity. Any advances in computing capacity will return significant scientific advancements in many fields. In the atmospheric sciences, ITR promises progress in atmospheric modeling that will enable us to effectively address many of our nation's weather and climate policy issues.

High-performance Instrumented Airborne Platform for Environmental Research (HIAPER)

While we support the great advances in science and technology that all MRE funded programs represent, we were disappointed as a community to learn that HIAPER was not included in the fiscal year 2002 budget request. Following approval of the program by the National Science Board, funding for this modern research aircraft was begun by Congress in fiscal year 2000 and continued in fiscal year 2001. We sincerely hope that funding is continued since at least one other aircraft currently in service at NSF will end its useful lifetime in the next three years, and all delays in procurement and instrumentation result in higher costs. We look forward to HIAPER's completion and to its vital contribution to our understanding of how severe weather and other climate phenomena develop and impact the nation and the globe.

Earthscope

I encourage the Committee to consider the Earthscope project for future funding. This geophysical instrument array will allow scientists to make major advances in our knowledge and understanding of the North American continent. The initial Earthscope activity, deployment of high-capability seismometers throughout the United States, will improve our resolution of the subsurface structure and lead to advances in understanding fault conditions and the rupture processes of earthquakes.

Education and Human Resources (EHR)

I urge the Committee to support the President's request of $872.0 million in fiscal year 2002 for Education and Human Resources, an 11.0 percent increase over fiscal year 2001. As we enter the 21st Century, the importance of science education at all levels and for all people is crucial. Within the budget request language pertaining to education, I applaud the Administration's call to strengthen NSF's ability to leverage institutional partnerships for the improvement of math and science education. I support also the request for increased stipends to attract our best graduates for research and teaching fellowships. However, I ask that these increases not be realized at the expense of NSF's current very successful overall programs of the Education and Human Resources Directorate, the Major Research Equipment account (addressed above), or the core research directorates (such as GEO and CISE described above).

The Administration's recommended new Math and Science Partnership Initiative is begun with $200 million in fiscal year 2002, yet the total requested increase for EHR is only $86 million. I ask that the Committee ensure that proven EHR programs with excellent track records such as Teacher Enhancement, Informal Science Education, or Undergraduate Education not be penalized.

National SMETE Digital Library

We urge the Committee to support the President's request of $26.80 million for the National SMETE Digital Library (NSDL) within the EHR. While this is a 1.3 percent decrease from fiscal year 2001, our community appreciates greatly the advances that the NSF digital library effort is providing for science education. The NSDL long-term goal is to produce a digital library of high-quality educational materials at all levels in science, mathematics, engineering and technological education (SMETE). This research, teaching and learning resource is being developed in response to needs articulated by the academic community and corporate leaders. NSDL presents a tremendous opportunity to improve access to superior instructional materials and advanced classroom technologies.

U.S. Global Change Research Program

The President's request for USGCRP activities within NSF is $187.3 million for fiscal year 2002. This amount is level with fiscal year 2000 and fiscal year 2001 allocations and therefore represents the continued erosion of NSF's contribution to this interagency program that addresses interactions among physical, biological, ecological, and human systems at various scales. Working with national and international research institutions, this program allows the atmospheric sciences community to improve prediction capabilities for climate fluctuations between excessively wet and dry periods, and for long-term climate change. This research is a critical investment for the future of this nation, its economy, and the health and safety of its citizens. I urge the Committee to allocate for the U.S. Global Change Research Program an amount that reflects an overall 15 percent increase for NSF.

NSF Priority Areas

Biocomplexity in the Environment (BE)

I urge the Committee to support the President's fiscal year 2002 request of $58.10 million for Biocomplexity in the Environment. This interdisciplinary initiative will advance our ability to understand the complex systems that are structured or influenced by living organisms and the interactions within biological systems and physical processes. We are confident that BE efforts will lead eventually to better understanding of human impacts on the environment and enhanced predictability of environmental systems, including climate, that will assist environmental decision makers and contribute to society's ability to adapt to natural hazards.

Information Technology Research (ITR)

I urge the Committee to support the President's fiscal year 2002 request of $272.53 million for Information Technology Research and to support the NSF in its role as leader of this multi-agency initiative. This investment will produce tools and capabilities that should benefit all scientific fields and much of society in the next several years. ITR promises innovations that will provide efficiencies in the way university researchers process and access data, communicate with collaborators, and share research results. Given the enormous earth systems and solar-terrestrial data sets that are critical to atmospheric sciences research, it is possible that the ITR computational effort could advance our field of science through innovative processing, archiving, and networking methods which we have not yet imagined.

Nanoscale Science and Engineering

I urge the Committee to support the President's fiscal year 2002 request of $173.71 million for Nanoscale Science and Engineering. Nanotechnology promises to revolutionize our control of matter in areas such as information technology and to change the way in which most products are made. We look forward to the manner in which it may advance research in the field of the atmospheric sciences, particularly through possible major breakthroughs in the development of new research capabilities involving technology such as computers, radars, and satellites.

21st Century Workforce

I urge the Committee to support the President's fiscal year 2002 request of $125.51 million for the 21st Century Workforce. In order to remain a global leader in most scientific fields and competitive in all areas, this country must offer the opportunity for all of our citizens to increase their understanding of science, mathematics, and technology and to meet the challenges of the dramatic global transition to a technology-literate workforce. The SOARS program mentioned above is a good example of a highly successful effort to broaden involvement in the sciences. The 21st Century Workforce is an important focus that could help to create and enhance effective programs such as SOARS.

Blue Ribbon Panel

I would like to express my support for the section of the proposed NSF budget calling for the National Academy of Sciences to create "a Blue Ribbon Panel to assess the effectiveness of the current organization of federal support for astronomical sciences." Studies of this nature can be extremely constructive and we look forward to participating in the process. However, the wording of the President's original blueprint budget stating that the panel would assess ". . . the pros and cons of transferring NSF's astronomy responsibilities to NASA," is troubling. NSF and NASA each contribute their own degree of expertise, training and infrastructure to the exploration of the universe. NSF addresses astronomy using ground-based equipment and NASA builds and operates space-based instruments. Both of these arenas are critical to the discovery of our universe's mysteries and scientific wonders. Transferring astronomical research currently performed at NSF into NASA's portfolio, would restrict any new understandings that come from a complimentary, two-tiered approach. I want to express my sincere hope that our nation continues its diversified approach to astronomy as well as other sciences.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

The Administration's request for NASA overall is $14.5 billion, a 2.0 percent increase above fiscal year 2001 estimates. As with NSF's budget, this increase obviously does not meet inflation and will necessitate the reduction and/or elimination of some excellent programs. I urge the Committee to support NASA with a modest 5.0 percent increase, or a total of $15.2 billion, for fiscal year 2002.

Science, Aeronautics and Technology

This year, NASA instituted a new budget structure eliminating the Mission Support category and moving those funds into the Human Space Flight accounts as well as those of Science Aeronautics and Technology. For purposes of comparing fiscal year 2002 proposed numbers with fiscal year 2001 estimates, I will comment on aspects of the Science, Aeronautics and Technology account using the old, fiscal year 2001 budget structure that includes Mission Support as a separate account. Based on the fiscal year 2001 budget structure, the request for Science, Aeronautics and Technology would be funded at $6.17 billion, a real cut of 0.23 percent. (This appears under the new structure as a 16.4 percent increase.) I urge the Committee to support a 5.0 percent increase, or $6.49 billion, for Science, Aeronautics and Technology in fiscal year 2002 in order to support the following NASA programs that are of critical importance to the scientific advancement and security of our nation.

Space Science Enterprise

The extraordinary mission of the Space Science Enterprise, to solve mysteries of the Universe, explore the Solar System, discover planets around other stars, understand the behavior of the Sun and its interaction with Earth, and search for life beyond Earth, is of great interest to the public as well as the academic community. These challenges form the basis of the country's space science program over the next several decades. I urge the Committee to support the Administration's request of $2.45 billion for Space Science, a 5.7 percent increase over fiscal year 2001. (The request appears in the newly structured budget as $2.786 billion, or a 20 percent increase.)

Sun Earth Connections (SEC).—The SEC program within the Space Science Enterprise formulates missions to investigate the effects of solar phenomena on Earth and on the space environment. Its overall goal is nothing short of understanding the changing Sun and its effects on the Solar System, life and society. SEC contains several missions that promise great benefit to society, and are of particular importance to our community including the following:

—Thermosphere, Ionosphere, Mesosphere Energetics and Dynamics (TIMED), the first science mission of Solar Terrestrial Probes within SEC, will help us gain a more detailed understanding of the transport of chemicals that influence climate change, as well as a better understanding of space weather variables that impact spacecraft, astronauts in space, and communications. The development phase of TIMED is complete and the launch of the TIMED mission is expected to occur this summer. I urge the Committee to support the fiscal year 2002 request of $8.4 million for TIMED mission data analysis.

—Solar-B, scheduled to launch in 2005, will provide data to help understand events such as solar mass ejections that can endanger astronauts in orbit and hit Earth's atmosphere with enough force to cause expensive communications disruptions. I urge the Committee to support the fiscal year 2002 request for $21.9 million for the continued NASA development of the Solar B mission's instrument subsystems.

Solar Probe.—I understand that difficult decisions must be made during any budget cycle, but I must express the atmospheric science community's disappointment that Solar Probe, one of the most exciting, promising NASA programs now under development, is eliminated under the requested Space Science Enterprise budget. I focus on it because it is crucial to unlocking the mysteries of the solar corona which is composed of the most energetic material in our visible solar system. If this program is eliminated, we will lose humankind's first look at the poles of the Sun, an opportunity to better understand the space weather disturbances that affect our technological and military infrastructure, and years of development of a mission that has remained within budget. I urge the Committee to continue to fund Solar Probe without moving resources from other planned solar and space physics programs.

Earth Science Enterprise (ESE)

ESE's mission is to develop space-based observation systems to improve our understanding of the complex Earth system and its response to natural and human-induced changes. Analysis of ESE data enables improvement of the prediction of climate, weather and the occurrence of natural hazards. The fiscal year 2002 budget request states that, "Earth system science is an area of immense benefits to the nation, yielding new knowledge and tools for weather forecasting, agriculture, water resource management, urban and land use planning, and other areas of economic and environmental importance." Such critical work should not be diminished, particularly at a time when our country's environmental and economic resources are under tremendous pressure. The fiscal year 2002 budget request proposes $1.51 billion, a 13.9 percent cut from fiscal year 2001, for the Earth Science Enterprise. (This appears as a 2.0 percent increase in the new budget structure.) I urge the Committee to support the Earth Science Enterprise at $1.56 billion, or a 5.0 percent increase, in fiscal year 2002.

Earth Observing System (EOS).—To answer the critical question, "How is the Earth changing and what are the consequences for life on Earth," ESE deployed the Earth Observing System (EOS) satellites to collect data on the major interactions of the land, oceans, atmosphere, ice and life that comprise the Earth system. The first phase of EOS deployments is approaching completion in the next several years, so it is understandable that the EOS budget request is down for fiscal year 2002. However, I do hope that the proposed, major cut of 10.2 percent does not jeopardize beneficial programs already underway such as the following:

—*Aura*.—The Aura mission (formerly called the EOS Chemistry Mission, or CHEM) of EOS focuses on the impact of greenhouse gases on the global climate and is therefore key to our understanding of climate change. In 2002, all of the Aura instruments will be delivered and integrated onto the spacecraft, and observatory level testing will begin leading to the scheduled launch in 2003. In addition to climate change information, this mission will provide data to answer such critical questions as whether the Earth's ozone layer is recovering and whether air quality is deteriorating around the globe. I urge the Committee to support the fiscal year 2002 budget request of $80.6 million for Aura instrument completion.

EOS Follow-On.—As the first cycle of EOS missions comes to a close, EOS Follow-On missions are being planned. This next generation of missions will provide new technology and space systems to continue global climate change observations, continue the global land cover change data set, and create improved observations of atmospheric phenomena such as global precipitation, ocean wind vectors, and aerosol levels. I urge the Committee to support the Administration's fiscal year 2002 request of $129.6 million for EOS Follow-On.

AERO-SPACE TECHNOLOGY ENTERPRISE

Aviation Safety Program

The Aviation Safety Program (AvSP) within the Aerospace Technology Enterprise has a goal of radically improving air travel, with a major emphasis on improving safety. The budget request for AvSP cuts the program from $70.85 million in fiscal year 2001 to $70.0 million in fiscal year 2002. In real dollars, this is a reduction of almost 4.0 percent. This very small piece of the NASA budget covers six critical areas, one of which is Weather Accident Prevention (WxAP), a program that develops and supports the implementation of technologies to reduce fatal aviation accidents and delays caused by weather hazards.

The world-wide demand for air travel is expected to more than double in less than two decades. If the current accident rate remains the same as it is today, the increased traffic volume could result in approximately one major accident per week. According to the National Transportation Safety Board, approximately 30 percent of all aviation accidents are weather related, and 37 percent of the fatal accidents are weather related. AvSP's specific safety goal is to develop and demonstrate technologies, many of them through the WxAP, that contribute to a reduction in aviation accident and fatality rates by a factor of five by the year 2007. I urge the Committee to support programs such as the WxAP that are critical to all air travelers by providing the Aviation Safety Program a responsible 5.0 percent increase, or $74.4 million, for fiscal year 2002.

CONCLUSION

On behalf of the atmospheric sciences community, I ask that you continue the commitment the Committee made last year to invest aggressively in our country's future. During this rare time of budget surpluses, we can afford to double NSF's budget and to continue NASA programs that promise discoveries that will benefit and advance society. History has shown that these investments will pay tremendous dividends to the country in lives saved, technologies developed, and American leadership sustained throughout the world.

On behalf of the UCAR community, I want to thank the Committee for the important work you do for U.S. scientific research, education, and training. We appreciate your attention to the recommendations of our community concerning the fiscal year 2002 budget of the National Science Foundation and the National Aeronautics and Space Administration.

PREPARED STATEMENT OF THE CITY OF NEWARK, NJ

Mr. Chairman and members of the Subcommittee, thank you for giving the City of Newark, New Jersey an opportunity to submit for the record, about projects under your jurisdiction which are very important to the people of Newark and the surrounding region. The support of this Committee has been critical in the past, and we wholeheartedly thank you for your aid to projects that have truly impacted on the people of Newark and our economy. Newark's infrastructure needs are vital to enabling us to maintain our position as a regional center for commerce, government and entertainment.

Newark is a City with vast potential, and there is a renewed vitality and sense of optimism in Newark. Newark is the largest City in New Jersey, with 275,221 residents in 1990, and ranked sixty-third in the nation in population. Newark's twenty-four square miles of land makes it the smallest of the country's top one hundred cities, with the fifth highest population density in the nation. Much of our land is taken up by Newark International Airport, higher education and medical facilities, and other institutional uses, increasing the density of our actual "livable" space. As the physical crossroads of the Northeast Corridor, the future economic viability of Newark is inextricably dependent upon the continued modernization and expansion of our intermodal transportation system, as well as systems which support these endeavors. Improvements that impact our roadway network, our rail system, and our port and airport facilities directly translate into jobs and economic prosperity for our City, State and Region. The proposals for economic development activities outlined herein may be related to water infrastructure projects, but they will actually translate to improvements in the quality of life for residents of and visitors to Newark.

The first project for which we ask your assistance is an essential wastewater/wet weather regional infrastructure improvement. It will have a tremendous impact on the efficiency and future expansion of Newark International Airport, the ability of Amtrak and New Jersey Transit to maintain railroad service in wet weather, and redevelopment of industrial property close to the Airport, known as the Airport Support Zone. We seek essential help to address the ever-worsening overflow and flooding of the combined sewer overflow system which runs through this area, in order to prevent flooding and the threat of service disruptions.

The Queens and Peddie Ditches are the principal stormwater conveyances for the East and South Wards of the City of Newark. Both ditches feed in to the Southside Interceptor and are in desperate need of cleaning and reconstruction. The regulating chamber at the intersection of the Queens Ditch and the Southside Interceptor also needs massive reconstruction. In their current state, these conveyances do not provide the necessary stormwater capacities. An average five-year storm event will surcharge these ditches and pose a major threat to the operation of Newark Airport and the Major Northeast Amtrak Rail link. The surcharge of the ditch is also the primary cause for street flooding and sewer backups in the South Ward of the City of Newark. Peddie Ditch and Queens Ditch are the two drainage channels primarily responsible for the regional flooding. These ditches are heavily silted and dysfunctional, the culverts are in disrepair and obstructions need to removed. The result is severe flooding in critical areas, including a large urban park, the Newark Airport Support Zone, the Airport perimeter, and along Amtrak's Northeast Corridor Line. During Hurricane Floyd, flooding from the Peddie Ditch caused suspension of rail services. This is a regional challenge, but jurisdictionally, falls to the already overburdened City of Newark to resolve.

The project is also critical to the development of the warehouse/industrial complex along Frelinghuysen Avenue and the Waverly Yards property to support expansion of Newark Airport. Reconstruction of the South Side Interceptor will eliminate the flooding problems on Frelinghuysen Avenue, especially in the vicinity of the critical connections with Route 22 and I–78. The removal of standing water will enhance the connections of this area to Newark Airport and further its development as an Airport Support Zone. The rehabilitation of the Queens Ditch will reduce flooding in the vicinity of International Way and Waverly Yards. This area is located immediately adjacent to the Northeast Corridor, the Airport Monorail Extension, and the proposed conference center and hotel complex.

The estimated cost of all required work is approximately $20 million. Congress has recognized the validity of the Queens-Peddie Ditch initiative by providing $475,000 through the fiscal year 2000 VA/HUD Appropriation. This has enabled us to initiate preliminary studies and design efforts to alleviate the flooding problems. The City now respectfully requests $20 million for completion of this regional project. While the City of Newark has raised the maximum bonding financing that it can to invest in its aging and deteriorating wastewater system, this regional project is beyond our capability to undertake without federal assistance. Critical federally-supported and regulated facilities—the airport and rail lines—are repeatedly threatened by the flooding of the Queens/Peddie Ditch system.

The second project I will briefly describe concerns the generation of hydroelectric power through the addition of in-line turbines at existing water transmission facilities. Newark has an extensive water collection and treatment system, spread over a large area in northern New Jersey. The City's Pequannock Water Treatment facilities and aqueduct downstream of the Charlotteburg Dam and Reservoir present a unique opportunity to recover energy that is currently dissipated in the diversion of water through various dam gatehouse and intake structures, pipeline, and downstream screen chambers. Further, the potential hydroelectric power and energy represented in the conveyance could, most of the time, offset the existing power and energy requirements of the water treatment facilities themselves, including the loads present at dams and treatment facilities. With this potential in mind, the City performed an evaluation of the power production and energy generation potential of its system.

This project proposes to construct a Water Turbine Hydroelectric Facility at the City's Cedar Grove balancing reservoir. Utilizing the existing infrastructure, this proposed facility would take advantage of the hydrostatic head on the transmission aqueduct between the West Milford Treatment plant (elev. 700 feet) and the Cedar Grove Reservoir (elev. 380 feet). This proposed facility would be capable of offsetting the City's electrical operating expenses in additional to the needs of the Water & Sewer Utility.

The proposed site lies alongside a power company easement which makes connection to the grid quite simple. The fairly static flow provided by the interceptor makes this a logical location for a turbine regulator set up. The revenue realized by this venture could potentially offset the cost to construct concrete storage tanks at the Cedar Grove site in order to meet Federal compliance for the elimination of open potable drinking water reservoirs. This method of energy recovery would be the least invasive as it could be implemented without significant disruption of our present system. It is estimated that costs for planning and design will be $2 million, and construction of the project will cost $10 Million, for a total of $12 million.

The assistance of this committee in funding these projects is vital. The rehabilitation of the Queen's/Peddie Ditch system will directly impact on service improvements for AMTRAK and Newark International Airport, facilities which are critical links in Newark's transportation network, and your support for them is crucial to our continued economic development. And your support for innovative hydroelectric energy generation will further enable the City of Newark to impact on its own environmental and economic concerns. Your attention and consideration of the needs of Newark, New Jersey are deeply appreciated.

Prepared Statement of Rogene F. Henderson, Senior Scientist, LRRI, The Lovelace Respiratory Research Institute

It is requested that the U.S. Environmental Protection Agency (EPA) continue to support the National Environmental Respiratory Center, a government-industry program to determine the apportionment of health risks among individual air contaminants and their sources from exposures of populations to complex air pollution mixtures. Funds for the Center are requested in the fiscal year 2002 EPA appropriation. It is further requested that EPA serve as the lead agency in coordinating support for the Center from multiple federal agencies.

WHAT IS THE NATIONAL ENVIRONMENTAL RESPIRATORY CENTER?

The National Environmental Respiratory Center (NERC) is a laboratory research program to improve our understanding of the contributions of individual air contaminants (and thus their sources) to the health hazards of breathing complex mixtures of air pollutants.

Recognizing a serious gap in our understanding of air quality health issues, Congress established NERC through the fiscal year 1998 EPA appropriation. The program was intended to address a set of common fundamental scientific issues faced by multiple federal agencies, states, and non-federal organizations. Accordingly, NERC is jointly supported by these entities to spread costs and foster consensus regarding research results. The Center is operated by the independent, not-for-profit Lovelace Respiratory Research Institute (LRRI) in Albuquerque, NM. LRRI has experience and facilities uniquely suited to this mission, and longstanding, high credibility with both government and industry in conducting and interpreting research aimed at contentious, high-stakes issues.

NERC is the nation's sole laboratory program focused directly on this issue.

WHAT IS THE "POLLUTANT MIXTURES" ISSUE?

Simply stated, we do not understand how small concentrations of air pollutants from many man-made and natural sources act together to cause the health problems associated with dirty air. Conversely, we do not have an acceptable ability to predict the health impacts, for better or worse, of changing the composition of the complex air pollution mixtures we actually breathe.

Environmental (and occupational) air quality regulations focus on a limited number of single pollutants (eg, ozone), pollutant classes (eg, particles), and pollution sources (eg, diesel engines), which are reviewed and debated one at a time. In reaction, research programs have also focused on one pollutant, pollutant class, or source at a time. People never breathe only one pollutant, or pollutants from only one source, at a time! People are really exposed to very complex, ever-changing mixtures of air contaminants from many sources. Congress, researchers, regulators, industry, and the public are increasingly aware that the "single pollutant" approach does not provide a true understanding of the relationship between air quality and health. This "pollutant mixtures" problem has recognized for decades, but has been avoided by agencies and research organizations because of its complexity and pressures to continue the status quo of the single-pollutant, single source regulatory-research cycle.

Every one of the several air pollution epidemiology studies in the U.S. and elsewhere during the past year that have examined more than one air pollutant suggests that it is unlikely that any population effect can be attributed solely to one pollutant or source. It is likely that combinations of pollutants act together to cause effects. Because the levels of most pollutants go up and down at the same time due to meteorology, it is also true that the few routinely measured pollutants may be blamed for effects caused solely or in part by air contaminants that are not routinely measured.

The pollutant mixtures problem is a high-stakes issue. Correctly estimating both the health-effectiveness and cost-effectiveness of air quality management strategies aimed at specific man-made pollutants and sources depends on our resolving this issue.

The problem is faced by many federal and non-federal stakeholders for different reasons. EPA faces the problem in dealing with environmental air quality. DOE faces the same fundamental problem in understanding the role of energy-related emissions in the public health burden, or how changing the composition of emissions will impact health. DOD faces the same fundamental problem in dealing with their emissions and site contamination issues. DOT faces the problem in understanding how different transportation strategies might impact public health. Multiple DHHS agencies face the problem. NIEHS has concluded that risks from chemical mixtures can not be estimated accurately from combining information from single-chemical studies. NIOSH acknowledges the difficulty of dealing with mixed exposures of workers. ASTDR is trying to place mixed exposures from waste sites into context among other exposures. CDC's office of Smoking and Health is trying to estimate whether changes in smoke composition from "safer cigarettes" actually reduce health risks. Many sectors of industry face similar problems.

All of these organization-specific dilemmas have a common fundamental underlying problem: our present poor ability to understand the health impacts of individual components of a complex exposure, and thus how changes in the complex exposure are likely to impact health. Although initiated because of environmental air pollution, the work of NERC addresses this fundamental issue in a manner applicable to many "mixture" problems.

HOW DOES THE CENTER APPROACH THE PROBLEM?

Management Strategy

It was recognized from the beginning that the mixtures problem had to be approached as a fundamental, or core, issue. It is impossible to study the health effects of every possible mixture, so a strategy has to be developed to understand the impacts of different classes of chemical when contained in a mixture. Moreover, if the work is to be responsive to the needs of many organizations, some having conflicting interests, management of the program and interpretation of results must be independent from sponsorship. Accordingly, a diverse, expert External Scientific Advisory Committee (ESAC) was formed and vested with authority for guiding development of the research strategy and approving research protocols and summary of results. The research described below was recommended unanimously by the ESAC, which is listed in Table 1.

TABLE 1.—*External Scientific Advisory Committee*

Morton Lippmann, PhD, Chair, New York University	Gerald van Belle, PhD, University of Washington

Michael Bird, MSc, PhD, DABT, C.Chem, FRSC, International Agency for Research on Cancer
John Vandenberg, PhD, U.S. Environmental Protection Agency
Bill Bunn, MD, JD, MPH, International Truck & Engine
Ron White, MST, American Lung Association
Glen Cass, PhD, Georgia Institute of Technology
Ron Wyzga, MS, ScD, Electric Power Research Institute
Jonathan Samet, MD, MS, Johns Hopkins University

Research Strategy

The Center's research strategy addresses the fundamental "mixtures" problem in a manner that has both long-term and short-term pay-off. The key problem is a lack of a database of exposure vs. health effect suitable for analysis in a manner revealing the roles of common mixture constituents. Environmental air sampling does not provide sufficient detail on exposure composition, and epidemiology does not provide sufficient detail on health outcomes. Data from laboratory studies using different protocols cannot be combined into a suitable single database. The principal goal of NERC therefore, is to create and analyze a database on mixture composition vs. health effects. The database is being constructed by a series of studies applying identical protocols and health measures to animals exposed by inhalation to complex mixtures having different, but overlapping, compositions (just like real air pollution). By using real-world, source-based pollution mixtures, or exposure atmospheres, the program will also provide important health comparisons among common pollution sources during the several years required to build the combined database.

The health responses to twelve atmospheres will be measured in 12 separate, but identically-designed, studies (Table 2). The atmospheres recommended by the ESAC include diesel (contemporary and outdated engines and fuels) and gasoline (contemporary on-road, catalyst-equipped and off-road) engine exhaust, road dust (paved and unpaved) wood smoke (hardwood and softwood), cooking fumes (meat and vegetable), tobacco smoke, and coal-fired power plant emissions. The atmospheres were selected for their variations in composition, and for their relevance to current air quality concerns. Measurements will include over 400 physical and chemical properties of the atmospheres and over 200 health variables spanning the five general areas of concern listed in Table 2. Four exposure levels of each atmosphere will be used, including levels representing realistic human environmental exposures. The basic experimental design, the several different animal "models" and the composition measurements were selected on the basis of recommendations from peer workshops involving numerous federal and non-federal scientists and technical experts.

TABLE 2.—NERC RESEARCH MATRIX

	Irritation & Inflammation	Allergies & Asthma	Defenses against Infection	Heart & Lung Function	Cancer
Diesel exhaust (contemporary, outdated)	+	+	+	+	+
Gasoline exhaust (on-road, off-road)	+	+	+	+	+
Road dust (paved, unpaved)	+	+	+	+	+
Wood smoke (hardwood, softwood)	+	+	+	+	+
Tobacco smoke	+	+	+	+	+
Cooking fumes (vegetable, meat)	+	+	+	+	+
Coal power plant	+	+	+	+	+

WHAT IS THE CENTER'S STATUS AND SCHEDULE?

The work of the Center is well underway. After pilot studies to refine the experimental design, the study of the first atmosphere, contemporary diesel emissions, is underway and will be completed during fiscal year 2001. Preparations are underway for beginning the study of the second atmosphere, hardwood smoke.

Data from each atmosphere and comparisons among pairs of atmospheres will be published as each study is completed.

The time required to complete and analyze the combined database depends on the level of funding secured. If funding is adequate to have studies of two atmospheres ongoing in parallel, the database can be built in five years. Some data analysis can be done concurrently with completing the database, but analysis of the combined database will require approximately a year after the data from the last atmosphere are acquired.

WHAT IS THE CENTER'S FINANCIAL STATUS AND WHAT SUPPORT IS BEING SOUGHT?

Completing the current research agenda within 6 years will require approximately $6 million/year. Support is being sought from multiple federal agencies and non-federal government and industry sources. Significant progress has been made, but the critical level of funding has not yet been reached. Our goal is to develop $5 million/year from federal agencies complemented by $1 million/yr from non-federal organizations.

Non-EPA sponsorship has grown continuously. Among federal agencies, the Department of Energy's Office of Heavy Vehicle Technologies has provided $300 thousand and the Department of Transportation has committed $375 thousand in fiscal year 2001 funds to NERC. Non-federal sponsorship has grown, and will approach $500 thousand by the end of fiscal year 2001. Funds have been received from the California Air Resources Board, American Chemistry Council, American Petroleum Institute, American Trucking Association, California Trucking Association, Caterpillar Inc., Cummins Engine Co., General Motors Corp., John Deere and Co., Detroit Diesel Corp., ExxonMobil Corp., Ford Motor Co., International Truck & Engine Co., Japanese Automobile Manufacturers Association, Phillips Petroleum, Salt River Project, Southern Co., and individuals. Discussions are underway with a number of additional organizations.

EPA's continued involvement in this program is critical. EPA bears the primary, although certainly not sole, mandate for the environmental air contaminants NERC is studying. Moreover, EPA funding continues to be the foundation upon which the remainder of the necessary funding is being developed. A continued commitment from EPA is thus key not only to continuing the program, but to securing continued funding from other federal and non-federal organizations.

Dialogue is being sought among relevant agencies (EPA, DOE, DOT, DOD, DHHS) to develop a multi-agency strategy for funding the program in a planned, collaborative manner, in contrast to independent contributions sought piecemeal by LRRI. It is unlikely that this important program will fulfill its mandate without an improvement in the stability and level of funding that could come from interagency agreements to incorporate the program into multiple agency budgets. Current and potential non-federal sponsors have noted their likely increased willingness to commit support to the program if there is evidence of a federal commitment to the program's success. In the view of LRRI, it is logical that EPA play the lead agency role in this interagency, government-industry program.

Lovelace respectfully requests that $3 million be designated for the National Environmental Respiratory Center in the fiscal year 2002 EPA appropriation, and that EPA be charged with the lead agency role in coordinating multi-agency support and participation in the program.

PREPARED STATEMENT OF DR. ROBERT RUBIN, PRESIDENT AND CEO, LOVELACE RESPIRATORY RESEARCH INSTITUTE (LRRI)

It is proposed that the Department of Housing and Urban Development through its constituent agencies support the renovation of the LRRI clinical facilities and purchase of necessary equipment to support LRRI's ability to maintain its high research and clinical standards, and to better provide appropriate patient data security.

LRRI has committed to a building campaign using $10M in private funds to improve its laboratory facilities and equipment. LRRI's clinical study facility is in need of renovation to better accommodate the thousands of outpatients recruited for these studies and to better maintain security of their patient information. LRRI requests $2M to help renovate this facility.

Project Impact:

LRRI, as a private non-profit research institute, places top priority on its ability to translate its basic science findings from animal models, into protocols designed to evaluate new approaches for treating respiratory disease. These protocols lead to new innovative techniques and approaches to health care.

LRRI conducts clinical studies requiring the recruitment of thousands of patients that provide the basis for making the link between genetic and cellular defects and clinical disease presentation and demographic characteristics. Currently, LRRI is conducting population-based genetic studies in:

—Chronic obstructive pulmonary diseases (COPD),

—Early detectors for lung cancer,
—Pulmonary fibrosis, and
—Mechanisms of asthma and other lung diseases in Hispanic and Native American children.

Two events have greatly enhanced the ability to better understand the mechanisms of human disease in communities. One is the dramatic advance in molecular and cellular biology over the last 10 years, especially in human genetics. The other is the ability to collect and process data using advance computer systems and statistical techniques. This process called "molecular epidemiology" makes the link between genetic and cellular defects and clinical disease. LRRI has formed collaborations with national and local a private health providers to collect and manage patient data to carry out their "molecular epidemiological" studies. These partners include, the:

—Lovelace Health Systems (LHS),
—Albuquerque Veterans Administration Medical Center (VA),
—University of New Mexico School of Medicine (UNM), and the
—University of Miami School of Medicine (UMSM).

Given the nature of the clinical studies performed, LRRI's facility requires security mechanisms well beyond those of ordinary medical clinics. As one can well imagine, this facility is the repository of very sensitive personal data, including that linked to an individual's DNA. To carry out this responsibility for privacy and confidentiality, there is a need to renovate the facilities and equipment necessary to be physically and electronically impenetrable to all but those who have specific and authorized access.

The existing 8,000 sq. ft. facility was constructed in the 1950's and requires renovation and upgrades to provide a suitable, efficient, functional and secure facility. The proposed project would require reconfigured space, upgrades to meet current fire and safety codes, new interior finishes, new plumbing, upgraded electrical and a new heating, ventilation and air conditioning system.

The current clinical trial's facility is occupied in part by other LRRI functions. Some of these functions will need to be relocated to provide the required additional space for the clinical studies. Unfinished space is being made available in the new research facility included as part of the $10M LRRI campaign. The proposed project will include the completion of 8,000 square feet of the unfinished space for this purpose.

Accordingly, to meet this responsibility and to improve LRRI's ability to conduct its clinical studies, we respectfully request $2M. The responsible Federal agency is the Department of Housing and Urban Development—EADI.

PREPARED STATEMENT OF DR. FLOYD J. FROST, JR., PH.D., SENIOR SCIENTIST, LOVELACE RESPIRATORY RESEARCH INSTITUTE (LRRI)

It is proposed that the Environmental Protection Agency (EPA) support the funding request of a consortium of agencies, led by the Lovelace Respiratory Research Institute (LRRI). This diverse and expert team, which includes the University of New Mexico (UNM), New Mexico School of Mining and Technology (NM Tech), state and local public health and environmental agencies, and municipalities will provide a comprehensive study on the health and other risk effects from waterborne arsenic.

THE PROBLEM

The U.S. Environmental Protection Agency (EPA) recently lowered the maximum contaminant level (MCL) for arsenic from 50 to 10 parts per billion (ppb). According to the EPA, this revised MCL will affect thousands of community water systems located primarily in areas of the country with high naturally occurring arsenic in surface and ground water, such as New England and the western states. Because of the expense of removing arsenic and the large number of systems affected, revising the arsenic MCL will have significant economic consequences. EPA estimates the annual costs of compliance to be $218 million. However, a study by the American Water Works Association Research Foundation (AWWARF) estimates the costs to be closer to $600 million.

EPA based their assessment of arsenic-related risks primarily on a report by the National Research Council (NRC) that concluded, "there is sufficient evidence from human epidemiological studies in Taiwan, Chile, and Argentina that chronic ingestion of inorganic arsenic causes bladder and lung cancer, as well as skin cancer." However, the NRC also noted important limitations of the scientific data and recommended further research to characterize a possible dose-response relationship at low exposures to arsenic in drinking water. The NRC report emphasized that "With minor exception, epidemiological studies of cancer are based on populations exposed to arsenic concentrations in drinking water of at least several hundred ppb. Few data address the degree of cancer risk at lower concentrations of ingested arsenic".

According to the EPA, removing arsenic from drinking water will prevent the occurrence of and death from arsenic-related bladder and lung cancers and possibly cardiovascular and hypertensive diseases. The EPA estimated that lowering the arsenic MCL from 50 ppb to 10 ppb will prevent 28 bladder and lung cancers each year. The number of cardiovascular and other deaths prevented was not quantified. These estimates of prevented cases or cancer were obtained by extrapolating cancer risk from populations in southern Taiwan consuming high waterborne arsenic levels (about 500 ppb) to U.S. populations consuming low waterborne arsenic levels (less than 50 ppb). The EPA acknowledged that their linear model "could overestimate risk at low doses" and that the overestimate increases as the exposure level decreases. The NRC estimate of the number of arsenic-caused cancers was 1⁄74th the EPA's estimate (0.4 cases vs 28 cases). Recent epidemiological information also suggests there may be no increased risks from low dose arsenic exposures in U.S. and European populations. Given the uncertainty in the risk assessment, the EPA concluded "decisions about safe levels are public health policy judgments".

The NRC recognized the limitations of the available data and recommended additional studies to refine the dose-response relationship between arsenic ingestion and cancer of the skin, bladder, and lung, especially at low doses. Such studies are "deemed to be of critical importance for improving the scientific validity of risk assessment".

The EPA's own Science Advisory Board recommended that EPA set an interim standard that would affect only a small number of drinking water systems. This would allow time to improve arsenic health risk estimates, as well as to examine uncertainties over the feasibility of treatment and the cost of compliance. Although the proposed treatment technologies have been used for many years for other purposes, they have never been used for arsenic removal, and there is no information beyond laboratory experiments to demonstrate that these technologies will work in full scale treatment plants. Many of these concerns are addressed by this proposal.

Until recently, there were no studies of U.S. populations exposed to elevated drinking water arsenic levels. Thus, it was not clear whether the Taiwan findings could be extrapolated to U.S. populations. Drinking water at lower levels of arsenic. However, several recent studies suggest that U.S. populations exposed to lower arsenic levels may not be at elevated risks of bladder and lung cancer. In 1999 the EPA published a study of a cohort or group of 4,045 Millard County, Utah residents exposed to drinking water with 14 to 166 ppb arsenic. This cohort was formed from Church of the Latter Day Saints records. Participants were followed to determine if they had died. If so, the cause of death was identified. Efforts were made to determine the waterborne arsenic exposures (arsenic level and number of years the person drank the water) for each cohort member. Of the participants, 2,203 had died at the time of the study. The authors observed no association between arsenic exposure in drinking water and mortality due to bladder, lung, liver or kidney cancer in the Utah cohort. No increased risk of death was found for heart disease or stroke. These were unexpected results based on findings of the Taiwan and South American studies.

Another U.S. study and one European study found that there was no association between the risk of bladder cancer and arsenic exposure. The authors concluded that their findings were not statistically consistent with the findings of the Taiwan study.

COSTS OF COMPLIANCE

The new arsenic standard will affect approximately half of all New Mexico drinking water systems. The estimated annual costs of compliance for New Mexico drinking water systems range from $49 to $60 million. This is a large fraction of the total costs for all drinking water utilities in the United States. The average monthly bills will be approximately $41–$46 per month for customers of large water systems and $90 per month for customers of small water systems. However, for some smaller water systems, the average monthly water bills could increase to over $500/month. For many rural areas, the costs of drinking water will exceed the EPA affordability levels and result in considerable reallocation of both community and household resources. These costs are very high for economically disadvantaged New Mexico populations living in rural areas. Other people living in rural areas in other states will also find their water bills drastically increased as a result of the regulation. There have been no rigorous studies of the costs of this regulation for small drinking water system, or the economic consequences of the rule on these communities.

TRANSPORTATION RISKS

Compliance with the arsenic rule will require transportation of massive amounts of toxic chemicals to and from water treatment plants in the affected areas. The City of Albuquerque has 92 wells located mostly in residential neighborhoods, many of which must be treated. We estimated the chemical transportation requirements for meeting the proposed arsenic standard and the number of miles traveled by employees. Based on the miles traveled and the expected number of fatal accidents per million miles traveled, we estimated the number of people likely to die and the years of life lost. Depending upon the treatment type selected by the utility, we found that the number of years of life lost will be greater than or equal to the number saved from reduced cancer risks.

Our study of transportation risks suggested that if the risks from water treatment are considered, the regulation may increase rather than reduce the loss of life. Furthermore, our study did not look at risks to water treatment plant operators or to local citizens and emergency response personnel from toxic chemical spills. Since the study was limited to Albuquerque, there is considerable uncertainty over the nationwide effect of the rule on transportation related deaths.

ECONOMIC CONSEQUENCES

A study completed for the American Water Works Association (AWWA) suggested that an increased water bill of over $50 per household per year could raise serious affordability concerns for people living in poverty. This might cause low-income households to make tradeoffs that would be detrimental to the family's health and welfare. In many states, and especially in the U.S. Southwest, the monthly rather than yearly increases in water bills will commonly exceed the $50 affordability threshold.

A study by the Brookings Institution and the Harvard Center for Risk Research came to the same conclusions. They argued that mandated increases in the costs of water treatment will force families to reallocate their resources away from other expenditures. Some of this reallocation will be away from other health risk reduction activities, such as diet, medical care, pharmaceuticals, etc. If the reduced risk from lowering the arsenic standard is less than the increased risk from resource reallocation, then, the rule will cause a net increase in the risk of premature morbidity and mortality. The methodologies used are relatively new, and there are currently insufficient data to accurately estimate the health effects from specific resource reallocations in communities affected by the arsenic rule. However, for many rural vulnerable economically disadvantaged populations and the elderly on fixed incomes, the monthly drinking water bills will increase more than $50 rather than $50 per year.

THE PROPOSED PROJECT

The funding request involves a consortium of agencies, led by the Lovelace Respiratory Research Institute (LRRI) and including the University of New Mexico (UNM), New Mexico School of Mining and Technology (NM Tech), state and local public health and environmental agencies, and municipalities (Albuquerque, and Rio Rancho). This team, lead by LRRI, was assembled recently to assist the City of Albuquerque and other southwest utilities in responding to the EPA's proposed arsenic regulation. It has a unique combination of skills in epidemiology, water treatment, economics, toxicology, geology and applied public health and is centrally located in a region most affected by the rule. The following goals are proposed:

A. Assess the total costs of the arsenic rule and, especially, the costs for economically disadvantaged communities.

Because of new information on treatment technologies and clarification on whether treatment wastes may be legally sent to landfills, the earlier cost estimates should be updated. More importantly, prior cost studies did not extensively examine the costs to small communities. These communities do not have the economies of scale of larger cities, in which costs can be spread over a large number of people. EPA recognized that many small communities may be severely affected by the rule but indicated that states will be able to subsidize these communities through loans and grants. For New Mexico, the revolving fund for all drinking water and wastewater capital projects has only $40 million available annually. The total capital costs for New Mexico of the arsenic rule will exceed $400 million.

B. Assess the consequences if small communities and their residents reallocate a large fraction of their resources for drinking water treatment. (a) Is there is evidence of adverse health effects from community or household resource reallocation for mandated water treatment? (b) What is the magnitude of the increased health risks? (c) How certain or uncertain are those added risks? (d) Are the adverse consequences from resource reallocation smaller than the benefits from the new water treatment?

C. Are the adverse public health consequences of water treatment greater than the benefits?

Our preliminary study of transportation risks associated with the new arsenic standard was restricted to the City of Albuquerque and did not consider anticipated risks from the toxic chemical spills, exposure of workers to hazardous substances or construction of new water treatment facilities. Since this preliminary study, we have become aware of work done by others on risks and benefits of moving hazardous material to approved landfills. We propose to extend our work to a nationwide study and compare our findings with other studies of adverse consequences of environment interventions.

D. Extend the scientific base for waterborne arsenic health effects.

Although studies conducted in Taiwan and South America have found adverse health effects from waterborne arsenic exposure, studies conducted in the United States (U.S.) and Europe have not been statistically consistent with the risks predicted from the Taiwan studies. We feel that research-funding agencies have been reluctant to fund U.S. studies because of the likelihood that the studies will not find adverse health effects. Similarly, we believe that U.S. researchers are reluctant to propose or conduct these studies since negative findings are unlikely to further their careers. Therefore, the studies most needed to evaluate the justification for the proposed multibillion-dollar arsenic rule have the lowest funding priority.

Health examination studies should be conducted in communities with potentially high-risk populations and with high levels of waterborne arsenic to determine if there is evidence of predicted elevated risks of cardiovascular disease and skin cancer. Cohort mortality studies should be conducted in several locations to replicate the Millard County, Utah study conducted by EPA. This study did not detect any evidence of elevated cancer risks from arsenic exposures. The follow-up period for the Millard County study should also be extended to include more recent deaths. The requested funding will be used to conduct health examination surveys and cohort mortality studies of arsenic exposed communities (e.g. Fallon, NV, Socorro, NM)

E. Water treatment technology evaluation.

There are a number of unresolved issues related to drinking water treatment. These issues arise due to lack of current knowledge and experience in building and operating the proposed treatment plants. Federal funds are available to help build pilot treatment plants but there is insufficient funding to evaluate and summarize their performance and calculate the costs of construction and operation. Data from several pilot treatment plants need to be reviewed and summarized to address these issues. Furthermore, treatment technologies for smaller communities need to be evaluated for cost and feasibility. Funding will also be used for this evaluation.

F. To oversee the proposed studies, we will assemble an external panel of epidemiologists, drinking water engineers, economists, risk assessors and toxicologists.

This panel will meet and prepare an annual report evaluating the project. The purpose of this panel is to insure that the studies address the most important public health issues, that they are rigorously designed and conducted and that the findings are justified by the data.

Accordingly, we respectfully request $1.6M in funding.

PREPARED STATEMENT OF THE UNIVERSITY OF MIAMI, CORAL GABLES, FLORIDA

Mr. Chairman and Members of the Subcommittee: we appreciate the opportunity to submit testimony today on behalf of my colleagues at the Rosenstiel School of Marine and Atmospheric Science at the University of Miami. We respectfully seek your continuing support in fiscal year 2002 for two important projects.

First, my colleagues and I seek fourth-year funding through the Environmental Protection Agency for the National Center for Atlantic and Caribbean Coral Reef Research to conduct research to protect and preserve the nation's endangered coral reef resources. Next, we seek third-year funding through the National Aeronautics and Space Administration for the National Center for Tropical Remote Sensing Applications and Resources—the SAR Facility. We have special expertise in both coral reef research and in remote sensing technology and applications, and it is for these reasons that I appear before you today.

Founded in 1925, the University of Miami is the largest private research university in the Southeastern United States and the youngest of 23 private research universities in the nation that operate both law and medical schools. Through its 14 colleges and schools, more than 2,300 faculty instruct almost 14,000 students in more than 170 areas of undergraduate study and 192 disciplines for graduate and professional study.

The Rosenstiel School is recognized as one of the premier academic oceanographic research facilities in the world and ranked among the top six nationally. Located on a 16-acre tract on Virginia Key in Miami's Biscayne Bay, the Rosenstiel School provides the only subtropical marine research facility in the continental United States, and is adjacent to and coordinates daily with the national NOAA lab and research facility. Because of our unique location—the Gulf Stream is immediately offshore; just to the south lies a vast expanse of the only living coral reef off the shores of the continental United States; and just to the east the Florida-Bahamas Carbonate Platform—we are a unique resource for the nation, as well as for Florida and the southeast region. Our more than 100 recognized scientists, researchers, and educators collaborate closely with other institutions—in Florida and beyond—in addressing critical national, regional, and Florida natural, environmental, and climatic challenges.

NATIONAL CENTER FOR ATLANTIC AND CARIBBEAN CORAL REEF RESEARCH

The Rosenstiel School is a major national research institute focusing on the living coral reef as a unique and critical national and international resource, critical to the vitality and health of the marine life and coastal marine environment of Florida and the southeast. Florida's coral reefs are the only living coral reefs off the continental United States. The environmental, climatic and man-made challenges to and stress on these precious resources are extensive. To preserve and protect our reefs requires the organization and coordination of the broadest range of talent and resources.

We have committed to a major investment of our resources and seek to enlist a broad range of Florida, regional, and national expertise to coordinate the most advanced and productive research that will ensure the protection of living coral reefs. For fiscal year 2002 we seek $3 million through the EPA to continue and expand the National Center for Atlantic and Caribbean Coral Reef Research Center (NCORE), begun in fiscal year 1999, a parallel to the Hawaii-based and focused effort. Together, these centers will provide a balanced, focused, critical scientific mass brought to bear on these precious, unique, and vanishing natural resources.

Coral reefs are the only ecosystems on Earth constructed entirely by the secretions of a complex assembly of marine animals and plants. They are economically important resources of humans as sources of food, medicinals, building materials, and coastal protection. They are especially invaluable, in our increasingly crowded world, for the spiritual relief they provide the millions of people that journey to visit them each year. Unfortunately, changes in water quality due to coastal development, environmental changes potentially related to global climate change, and over-exploitation of coral reef fisheries resources, are contributing to world-wide coral reef deterioration at an alarming pace, especially in the Caribbean region. U.S. coral reefs in Florida are down-stream of the entire Caribbean coral reef system, and are thus dependent on Caribbean reefs for larval recruits and maintenance of fisheries stocks. Florida reefs could also be affected by pollutants released into marine waters by nations in the region, and from our own rivers via discharge into the Gulf of Mexico.

Scientists are hampered in helping government make critical and socially difficult management decisions by our rudimentary understanding of coral reef ecosystem processes. Coral reef environmental research has historically been piece-meal and under-funded with few attempts at true interdisciplinary process-oriented research. Local changes in water quality, broad scale environmental changes potentially related to global climate change, and fisheries over-exploitation of coral reef ecosystems, are thought to be contributing to deterioration of coral reefs worldwide.

NCORE initiated a new approach to coral reef research. The Center seeks to coordinate U.S. coral reef policy and research, and assemble major national and international initiatives pertaining to coral reefs. The Center fosters organization and collaboration within the U.S. scientific community, leads the development of a new level of understanding of the processes and environmental conditions necessary for the establishment, survival and sustainable use of coral reef ecosystems public. The initial focus is on problems faced by coral reefs in Florida and U.S. possessions in the Caribbean region (Puerto Rico and the U.S. Virgin Islands), but also to coordinate these efforts with those of coral reef researchers within the Caribbean region, in recognition of the importance of larger scale relationships between coral reef systems within the Inter-America Seas.

NCORE invites nation-wide participation of scientists with expertise in coral reef research, and involves scientists from related disciplines. The specific functions of the National Center for Atlantic and Caribbean Coral Reef Research are: (1) to study fundamental scientific aspects of the function of coral reef ecosystems; (2) to establish a database of past and ongoing coral reef research in the United states; (3) to directly interact with resource managers at local to national levels; (4) to provide accurate, but non-technical syntheses to the public; and (5) to develop instrumentation and observational strategies for coral reef research.

NATIONAL CENTER FOR TROPICAL REMOTE SENSING APPLICATIONS AND RESOURCES

Synthetic Aperture Radar (SAR) is a powerful remote sensing system, able to operate in all weather, day or night. Space-based satellite SAR systems are able to monitor the movement of targets on land or ocean in near real-time, map topography with unprecedented accuracy, assess storm and flood damage to urban and rural infrastructure, localize forest and wildfires, and assess the soil properties of farm land (soil moisture) and health of vegetation. SARs provide data that can be used to forecast major volcanic eruptions and understand the earthquake process, and a host of other military, civilian, and scientific applications. SAR can make a major contribution to Southcom's various missions, especially in the area of drug interdiction, civil defense (e.g., storm damage assessment) and natural hazard mitigation (e.g., volcano forecasting).

The University of Miami uses SAR data for a variety of terrestrial and oceanographic applications, and has a large amount of experience in the analysis and use of SAR data, and expertise in the operation of satellite downlink facilities.

The SAR receiving facility currently under construction by the University of Miami will provide a unique capability for the Caribbean and southeastern U.S. region. Applications of this ground receiving station will be extremely diverse. They will include a wide range of scientific applications in earth, atmosphere and ocean sciences, as well as more practical applications in the fields of environmental monitoring, natural hazard assessment, civil defense and defense tactical applications. The station will initially operate at X-band, and will be capable of receiving data from a wide variety of low-Earth orbiting satellite systems. Our initial operational capability will focus on SAR and visible and infrared imagery. The combination of these sensor and imaging types will provide an unprecedented wealth of information of the earth's surface. Future upgrades of the Center's system should include the capability to collect L- and S-band downlinks, as well. In all cases a high priority will be placed on high reliability data reception to low elevation angles (2 degrees above the local horizon). A heavy launch schedule over the next few years will place numerous new satellites with SAR and other radiometric sensors in space that requires at least two antennas to enable data recovery in the case of simultaneous satellite passes or situations with a blocked line-of-sight. The voluminous flow of data associated with high-resolution satellite sensors such as SAR will require high reliability data archiving with rapid retrieval, rapid dissemination of data (both raw and analyzed to some specified level) to selected users, full data analysis capability, and higher level software products to aid in data interpretation.

In fiscal year 2000 you provided support to launch this vital initiative and continued your support in fiscal year 2001. We hope to continue our partnership with the National Aeronautics and Space Administration in fiscal year 2002 and seek $1.5 million for the NASA Advanced Tropical Remote Sensing Center, the SAR Facility.

For purposes of illustration, I will provide three example applications for the SAR Facility: natural hazard mitigation, drug interdiction, and educational opportunities.

NATURAL HAZARD MITIGATION AND CIVIL DEFENSE

It is appropriate that NASA's remote sensing research program include a component of natural hazard mitigation for Central America, South America, and the Caribbean region. The reason is that the nation's long-term security is best served by having prosperous, politically stable democracies in this hemisphere. The U.S. has a role to play in promoting the economic and political "health" of the region. Even ignoring strictly humanitarian considerations, problems such as poverty and civil unrest can negatively impact the U.S. directly and indirectly. Examples include illegal immigration, reliance on a drug economy, and lost market opportunity for U.S. business. The poor infrastructure that is endemic to much of the hemisphere is exacerbated by natural disasters via negative feedback: poor countries generally have weak infrastructure that is easily damaged by natural disasters (witness the recent devastation in Honduras during passage of tropical storm Mitch). The region is especially vulnerable to earthquakes, volcanic eruptions, and hurricanes. Techniques to mitigate the effects of these disasters can be of enormous benefit.

Volcano Hazard.—For volcanoes, SAR interferometry generates accurate topographic data (DEMs) enabling accurate prediction of the direction and speed of lahars, a type of volcanic mudslide. Lahars are often the major “killer” from volcanoes, claiming more than 20,000 lives at Nevado del Ruiz, Colombia in 1985. A mudslide from a dormant volcano was responsible for most of the casualties in Honduras during the recent passage of tropical storm Mitch. SAR interferometry also allows detection of pre-eruption swelling of a volcano, which can be used to help predict eruption. Such studies are only of academic interest at present, because it takes so long to acquire imagery from available ground stations (three month or longer waits are typical). A South Florida ground station can provide at least several weeks warning of major eruption to authorities in the affected area.

Earthquakes.—Are a major hazard for much of the western Americas. A relatively small earthquake in Los Angeles several years ago caused $20 billion in damages. An earthquake in the 1970s in Managua, the capital of Nicaragua, so severely damaged the city that parts of it were never rebuilt. The associated economic devastation is believed by many social scientists to have been a contributing cause to two decades of civil war. At present most researchers do not feel it is feasible to predict earthquakes. Nevertheless, SAR can play a critical role, by precise mapping of ground displacement during earthquakes, which can lead to better understanding of the earthquake process. SAR is probably the best tool available for this type of study. In some cases, SAR is the only tool, e.g., in inaccessible parts of South America.

Hurricane Damage Assessment and Civil Defense.—As more people and societal infrastructure concentrate in coastal areas, the U.S. is becoming more vulnerable to tropical cyclones. Hurricanes are the nation’s costliest natural disaster. Early and accurate warnings can save millions of dollars and reduce the detrimental impact of storms. Quick-look SAR can assess storm damage and identify areas of immediate need. SAR images can also provide information on sea state and surface wind speed, important to weather forecasters and civil defense planners. Radar frequencies are also sensitive to the intensity of rain and can better locate concentrations of strong rainfall within tropical storms. Such real time observations can provide better estimates of storm strength prior to landfall.

DRUG INTERDICTION

Small, fast moving boats are one of the major vectors for drug delivery to the coastal southeastern United States. These boats travel exclusively at night without running lights, and are very difficult to detect. Their low radar cross sections mean the P3 Orion surveillance aircraft equipped with standard ocean surface radar only rarely detect them (the targets have to be fairly close to the aircraft). Given the large area of ocean used by traffickers, and the relatively small numbers of surveillance flights, detection success rate is low.

SAR can easily detect such targets. It does so not by direct detection of the boat, but by wake imaging. The center line wake of a small fast moving boat is typically 100–200 meters long, and is relatively smooth compared to the adjacent ocean surface, and thus is easily detected by standard civilian SAR. A recent test by the Office of Naval Intelligence had virtually 100 percent success at detecting this class of target during nighttime RADARSAT passes. The test target was a fiberglass boat operated by the University of Miami.

At the present time, there are two civilian SAR satellites that a South Florida ground station can access, RADARSAT and ERS–2. On an average, we can expect to image a given “patch” of ocean every few days with these systems, and thus would not detect and track all targets. On the other hand, we could expect to track a much larger number of targets than are currently possible, and could generate, with “post-diction” analysis, an accurate picture of where most illegal traffic is originating and landing. Over the several day transit period of these small craft to the southeastern U.S., approximately 30 percent to 40 percent of targets would be detected in “real time” with available satellite coverage, enabling direct interdiction by the Coast Guard. This assumes, of course, that the data can be made available quickly. The South Florida SAR Facility will make this possible.

In summary, satellite SAR data could make a major impact on the drug interdiction program. However, realizing its full potential requires a dedicated facility in South Florida, integrated into the chain of command of the drug interdiction effort, and integrated into academic efforts in the area of rapid data processing and raid image analysis. The proposed University of Miami SAR ground station is an excellent vehicle for this collaboration.

EDUCATION: K–12, UNDERGRADUATE, GRADUATE LEVEL

The Florida Space Grant Consortium (FSGC) is a voluntary association of seventeen public and private Florida Universities and Colleges, all the community colleges in the state, Kennedy Space Center Astronaut Memorial Foundation, Higher Education Consortium for Science and Mathematics, and Spaceport Florida Authority. Collectively, it serves more than 230,000 university students (100 percent of the public enrollment and approximately 75 percent of total Florida enrollments). FSGC represents the State of Florida in NASA's Space Grant College and Fellowship Program. As one of the sixteen founding Space Grant Consortia, it was formed in 1989 when the federal Space Grant program was implemented. With programs now in place in fifty states plus Puerto Rico and the District of Columbia, Space Grant now joins the Land Grant and Sea Grant Programs to form a triad of federally mandated programs addressing critical national needs in education, research and service.

The new National Center for Tropical Remote Sensing at the University of Miami would provide a unique opportunity for FSGC to begin dedicated education and training of the use of space-based remote sensing and imagery. Furthermore, opportunities also exist to broaden the educational use of the Tropical Remote Sensing site through a K–12 education partnership with Miami-Dade County Public Schools. We envision the development of a magnet studies program in space science that would be modeled after a very successful existing program in marine science and technology in collaboration with the University of Miami. This partnership would educate first-rate students and help produce the next generation of scientists, engineers, and technology experts for the nation.

Mr. Chairman, we recognize that this will be another difficult year. However, we hope that you and your colleagues on the Subcommittee will find it possible to continue to support these two important initiatives that deal with issues of crucial national importance. The results of the work at the National Center for Atlantic and Caribbean Coral Reef Research will make important contributions to the national effort to save our endangered coral reef communities. Similarly, our proposal for the SAR Facility will enable us to continue our partnership with NASA in developing a vital resource in South Florida that will benefit the entire nation.

Prepared Statement of the California Industry and Government Central California Ozone Study (CCOS) Coalition

Mr. Chairman and Members of the Subcommittee: On behalf of the California Industry and Government Central California Ozone Study (CCOS) Coalition, we are pleased to submit this statement for the record in support of our fiscal year 2002 funding request of $2.5 million from the Environmental Protection Agency (EPA) for CCOS as part of a Federal match for the $8.7 million already contributed by California State and local agencies and the private sector.

Ozone and particulate matter standards in most of central California are frequently exceeded. In 2003, the U.S. Environmental Protection Agency (U.S. EPA) will require that California submit SIPs for the recently promulgated, national, 8-hour ozone standard. It is expected that such SIPs will be required for the San Francisco Bay Area, the Sacramento Valley, the San Joaquin Valley, and the Mountain Counties Air Basins. Photochemical air quality modeling will be necessary to prepare SIPs that are acceptable to the U.S. EPA.

The Central California Ozone Study (CCOS) is designed to enable central California to meet Clean Air Act requirements for ozone State Implementation Plans (SIPs), as well as advance fundamental science for use nationwide. The CCOS field measurement program was conducted during the summer of 2000 in conjunction with the California Regional PM_{10}/$PM_{2.5}$ Air Quality Study (CRPAQS), a major study of the origin, nature, and extent of excessive levels of fine particles in central California. CCOS includes an ozone field study, a deposition study, data analysis, modeling performance evaluations, and a retrospective look at previous SIP modeling. The CCOS study area extends over central and most of northern California. The goal of the CCOS is to better understand the nature of the ozone problem across the region, providing a strong scientific foundation for preparing the next round of State and Federal attainment plans. The study includes six main components:

- —Developed the design of the field study
- —Conducted an intensive field monitoring study from June 1 to September 30, 2000
- —Developing an emission inventory to support modeling
- —Developing and evaluating a photochemical model for the region
- —Designing and conducting a deposition field study
- —Evaluating emission control strategies for the next ozone attainment plans

The CCOS is directed by Policy and Technical Committees consisting of representatives from Federal, State and local governments, as well as private industry. These committees, which managed the San Joaquin Valley Ozone Study and currently managing the California Regional Particulate Air Quality Study, are landmark examples of collaborative environmental management. The proven methods and established teamwork provide a solid foundation for CCOS. The sponsors of CCOS, representing state, local government and industry, have contributed approximately $8.7 million for the field study. The federal government has contributed $500,000 for some data analysis. In addition, CCOS sponsors are providing $2 million of in-kind support. The Policy Committee is seeking federal co-funding of additional $8.5 million to complete the data analysis and modeling portions of the study and for a future deposition study.

For fiscal year 2002, our Coalition is seeking funding of $2.5 million from the Environmental Protection Agency (EPA). There is a national need to address issues related to the 8-hour ozone and $PM_{2.5}$ standards set by EPA. Nationally, research and data gaps exist in effectively coordinating particulate matter and ozone control strategies, in understanding ozone deposition, and in using models for future ozone and particulate matter SIPs (and updating existing SIPs). Federal assistance is needed to address these issues effectively, and CCOS provides a mechanism by which California pays half the cost of work that the federal government should otherwise pursue. California should not have to bear the entire cost of addressing these issues.

The CCOS field study took place concurrently with the California Regional Particulate Matter Study—previously jointly funded through Federal, State, local and private sector funds. The quality and concurrency of these studies brought both technical and financial benefits that merit EPA funding for the purpose of addressing national, SIP-related issues.

Financially, CCOS was timed to enable leveraging of the efforts for the particulate matter study. Some equipment and personnel served dual functions to reduce the net cost of the CCOS field study. The study itself was also very cost-effective since it builds on other successful efforts including the 1990 San Joaquin Valley Ozone Study.

From a technical standpoint, carrying out both studies concurrently was a unique opportunity to address the integration of particulate matter and ozone control efforts. Regarding the need for ozone deposition research (how much ozone is removed from the ambient air by plants and soil surfaces), California is an ideal natural laboratory for studying deposition given the scale and diversity of the various ground surfaces in the region (crops, woodlands, forests, urban and suburban areas). With respect to SIP-based modeling, evaluating and testing various models with the extensive data provided by both CCOS and the California Regional Particulate Matter Study will advance the use of models for future SIPs nationwide since the region covered by the study is large and technically challenging. Improving model performance for SIPs is essential since models drive emission reduction targets and control strategies. The federal government should fund continuing efforts to improve the performance of models used in SIPs.

Thank you very much for your consideration of our request.

Prepared Statement of the Integrated Petroleum Environmental Consortium

It is proposed that the U.S. Environmental Protection Agency continue to support a focused, university-based program, the (IPEC), with the goal of increasing the competitiveness of the domestic petroleum industry through a reduction in the cost of compliance with U.S. environmental regulations. Continued Federal support of $2 million is specifically requested as part of the fiscal year 2002 appropriation for the Environmental Protection Agency through the Science and Technology account or other source the Subcommittee may determine to be appropriate

Mr. Chairman, on behalf of the Integrated Petroleum Environmental Consortium (IPEC), I would like to take this opportunity to thank the Subcommittee for providing $1.5 million in funding for IPEC in the fiscal year 1998 and fiscal year 1999 appropriations bills and $750,000 in the fiscal year 2000 and fiscal year 2001 appropriations bills for the Environmental Protection Agency (EPA). Under the Subcommittee's leadership both houses of Congress and the final appropriations bills included funding for this Consortium each year. Specifically this funding was provided for the development of cost-effective environmental technology and technology transfer for the domestic petroleum industry. With funding under the Science and Technology account of EPA, IPEC is implementing a comprehensive mechanism (Center) to advance the consortium's research expertise in environmental technology. IPEC's operating practices and linkages to the independent sector are ensuring that real problems in the domestic petroleum industry are addressed with real, workable solutions. The consortium includes the University of Tulsa, the University of Oklahoma, Oklahoma State University, and the University of Arkansas.

We are pleased to report that, as envisioned and proposed by the Consortium, State-level matching funds have been obtained to support IPEC, creating a true Federal-State partnership in this critical area. In fiscal year 1998 and fiscal year 1999, IPEC received $375,000 in matching funds from the Oklahoma State Reagents for Higher Education. We anticipate receiving an additional $185,000 from the Reagents as matching for each of the fiscal year 2000 and fiscal year 2001 appropriations when received from the EPA. A similar amount has been pledged by the Reagents as matching funds for a fiscal year 2002 appropriation.

Since December, 1997 IPEC has worked closely with the EPA to meet all internal requirements for funding of research centers. These efforts have resulted in an excellent working relationship with the Environmental Engineering Division of the EPA National Center for Environmental Research and Quality Assurance with IPEC's grant from EPA (fiscal year 1998 appropriation) finalized September 2, 1998.

Since September 1998 IPEC has funded 18 research projects that promise to help ease the regulatory burden on the domestic petroleum industry. These funded projects include: the use of plants to clean contaminated soils; the natural biodegradation of gasoline by microorganisms in the absence of oxygen; the beneficial use of petroleum wastes as road materials; the control of the formation of toxic hydrogen sulfide in oil wells; the development of simple sampling devices to replace expensive live organisms to assess toxicity in contaminated soils; the treatment and disposal of naturally occurring radioactive material (NORM) in oil production equipment; the remediation of brine-impacted soils; development of a sound scientific basis for ecological risk assessment of petroleum production sites; improving the economics of well plugging; improving the efficiency of oil-water separation; and enhancing the remediation of oil contaminated soils. These projects were first reviewed and approved by our Industrial Advisory Board (dominated by independent producers) as relevant to our mission of increasing the competitiveness of the domestic petroleum industry and finally reviewed and approved by our Science Advisory Committee (SAC) on the basis of scientific quality. The EPA has endorsed each member of the IPEC SAC.

IPEC has provided $1,612,071 in funding for these projects. However, another $1,432,226 in funding for these projects have been secured by the investigators as matching funds from industry and industry organizations such as the Gas Research Institute, the American Petroleum Institute and the Petroleum Environmental Research Forum. This is over and above the matching funds provided by the Oklahoma State Reagents for Higher Education. IPEC has pledged to Congress to work for a 1:1 match of federal dollars. As you can see IPEC is living up to that promise! IPEC is a true public/private partnership.

IPEC's technology transfer program is directed toward providing useful tools for environmental compliance and cost reduction to independent producers. The first objective of this program is to raise the level of technical training of the field inspectors of the oil and gas regulatory bodies of Oklahoma and Arkansas including the Oklahoma Corporation Commission, the Arkansas Oil and Gas Commission, and the Osage Agency of the Bureau of Indian Affairs with regard to first response to spills, pollution prevention, and remediation of oil and brine spills. The second objective of this program is the development of checklists for independent producers to assist them in environmental audits ("staying out of trouble checklists"), remediation of oil and brine spills, and first response to spills. Oklahoma and Arkansas regulatory field agents are being used to deliver these tools to the independent producers.

IPEC's technology transfer flagship is the International Petroleum Environmental Conference. In November, 2000 IPEC held the 7th International Petroleum Environmental Conference in Albuquerque, NM. There were 348 in attendance from all facets of the oil and gas industry including independent and major producers, service industry representatives, and state and federal regulators. The program for the 7th conference featured several plenary lectures, over 135 technical presentations, exhibits, a poster session and a special symposium on characterization and remediation of the subsurface. Co-sponsors of the conference included the Interstate Oil and Gas Compact Commission, the Railroad Commission of Texas, the Texas Independent Producers and Royalty Owners Association, the Gas Research Institute, the Oklahoma Independent Petroleum Association, the Oklahoma Energy Resources Board, the EPA Office of Research & Development, and the National Petroleum Technology Office of the U.S. Dept. of Energy. IPEC sponsors the participation of fifteen state regulators from Oklahoma and Arkansas each year at the conference. The 8th International Petroleum Environmental Conference will be held November 6–9, 2001, in Houston, TX.

THE CONTINUING CRISIS IN THE DOMESTIC PETROLEUM INDUSTRY

Much attention has been paid recently to the high costs to consumers of gasoline and natural gas. Energy experts agree that the price increases currently being experienced were brought on by short-term shocks that resulted from sudden changes in supply and demand. On the demand side there has been increasing demand for petroleum worldwide, especially in the Far East. On the supply side, OPEC and several non-OPEC countries have removed significant amounts of crude oil from production. Once again America has been held hostage to the marketing whims of foreign producers and we are in no position to respond. Since 1990 there has been a 27 percent decline in the number of jobs in the U.S. exploring and producing oil and gas and the number of working drilling rigs has seriously declined. Thirty-six refineries have closed since 1992 and no new refineries have been built since 1976. Most energy analysts agree that we need to "drill our way out" of the current high prices and shortages; however, the industry's infrastructure (in terms of equipment and trained personnel) cannot support the amount of drilling activity current prices would otherwise encourage.

In order to regain energy security the U.S. must have a coherent domestic energy strategy. Some may be willing to entrust the health of the U.S. economy to windmills and solar-powered cars, but it will be a stable and profitable domestic oil and gas industry that is the nation's best defense against OPEC market manipulations. The current upswing in crude oil prices may eventually stimulate the industry. However, the record low prices that preceded the current increases have left many companies in financial positions that make it impossible to launch new exploration activities. Additionally, many in the industry are simply uneasy with the volatility that has come to characterize the industry. Much of U.S. domestic oil production is carried out by independent producers who are producing from mature fields left behind by the majors. Although there is a significant resource base in these fields, this is the most difficult and the most costly oil to produce. The independent producer has only one source of revenue—the sale of oil and gas. There is no vertical depth to his business.

A major factor in the high cost of production in the domestic petroleum industry is the cost of environmental compliance. IPEC is working to strengthen the domestic petroleum industry and reduce the impact of market volatility by providing cost-effective environmental technologies to solve those problems that are having the greatest impact on production costs. These efforts are especially needed now as we develop new sources of natural gas such as coal-bed methane. This new source of natural gas is desperately needed to meet our nation's energy demand but coal-bed methane presents some unique environmental problems which must be addressed in a cost-effective manner. A strong and stable domestic petroleum industry is our best hedge against foreign market manipulation.

IPEC'S RESPONSE TO CRITICAL RESEARCH NEEDS

IPEC is continuing to fulfill its pledge to you of responsiveness to the needs of domestic petroleum industry and fiscal responsibility. IPEC continuously probes our Industrial Advisory Board for new ways to assist the industry and seeks out cost-effective technical solutions to these problems through an aggressive solicitation and review process.

IPEC will continue to work with the domestic petroleum industry to provide technical solutions to those environmental problems that represent the greatest challenge to the competitiveness of the industry. In addition, IPEC proposes to launch two new technology transfer initiatives.

NEW IPEC INITIATIVES

Petroleum extension agents

There are over 3,500 independent oil producers in Oklahoma and Arkansas. Most of these are very small companies, the "mom and pop" operations whose business is run from the pickup truck and the kitchen table. These small producers are especially vulnerable to industry volatility. The ongoing crises in the domestic petroleum industry requires a multi-level response with a specific outreach effort to the smallest of the independents, those without in-house experts, to advise them on the latest production techniques to minimize costs; how to prevent spills and the accompanying clean-up costs; and how to comply with state and federal regulations to avoid fines and costly loss of production. This type of assistance is not currently provided by the private sector engineering and service companies because the small producers cannot afford private sector services of this kind.

IPEC proposes to provide these services to small independent producers through a system of petroleum extension agents (PEAs). Up to ten (10) full-time equivalent petroleum professionals will be hired in a pilot program to call on small independent producers throughout Oklahoma and Arkansas to provide direct assistance in every aspect of operating a profitable and environmentally friendly business as an oil producer. These PEAs will be seasoned veterans of oil and gas production in the state in which they will operate and operate from the major oil producing areas of the states. PEA services will be made known to producers through advertisements and through field agents of the Oklahoma Corporation Commission and the Arkansas Oil and Gas Commission. PEAs will also seek out and call on small producers in the same way that county agricultural extension agents call on small farmers. In difficult situations PEAs will be able to draw on the significant resources of the IPEC institutions and the IPEC Industrial Advisory Board. Since representatives of the state regulatory bodies serve on the IAB, IPEC can also serve to help resolve problems.

The results expected from this program are: a reduction in the costs of production and increased profitability among small independent producers; lesser numbers of small producers going out of business; less abandoned resources; greater state tax revenues; and increased compliance with environmental regulations and greater protection of natural resources. The Oklahoma and Arkansas PEA program will serve as a model and pilot program for other oil-producing states.

Train the trainer—Expanding environmental know-how among Native Americans

Historically much of the oil and gas produced in Oklahoma has come from Indian land. In the culture surrounding the early days of oil and gas production there were few environmental regulations or concerns. This past lack of proper environmental practice resulted in damage that is still visible and problematic today. The most persistent problems are soil and groundwater contamination resulting from spills and discharge of produced water brine. Historic brine are seen today as scars on the land, devoid of vegetation, and highly eroded. Because of the age of these spills many of the companies responsible are no longer in business. Historic brine scars not only represent a loss of use of land but also a continuing source of pollution of valuable surface waters and groundwater. These brine impacted sites contain salt which jeopardizes public and private sources of drinking water through runoff and drainage. The sole solution to this continuous source of salt pollution is remediation. Many Oklahoma tribes occupy lands scarred by brines and the salt in these scars threatens tribal recreational and drinking water sources.

IPEC proposes to provide tribal organizations with an in-depth training program in environmental know-how related to these oil and gas problems resulting in the education of Native American environmental specialists. Further IPEC proposes to give these specialists the skills and resources to allow them to train others in methods of remediation of oil and brine spills and pollution prevention.

The remediation of crude oil spills and brine scars does not require expensive instrumentation or highly specialized equipment. The major equipment required is simply earth-moving equipment. Most tribes have equipment of this type currently used for road work and other municipal projects. Therefore, remediation of oil and brine spills is not economically beyond the reach of the tribes. By “training the trainer” IPEC extends its reach beyond the classroom into the tribes building self-sufficiency within the tribes to solve environmental problems on tribal lands and protect precious natural resources.

FUNDING OF IPEC

IPEC is seeking appropriations of $2 million for fiscal year 2002 through the Environmental Protection Agency. This request is a $1.25 million increase over the fiscal year 2001 appropriation. The additional funding will be used to expand our activities into coal-bed methane and fund the PEA pilot program and the Train the trainer program. The consortium will be responsible for at least a 50 percent match of federal appropriations with private sector and state support over any five-year period. The Consortium will be subject to annual review to ensure the effective production of data, regulatory assessments, and technology development meeting the stated goals of the Consortium.

PREPARED STATEMENT OF THE AMERICAN LUNG ASSOCIATION AND THE AMERICAN THORACIC SOCIETY

The American Lung Association and the American Thoracic Society appreciate the opportunity to submit written comments to the Senate VA–HUD Appropriations

Subcommittee. The American Lung Association is the nation's oldest voluntary non-profit health organization. For the better part of a century, the American Lung Association has fought for better lung health for all Americans.

The American Thoracic Society (ATS), founded in 1905, is an independently incorporated, international professional and scientific society which focuses on respiratory and critical care medicine. The ATS has approximately 13,500 members. The Society's members help prevent and fight respiratory disease around the globe, through research, education, patient care and advocacy.

Lung disease is the third leading cause of death in the U.S., responsible for one in every seven deaths. More than 25 million Americans suffer from a chronic lung disease. Lung diseases cost the U.S. economy an estimated $89.1 billion annually. Lung diseases represent a spectrum of chronic and acute conditions that interfere with the lung's ability to extract oxygen from the atmosphere, protect against environmental of biological challenges and regulate a number of metabolic processes. Lung diseases include: emphysema, chronic bronchitis, lung cancer, tuberculosis, pneumonia, influenza, sleep disordered breathing, pediatric lung diseases, occupational lung diseases, sarcoidosis and asthma.

Nearly all of these lung diseases are severely impacted by air pollution.

How well or how poorly our lungs perform is contingent on the quality of air around us, making the impact of air pollution inescapable. Air pollution remains a primary contributor to a high prevalence of respiratory diseases.

For the past 35 years, the American Lung Association and the American Thoracic Society have conducted scientific, public health and educational programs to fight air pollution and to improve the quality of air we breathe. We remain strong supporters of the Clean Air Act and its amendments. We can attest to the significant impact the Clean Air Act has had upon cleaning our nation's air and allowing us all to breathe a little easier.

While the nation has made great strides in improving air quality, many areas across the nation experience unhealthy levels of air pollution many days each year. The EPA reported that in 1997, approximately 59 million American lived in counties that did not meet the current federal air pollution standards. The number of people living in non-attainment counties jumps to 107 million when the revised air quality standards are used. Tens of thousands of Americans still die prematurely each year from complications associated with exposure to air pollution.

OPPOSE CLEAN AIR ACT LEGISLATIVE RIDERS

Mr. Chairman, the American Lung Association and the American Thoracic Society are greatly concerned that the VA–HUD appropriations bill has become a target in the past for substantive legislative riders seeking to change laws that protect the public health and our environment. Often these riders seek to delay the implementation of clean air standards that protect our clean air or reduce the level of protection to our environment.

In particular, the Clean Air Act has become the target of narrow changes attached to EPA's appropriation. Actions taken by the EPA to improve air quality enjoy broad public support. A recent poll conducted by the American Lung Association found that a majority of Americans support cleaner burning fuels and cleaner burning cars. In the same poll, 60 percent of respondents felt that the air quality was worse than it was ten years ago. Clearly, Americans are aware and concerned about air quality issues.

THE U.S. SUPREME COURT AND THE CLEAN AIR ACT

The American Lung Association and the American Thoracic Society are very pleased with a recent series of decisions issued by the U.S. Supreme Court related to the Clean Air Act. Recent high court rulings have affirmed the founding principle of the Clean Air Act adopted more than thirty years ago: that clean air standards should be based on protecting public health—not on cost.

The Court upheld the constitutionality of EPA's 1997 standards for particle pollution (soot) and ozone (smog). The Court rejected without reservation all challenges to the EPA standard for soot. EPA estimates that meeting this standard will save 15,000 lives each year.

In the same decision, the Court remanded the implementation of the 1997 8-hour ozone standard back to the Environmental Protection Agency. The Court did not question the underlying health science or the level of the standard, but rather ruled that EPA must develop a reasonable approach to implementing the standard.

Underlying both components of the U.S. Supreme Court's decision was the affirmation of the health-based standard setting process and it reliance on the best available scientific data. The high court preserved the vital role that sound science should play in setting those standards.

In a separate decision, the Supreme Court rejected without comment an appeal from seven states and several power companies of a Federal Court of Appeals, D.C. Circuit upholding EPA's "NO_X SIP Call." This regulation requires 22 states east of the Mississippi and the District of Columbia to reduce nitrogen oxide (NO_X) emissions from power plants in the Southeast and Midwest that contribute to smog in the Northeast. A 2000 study for the Clean Air Task Force found that power plants in the Midwest, Southeast and Northeast contribute about 25 percent of the NO_X emissions that result in unhealthy levels of smog in these areas. The study estimated that excess smog in these areas causes more than 200,000 emergency room and hospital admissions and 6 million asthma-attacks each year.

EPA found these reductions necessary in order to achieve compliance with the old one-hour ozone standard, not the more stringent eight-hour standard affirmed by the Supreme Court last week. However, the emission reductions resulting from this rule will be essential for areas in the eastern U.S. to meet the 1997 eight-hour ozone standard.

THE EPA BUDGET

The Administration has indicated it will seek $7.3 billion for EPA for fiscal year 2002. This is one-half billion less than Congress provided in fiscal year 2001. We are concerned that a one-half billion-dollar cut in the EPA budget will significantly reduce the effectiveness of EPA programs.

From the information made available to the public, it is unclear what the Administration's spending priorities for EPA are. The overall priorities released so far indicate that the President will propose an overall increase in State and Tribal Grants to administer programs and will grant increased flexibility to meet environmental goals.

We strongly urge Congress and the Administration to maintain the commitment to Sound Science Clean Air research activities of the Science and Technology programs. Recent studies supported by EPA grants are adding new understanding to the role outdoor and indoor air have on the initiation and progress of respiratory diseases. Now is clearly not the time to reduce EPA's commitment to research that is essential to providing the underpinning sound science needed for future air quality standards reviews and pollution control regulations.

EPA AND STATE GRANTS

Much of the work in implementing, monitoring and enforcing the Clean Air Act is conducted at the state and regional level. While much of the key leadership is provided by EPA, a good share of the work is done by states. The proposed increase is a positive step forward. However, given the work load remaining, meeting the existing new ozone and particulate standards, the preparation needed for new standards and ongoing work in other clean air activities like air toxics, other criteria pollutants attainment programs, and permits—additional support for state clear air activities is needed.

EPA: NIEHS SUPERFUND BASIC RESEARCH PROJECT

Mr. Chairman, the ALA/ATS would like draw special attention to the NIEHS Superfund Basic Research project. This program focuses on the health effects of toxic chemical exposure at Superfund hazardous waste sites, and devises methods for minimizing the relative health risks of exposure for clean up site employees. The ALA/ATS believes the EPA has made an excellent investment in the future of human protection and worker safety by supporting this research and training program. We recommend $45 million for transfer to the National Institute of Environmental Health Sciences (NIEHS) for superfund research and an additional $23 million for Superfund worker training. The NIEHS Superfund research program is conducting exciting research to develop biomarkers for measuring the actual burden of environmental toxics in humans.

THE VA MEDICAL AND PROSTHETICS RESEARCH PROGRAM

The American Lung Association and the American Thoracic Society strongly encourages the Subcommittee to support the VA medical and prosthetics research program by recommending an fiscal year 2002 appropriation of at least $395 million. Equally important, we urge the Committee to make a commitment to support sustainable funding increases in subsequent years. For too long, this program has suffered from a roller coaster of threatened cuts and flat funding, with an occasional hard won increase of significant size. This instability has made it difficult for the VA research program to maintain its momentum and to attract to VA the talented and skilled personnel necessary to conduct cutting edge research and to care for veterans. It has also caused low morale among clinician-scientists who, based on their experience caring for veteran patients, spend years developing research proposals only to learn their projects have been approved, but cannot be funded, or whose budgets are cut before the work is done.

Three core needs justify the ALA/ATS recommendation:

1. Increase investigator-initiated research to foster recruitment and retention of high quality physician-investigators and to continuously strive to advance diagnosis and treatment of conditions that particularly afflict veterans.

VA has identified four areas where there is a critical need for more effort and in which VA is uniquely positioned to make substantive contributions: treatment of chronic diseases; diagnosis and treatment of degenerative diseases of the brain; improving quality of care; and research involving special populations, particularly those who suffer from spinal cord injury, stroke, diseases of the nervous system and post traumatic stress disorder.

2. Expand training programs to attract the next young generation of clinician-scientists to careers in the VA health care system. VA's Career Development programs are a national resource for training the next generation of clinician scientists, those health care practitioners who treat patients and address questions that have a direct impact on care.

3. Accommodate biomedical research inflation so that, at a minimum, VA can maintain its current level of research activity on conditions prevalent in the veteran population such as prostate cancer, diabetes, heart diseases, Parkinson's disease, mental health, spinal cord injury and aging related diseases. Additional funding is also required for VA to implement more stringent controls on research involving human subjects and to ramp up new oversight programs.

In summary, the VA medical research and prosthetic research program is a high quality, peer-reviewed scientific program that is leading the way to new treatments and cures for veterans and all Americans. The ALA/ATS strongly urge the Subcommittee to provide $395 million for the VA medical and prosthetic research program to continue its excellent work.

Mr. Chairman, the American Lung Association and the American Thoracic Society appreciate the support you and the Subcommittee has shown for the EPA and the VA medical and prosthetics research program. We look forward to continue to work with you on these valuable programs.

Prepared Statement of the Upper Mississippi River Basin Association

The Upper Mississippi River Basin Association (UMRBA) is the organization created 20 years ago by the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin to serve as a forum for coordinating the five states' river-related programs and policies and for collaborating with federal agencies on regional water resource issues. As such, the UMRBA has an interest in the budget for the U.S. Environmental Protection Agency (EPA), particularly as it affects funding of water quality programs administered by the states.

STATE POLLUTION CONTROL GRANTS (SECTION 106)

Funding for Section 106 State Pollution Control Grants would decline by $2.0 million under the Administration's fiscal year 2002 budget request. While the UMRBA is pleased that this request comes close to matching the substantial funding increase implemented in fiscal year 2001, the states are reluctant to see any reduction in resources for this important program. The federal Section 106 funds, in combination with the states' matching dollars, support the core state water quality programs, including water quality assessment and monitoring, surface and ground water standards, point source permitting, and training and public information. Adequate funds are particularly critical to supporting the states' development and implementation of total maximum daily loads (TMDLs). The tasks associated with developing TMDLs for impaired waters include watershed characterization, computer modeling and related analyses, allocation of permissible loads, development of TMDL reports and plans, and public outreach and stakeholder development. These responsibilities have the potential to overwhelm state agency resources that are in many cases already strained. Regardless of how controversies surrounding EPA's TMDL rule are ultimately resolved, TMDL planning and implementation promises to be a major challenge. Further increases in funding to enable states to meet these challenges, as well as base program needs, will be imperative.

CLEAN WATER STATE REVOLVING FUNDS

The UMRBA is deeply concerned about the lack of support in the Administration's fiscal year 2002 budget proposal for the Clean Water State Revolving Fund (CWSRF), which helps address wastewater infrastructure needs. The CWSRF has made tremendous contributions to improving the nation's water quality. In contrast to fiscal year 2001 funding of $1.35 billion, the budget request for fiscal year 2002 is only $850 million, a reduction of 37 percent. Given the flexibility to redirect wastewater funds to the Drinking Water State Revolving Fund (DWSRF) and Section 319 nonpoint source grants, even less than $850 million might well be available for the wastewater SRFs. While the flexibility to shift among these three programs can help the states address their most pressing needs, it is no substitute for adequate funding. Estimates of the nation's wastewater infrastructure needs certainly vary, and EPA is scheduled to release an updated Clean Water Needs Survey next year. However, there is absolutely no doubt there are substantial unmet needs. The high demand for these funds underscores the need to reauthorize CWSRF funding and increase annual federal appropriations to $2 billion.

SEWER OVERFLOW CONTROL GRANTS

The UMRBA strongly supports efforts to address the problems of combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs). Wet weather events are a major source of water pollution and require an integrated effort to address them. However, the states do not support the Administration's proposal to provide $450 million for CSO/SSO grants while simultaneously reducing CWSRF funding by $497 million. The fiscal year 2001 Omnibus Appropriations bill authorized the new sewer overflow grants, but only in years when the CWSRF receives at least $1.35 billion. This provision clearly reflects Congress' judgment that both programs address critical needs and should not be traded off against one another. The UMRBA concurs with this judgment and urges Congress to maintain the requirement.

STATE NONPOINT SOURCE GRANTS (SECTION 319)

The Administration has requested $237.5 million for the Section 319 state nonpoint source (NPS) grant program. This is the same amount that was appropriated for fiscal year 2001 and $37.5 million above the fiscal year 2000 enacted level. Nonpoint sources are one of the major causes of water pollution in the Upper Mississippi River Basin, which drains the nation's agricultural heartland. Adequate funding for Section 319 and complementary efforts, including the USDA's conservation programs, is essential to meeting the region's major water quality challenges. While the UMRBA is pleased that the Administration is seeking to maintain last year's increase, it should be recognized that continued progress in addressing nonpoint pollution will require increased resources for Section 319.

RESEARCH

The UMRBA is concerned with the adequacy of water quality research funding under the Administration's budget. The budget request includes increased funding in some important areas, including almost $1 million for research on suspended solids and sediment. Turbidity and sediment are major problems on the Upper Mississippi River. This research promises to help inform development of criteria for non-contaminate suspended solids and sediment and to identify cost-effective strategies for managing these materials. Another notable increase is $1.9 million in new funding for decision support tools to help states in developing TMDLs. However, these increases should not come at the expense of equally important research efforts. The Administration's budget proposes cutting $690,000 from EPA's work to develop integrated water quality criteria. These criteria, which will incorporate sediment guidelines and aquatic life and wildlife criteria, represent a promising risk-based approach to protecting aquatic life in complex systems such as the Upper Mississippi. The URMBA is also concerned with a proposed $339,000 cut in research on habitat alteration, biocriteria, nutrients, eutrophication, and harmful algal blooms. This is precisely the sort of information needed to inform efforts to address the Gulf of Mexico hypoxia problem. As states, federal agencies, and local communities struggle with increasingly complex water quality problems, it is essential to support the research that will provide the scientific underpinnings of sound solutions.

PREPARED STATEMENT OF THE UPPER MISSISSIPPI RIVER BASIN ASSOCIATION

The Upper Mississippi River Basin Association (UMRBA) is the organization created 20 years ago by the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin to serve as a forum for coordinating the five states' river-related programs and policies and for collaborating with federal agencies on regional water resource issues. As such, the UMRBA has an interest in the budget for the Federal Emergency Management Agency (FEMA).

Mitigation.—Of particular interest to UMRBA is funding for mitigation of future flood hazards. Mitigation, which is the on-going effort to reduce or eliminate the impact of disasters like floods, can include measures such as relocating homes or community facilities off the floodplain, elevating structures, or practicing sound land use planning. Mitigation planning and implementation measures are essential to reducing the nation's future disaster assistance costs. Unfortunately, FEMA's fiscal year 2002 budget proposes a dramatic reduction in funding for mitigation activities. In particular, the Hazard Mitigation account would be cut from its fiscal year 2001 level of $46 million, to only $19 million in fiscal year 2002. The National Flood Mitigation Fund would also be reduced from $29 million to $20 million.

The Hazard Mitigation Grant Program (HMGP) is a particularly popular and enormously helpful program. Authorized under Section 404 of the Stafford Act, the HMGP provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. Because grant funds are made available during the immediate recovery from a disaster, it offers a particularly attractive option for communities that may not otherwise consider mitigation. It is not yet clear what the full impact of this spring's flooding along the Upper Mississippi River may be and whether HMGP funding will be made available for mitigation activities. However, following the disastrous 1993 Midwest floods, the demand for HMGP funds was so high that Congress provided two supplemental appropriations. Since 1993, mitigation funds have been used to acquire or elevate 10,372 flood prone properties in 236 communities in the five UMRBA states. The effectiveness of this mitigation investment is demonstrated by the fact that many of these were repetitive-loss properties that will no longer experience flood damage. The tax payer savings are evident.

Given the effectiveness of the HMGP and other mitigation programs, the UMRBA urges Congress to restore funding for mitigation programs in FEMA's fiscal year 2002 budget. In addition, UMRBA recommends that Congress reject the Administration's proposal to reduce the federal share for HMGP grants from 75 percent to 50 percent. By reducing the cost-share for mitigation, the incentive for communities to take advantage of these grants is also reduced. Frequently, out of compassion for those affected by a disaster, the nonfederal cost share for federal disaster recovery assistance is often relaxed or eliminated. In those instances, affected communities and their residents may find such disaster relief a more attractive option than mitigation, which would reduce their future risk. We need to ensure that mitigation remains a viable option for floodprone communities.

National Flood Insurance Program.—The President's budget proposes two cost saving reforms for the National Flood Insurance Program (NFIP). Of particular concern to UMRBA is the proposal to terminate flood insurance coverage for repetitive loss properties after one more claim. While repetitive loss properties need to be brought into compliance with flood risk standards, strategies to do so should include a one-time offer of mitigation assistance to enable repetitive claimants to floodproof or relocate their homes. Such a proposal is currently before Congress in legislation sponsored by Representatives Bereuter, Blumenauer, and Costello (H.R. 1428). Under the "Two Floods and You Are Out of the Taxpayers' Pocket Act," a repetitive claimant's refusal to mitigate would then result in NFIP premiums being set at the actuarial rates. In the absence of such a program, denying insurance to policy holders with repetitive claims will likely increase the public demand for federal disaster relief, with no real opportunity to prevent future damages. The UMRBA therefore urges Congress to reject the President's proposal to deny flood insurance coverage to repetitive loss properties without first ensuring that affected property owners are offered viable mitigation opportunities.

Flood Map Modernization.—UMRBA supports the proposed budget provisions that would allow $15 million of disaster relief funds to be used for flood map modernization activities in post-disaster situations and authorize the transfer of $7 million in unexpended previously collected NFIP fees to support on-going flood map modernization. Among other things, flood maps are used to determine risk-based NFIP premium rates and develop disaster response plans for federal, state, and local emergency management personnel. However, most flood maps are over 15 years old and are rapidly becoming obsolete. Many flood maps are outdated by the effects of land use changes in the watersheds. When out-dated maps underestimate flood depths, it can often lead to floodplain development in high risk areas. It is therefore important that flood maps be updated on an ongoing basis and in a timely way.

The Corps of Engineers is currently conducting a Flow Frequency Study that will update the discharge frequency relationships and water surface profiles of approximately 2,000 river miles of the Upper Mississippi, Lower Missouri, and Illinois Rivers. This data will have a variety of uses, including updating Flood Insurance Rate Maps (FIRMs) used by hundreds of flood prone communities along these rivers. The Corps and FEMA have estimated that 4,180 map panels in the 7-state study area will need to be revised at a cost of approximately $30 million. Using data from the Corps study will be a far more cost-effective way to update FIRMs than having FEMA independently study flood hazards and update the maps. UMRBA therefore urges Congress to provide funding for the Upper Mississippi flood mapping project and direct FEMA and the Corps to coordinate their efforts to advance FIRM updates.

PREPARED STATEMENT OF THE NUCLEAR ENERGY INSTITUTE

Mr. Chairman and members of the subcommittee, my name is Ralph Andersen. I am the chief health physicist at the Nuclear Energy Institute. I have worked in the areas of radiation protection, site cleanup and decommissioning, and nuclear waste management for 28 years. Before joining NEI nine years ago, I was superintendent of radiation protection at Detroit Edison Company's Fermi 2 nuclear plant, and the director of environmental protection and probabilistic risk assessment. Earlier in my career, I was a radiation safety officer and lecturer in the Department of Physics and Astrophysics at the University of Colorado and associate radiation safety officer and principal researcher at the University of Maryland Medical Center.

The Nuclear Energy Institute develops public policy for the U.S. nuclear industry. We represent 270 member companies with a broad spectrum of interests, including every U.S. utility that operates a nuclear power plant, their suppliers, fuel fabrication facilities, architectural and engineering firms, labor unions and law firms, radiopharmaceutical companies, research laboratories, universities and international nuclear organizations.

In my testimony today, I would like to discuss two issues: federal support for nuclear engineering education and the Environmental Protection Agency's (EPA) continuing duplicative regulation of Nuclear Regulatory Commission (NRC) licensees.

ENDING DUPLICATIVE REGULATION

This committee has cautioned EPA against duplicative regulation, but the agency has persisted, and this has been of ongoing concern to the nuclear energy industry.

The nuclear industry's highest priority is protecting public health and safety as well as the environment during all aspects of facility operation. Achieving this goal depends on clear and consistent federal policy that:

—assures protection of public health and safety;

—makes the best use of available public and private funds and resources; and

—helps build public trust and confidence in federal decisions and programs.

The current situation—one of duplicative and conflicting regulation by two federal agencies—works against those principles.

On behalf of the nuclear industry, I want to commend you for your continued oversight of EPA—in particular, the agency's administration of the National Priorities List, also known as the Superfund program. Public Law passed by Congress earlier has discouraged the allocation of funding for dual regulation by EPA of nuclear energy facilities that are undergoing decommissioning and license termination under NRC regulation. In doing so, the Congress is holding the Administration accountable for regulatory reform policy by deterring regulatory activities that are "inconsistent, incompatible, or duplicative of those of other federal agencies." [1]

EPA has continued to interject itself into the NRC's regulatory process for site decommissioning and license termination. Further, EPA has threatened to list NRC-licensed facilities on the National Priorities List after such facilities have been decommissioned in full compliance with NRC regulations which, I should emphasize, were established to be fully protective of public health and safety.

EPA has inserted itself into the NRC's regulatory process through interaction with state agencies, the industry and the public in a manner that represents an in-

[1] Executive Order 12866, "Regulatory Planning and Review," at 58 Fed. Reg. 51735, dated October 4, 1993.

efficient use of government resources and undermines public confidence in government and industry efforts to protect public health and safety.

In 1998, the House Appropriations Committee adopted report language that recognized the NRC's ability to oversee the full remediation of nuclear facilities. This language specifically prohibited EPA from using federal funds to place NRC licensees on the National Priorities List.[2] However, there has been no evidence that EPA intends to comply with the committee's guidance and no indication that it will not persist in challenging the NRC's authority to regulate decommissioning and site cleanup activities.

In 1999, the House Appropriations Committee expressed heightened concern about EPA actions. The committee pointed out that "any reversal of the long-standing policy of [EPA] to defer to the NRC for cleanup of NRC-licensed sites is not in the public interest and is not a good use of public or private funds."[3] Further, the committee recognized that attempts at dual regulation by EPA have created legitimate stakeholder concerns regarding the authority and finality of NRC licensing decisions, the duration and cost of site cleanup, and the potential future liability of parties associated with affected sites.

The House Appropriations Committee also encouraged EPA and the NRC to enter into an MOU to clarify the circumstances for EPA's involvement at NRC-licensed sites—when requested by the NRC. The agencies were directed to report to the committee by May 1, 2000, on the MOU status. As the deadline passed, the two agencies advised the committee that there has been no substantial progress on the development of an MOU.

The General Accounting Office (GAO) reviewed the status of the MOU in June 2000 and examined the underlying issues associated with it. GAO acknowledged the Congress' efforts to encourage the agencies "to clarify their conflicting regulatory roles related to nuclear facility cleanup and decommissioning."[4] However, GAO concluded that "given the agencies' historical differences and lack of recent progress, without congressional intervention, they may not resolve their differences."

In its most recent report accompanying H.R. 4635,[5] the House Appropriations Committee said "that both agencies have not worked in good faith to resolve the problem of dual regulation by the federal government in NRC-licensed site decommissioning." The committee directed the EPA administrator "to undertake a review of EPA action on the MOU, the costs to NRC licensees associated with dual regulation by NRC and EPA on site cleanup, the potential costs associated with listing these facilities on the [National Priorities List], and options for resolving this issue by regulation, litigation or legislation." The committee set a deadline of March 31, 2001, for submittal of the report. We have no indication that the EPA has conducted the comprehensive review directed by the committee—despite the rapidly approaching deadline.

Last year, EPA issued a guidance memorandum to its regional Superfund managers clarifying EPA's role under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at facilities licensed by NRC.[6] Unfortunately, this memorandum makes clear EPA's intent to continue to impose additional regulation on NRC licensees. The guidance memorandum:

—does not acknowledge that the NRC is the lead agency for regulating its licensees;

—does not place any constraint on EPA involvement at NRC sites when not requested by the NRC; and

—does not include any suggestion that EPA should consult or otherwise coordinate with the NRC on these issues.

With such glaring omissions, this document—now standing as EPA policy on the agency's role regarding NRC-licensed sites—stands in direct conflict with guidance this committee provided to EPA.

EPA persists in efforts that undermine the credibility of the NRC's regulatory process and erode the trust and confidence of public and government stakeholders in the NRC's health and safety standards.

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[2] U.S. House of Representatives, Report 105–175 to accompany H.R. 2158.

[3] U.S. House of Representatives, Report 106–286 to accompany H.R. 2684.

[4] GAO/RCED–00–152, "Radiation Standards: Scientific Basis Inconclusive, and EPA and NRC Disagreement Continues," June 2000.

[5] U.S. House of Representatives, Report 106–988 to accompany H.R. 4635.

[6] OSWER No. 9272.0–15P, "Interim Final Guidance on Evaluation of Facilities Currently or Previously Licensed by NRC under CERCLA," dated February 17, 2000.

A telling example occurred this past year in Maine. The Maine legislature last August passed a law[7] to establish cleanup standards for decommissioning nuclear facilities patterned after EPA's continued undermining of the validity of NRC's cleanup standards. EPA was heavily involved in shaping this legislation. For example, the agency provided testimony and subsequent guidance to the state legislature on the proposed law and stressed its support of Maine's efforts and legislative intent "to mirror EPA's policies." EPA also sent a letter to the Maine legislature, clarifying differences between the standards promulgated in the act and EPA's standards that "may have arisen inadvertently during the drafting of the legislative language and [were] not discovered until after the legislation was enacted." The letter commits EPA to "working closely with [the state] to provide closure on the matter," although it notes that "it is not possible to further analyze the issue" until the final license termination plan, required by NRC regulations, is available from the nuclear power plant undergoing decommissioning in Maine.

Mr. Chairman, we do not dispute the propriety and legality of the actions taken by the state in carrying out its authority and responsibility to the people of Maine. In fact, we view the active involvement of state and local government and the public as essential to the NRC regulatory process for decommissioning a facility. Indeed, NRC regulations expressly provide for such participation. However, we object to EPA's engaging in duplicative and conflicting regulatory efforts, taking every available opportunity to undermine the legitimacy of the NRC's regulatory process and standards.

There has been little progress by the two agencies in the past four years toward resolving this issue. Contrary to the guidance of this committee, EPA continues to engage in activities that impose duplicative and conflicting requirements. And, there has been no substantive progress in developing an MOU between the EPA and the NRC.

The industry continues to support the development of an MOU between the EPA and the NRC to clarify their respective roles and authorities in the decommissioning of NRC licensee facilities. In fact, we are hopeful that the recent change in leadership at EPA will lead to the kind of cooperative and constructive inter-agency dialogue that is necessary to produce such an MOU. The industry encourages the committee to work with the Bush administration and EPA Administrator Christine Todd Whitman to address this important issue. However, based on the record, the industry is skeptical that an MOU—even if one is concluded between EPA and NRC—will provide a lasting resolution to the issue of dual regulation. The agencies entered into a similar MOU in 1992,[8] and EPA previously has deferred to the NRC as a matter of policy under CERCLA. It is the breach of that agreement between the two agencies that has created the existing dual regulation.

In our view, an MOU alone cannot solve this issue. Provisions in CERCLA set the stage for conflicting and overlapping authority between the NRC and EPA, which inhibits the remediation of NRC-licensed sites in a timely and economical manner. The conflict stems from the fact that the Atomic Energy Act gives the NRC responsibility to regulate the civilian use of nuclear materials. Under this authority, the NRC has overseen the successful remediation of more than 70 sites in a manner that fully protects public health and safety. By comparison, CERCLA assigns EPA primary responsibility to administer the remediation of contaminated sites included on the Superfund list.

Given the lack of progress over the past three years, in spite of the efforts of the Congress, the industry believes that a legislative solution is needed to resolve the problem. In the interim, we respectfully offer several suggestions for the committee's consideration that may help avoid duplication in site cleanup regulation, and the imposition of unwarranted additional costs, until such legislation is enacted:

1. The committee should explicitly prohibit the EPA from using appropriated funds for dual regulation of NRC-licensed facilities.
2. The committee should reconsider its previous report language regarding an NRC–EPA Memorandum of Understanding (MOU) and provide definitive direction and guidance on what the MOU should address, as well as establishing a firm deadline for completion of the MOU.
3. If the EPA does not submit a report on the committee-directed review of the situation, the committee should consider initiating an independent audit of EPA ac-

[7] An Act to Establish Clean-up Standards for Decommissioning Nuclear Facilities, enacted by the Second Regular Session of the 119th Legislature of the State of Maine, Chapter 741, S.P.1084–L.D.2688.

[8] Memorandum of Understanding between Ivan Selin, Chairman, USNRC, and William K. Reilly, Administrator, USEPA, on *Guiding Principles for EPA/NRC Cooperation and Decision-making*, dated March 16, 1992.

tions and expenditures of resources with regard to the previous direction of the committee.

SUPPORTING NUCLEAR ENGINEERING EDUCATION

NEI also would like to take this opportunity to thank the committee for recognizing the importance of nuclear technology research and education. In last year's bill passed by Congress, the National Science Foundation was directed to review academic interest in nuclear engineering education and to provide recommendations on how NSF can provide support in this area.

To remain the global leader in nuclear technologies, the United States must ensure that the associated expertise and scientific infrastructures are maintained. Our nation must increase research in nuclear technologies, which have yielded extraordinary benefits in medicine, scientific research, electricity production, food safety and many industrial applications. It is essential to attract new scientists to these programs and maintain university programs to train them. The United States must stay on the cutting edge of these vital technologies.

When the National Science Foundation submits its report, NEI would like to have the opportunity to work with the committee to help assure that the appropriate level of support at NSF will be made available for nuclear technologies next year.

In addition, NEI is working on behalf of the industry to determine staffing and subsequent education needs for engineers, health physicists and technical tradespeople. The industry is also developing staffing strategies and communications that encourage students to pursue careers in nuclear technology. A potential shortage of nuclear engineers, health physicists and professionals with expertise in other areas is a matter the industry takes very seriously.

PREPARED STATEMENT OF THE MICKEY LELAND NATIONAL URBAN AIR TOXICS RESEARCH CENTER

The Mickey Leland National Urban Air Toxics Research Center (NUATRC) is requesting a $2.2 million appropriation for fiscal year 2002 to continue the air quality public health research on air toxics in urban areas as directed by the U.S. Congress. The Leland Center is a 501(c)(3) institution, which was authorized by Congress in the Clean Air Act Amendments of 1990 (Title III, Section 301 (p)).

The Leland Center has been operational for eight years and receives EPA Assistance Awards based upon Congressional appropriations. We leverage these federal funds with private sector funding, with industrial firms being the major contributors. Our private contributors include ten major U.S. companies, whose year 2000 contributions were the highest in our history. NUATRC utilizes an administrative services agreement with The University of Texas-Houston Health Science Center in the Texas Medical Center complex. This arrangement allows the Leland Center to take advantage of the world-renowned scientific community at The University of Texas and the Texas Medical Center, as directed by Congress, while still remaining an independent entity.

The Leland Center's mission is to sponsor and direct sound, peer-reviewed scientific research on the human health effects of air toxics in urban populations. It is an integral part of the air toxics strategy established by Congress to assess the risks posed by these materials to individuals living in areas where air quality concerns have been expressed by both medical and scientific experts and urban community leaders.

The NUATRC is governed by a nine-member Board of Directors, appointed pro rata by the Speaker of the U.S. House of Representatives, the Majority Leader of the U.S. Senate, and the President of the United States. In turn, the Board appoints a 13-member Scientific Advisory Panel, selected from national research institutions, academic centers and the private sector. The current membership of both the Board of Directors and the Scientific Advisory Panel is carried in Attachment 1. We are awaiting Congressional action on the appointment of three new Board Members.

ACHIEVEMENTS

We are pleased to bring to the Subcommittee a positive and promising report on the progress of the research work being sponsored by the Mickey Leland National Urban Air Toxics Research Center. We have established the following major scientific achievements over the last several years that are in keeping with our Congressional charge in the Clean Air Act Amendments of 1990:

1. Establishment of how important indoor toxic air pollutants are and how important personal exposure to the specific levels of these pollutants are. These findings

are resulting in a reevaluation of the national emphasis on outdoor levels and sources.

2. Development of inexpensive and accurate technology to allow measurements of individual personal exposures to air toxics. This provides a new and, for the first time, direct view of the possible public health risks of air toxics.

3. Results that support a new focus on those air toxics that exist on particles and may be a factor in the claims of increased mortality from these exposures.

4. Initiation of community-based studies that involve participation by those citizens directly exposed to urban levels of air toxics. This includes early data from our involvement in the National Health and Nutrition Examination Survey (NHANES).

We owe these advances in large part to the work of our Scientific Advisory Panel, made up of world class scientists from the public (EPA), private and academic sectors, who have spent considerable time and effort to develop and refine these studies in a collegial and efficient manner. We also are fortunate to have had the encouragement of the Congress, which has consistently supported the NUATRC with annual appropriations in the EPA budget, without which we would not be able to continue.

We continue to work closely with the US EPA, through which we access the Congressionally-appropriated funds. We have still been unable to have EPA include our research funding in their budget without the necessity of the appropriation process, but non-scientific factors continue to hinder this effort and result in less effective and time-consuming processes. We have an excellent working relationship with the EPA scientists that serve on our research panels, and we are continuing to interact with their administrative counterparts to establish a firmer base for our EPA financial support.

CURRENT ACTIVITIES

The Leland Center has begun three new air toxics research initiatives, all of which address the national concerns about asthma. We want to determine whether air toxics play a major role in the exacerbation of asthma, which is a multi-faceted and complex public health issue. The NUATRC has had several discussions with the scientific staff at the National Institutes of Environmental Health Sciences (NIEHS) to understand how we can best leverage our experience in personal exposure assessment with the NIEHS' well known expertise in public health effects. We are hopeful of developing considerable support in 2001–2002 for joint NUATRC–NIEHS programs on urban air toxics and asthma exacerbation.

The NUATRC is also starting a major new research program in Houston on children's asthma and the effects, if any, that result from exposures to air toxics. We expect that this study, which will not involve federal funding, will begin in the second quarter of 2001 and last for 20 months. Aside from generating important health data in Houston, it will help define the cost and scope of any national study of this kind, similar to what we are discussing with NIEHS. Our ability to discern specific personal exposures to those air toxics that are thought to play a role in asthma exacerbation will allow us to pinpoint and separate those effects from the many urban confounders that often mask the important factors in the spread of this disease. We have relied on scientific input from our expert Panel and submit all proposals to external peer-review. This process has led us to select a team of physician/scientists from major medical research institutions at the Texas Medical Center. Specifically, we are nearing agreement with a interdisciplinary research team whose members represent Baylor College of Medicine, The University of Texas School of Public Health and Texas Childrens' Hospital to carry out this work with asthmatic middle school children in the Houston area. This research will be supported through funding from local philanthropies and state, county and city offices, along with private sector contributions. No federal monies are included, but we are hopeful that the success of this program will lead to NIEHS involvement in a wider ranging study of asthma and air toxics with a national focus, and part of our appropriations request is for leveraging the NIEHS support.

In addition to this field research study, the NUATRC is hosting a major scientific Symposium in late May, 2001 at the Texas Medical Center, which will also focus on asthma, entitled "Environmental Air Toxics: Role in Asthma Occurrence?". The draft program for this Symposium is carried as Attachment 3. We are delighted that a highly recognized team of national experts will participate in this Symposium, which again is being supported by contributions from diverse parties and does not depend on EPA Grant monies. In all of our work, we seek to leverage federal funds, especially that appropriated to us by this Subcommittee. We have jointly funded work underway with the Health Effects Institute in Cambridge, MA., SKC, Inc., the National Center for Health Statistics, the Houston-based funding group assembled for our Houston asthma research, and a private (ExxonMobil, American Chemistry Council, etc.)/public (NIEHS, University of Texas) consortium underwriting our Asthma Symposium.

RESEARCH FINDINGS TO DATE

As we indicated in our submission last year, we are continuing our research efforts to better understand the individual personal exposures of people living in urban areas to a number of the 188 toxics defined in the Clean Air Act. However, we are also beginning to receive data from our new health effects studies, an emphasis area on which we will continue to focus in 2002.

We have achieved pioneering accomplishments in measuring levels of personal exposures to toxic air pollutants. These studies in New York, New Jersey, Los Angeles and Houston are nearing their end and the information generated has been reported at a number of major scientific meetings over the past 12 months. The investigators at Columbia University, EOHSI in New Jersey and The University of Texas have obtained massive amount of important data which will be the subject of many analyses and publications over the next several years. These data point conclusively to the importance of the indoor environment and the assessment of personal exposures to air toxics, in terms of assessing the actual public health risk from these materials. In Attachment 4 to this submission, we provide examples of the kind of information we are obtaining, which suggests that the nation's environmental resources need to be refocused on indoor and personal situations, as opposed to a continuing emphasis on fixed site urban air monitors.

These fixed site monitors, which play a key role in determining overall urban air quality and air quality standard attainment, are not precise enough to address public health risks. The support we have received from this Subcommittee has been instrumental in creating a new scientific emphasis on personal exposures. The US EPA has now accepted the importance of such approaches and is instituting its own program in this area.

The NUATRC research programs at Harvard and Washington State University are our first ventures into health effect studies and both these programs are focused on the air toxic component of fine particles, notably metals, in terms of possible effects on peoples' heart rate and pulmonary functions when exposed to fine particles. These ongoing epidemiological studies will also allow us to better define future research, which will combine personal exposure measurements, the apportionment of source contributions and the health effects end points, as are being developed in this work at Harvard and Washington State. Of course, the NUATRC's asthma studies in Houston this year and hopefully nationally in 2002, will be a major advance in the public health science area.

We have also expanded our involvement in community-based environmental health research, which is an important element in our charge, as air toxics health effects can be expected to disproportionately impact the economically and medically underserved people in our urban populations. We have research underway in Baltimore under a Johns Hopkins University research grant to address exposures to air toxics in a residential community in close proximity to an industrial complex. This research also has a goal of keeping the community informed as to the results of our studies, which is all too often ignored or neglected in our haste to complete these studies and submit them for publication. This causes an understandable and unfortunate backlash in such communities. We have a somewhat similarly-intentioned program in progress at the University of Illinois at Chicago, which deals with the levels of polycyclic aromatic hydrocarbons (PAH) in indoor environments.

ADMINISTRATION

The Leland Center operates with a small administrative staff of five full-time equivalent employees, one consultant, and important in-kind support from The University of Texas. Our staff are all employees of The University of Texas, which obviates the need for considerable personnel support services and allows us the benefit of residence at the University, while remaining an independent institution. This provides important scientific and administrative benefits, including access to Medical School and School of Public Health faculty. We are proud of the high rate of monies spent directly on research compared to administrative costs, and we continue to strive for additional economies.

BUDGET RATIONALIZATION

As discussed in detail earlier, our initial asthma work on the local Houston scene will hopefully be expanded to embrace a national study with NIEHS, which we will cost share. With the completion of our two major personal exposure studies at

EOHSI and Columbia University, we are planning to have these data subjected to more thorough and detailed analyses than was believed necessary when the programs were started. We would plan to offer RFA's to the scientific community to "mine" this complex and deep data base. We also would continue our involvement with the NHANES program run by the National Center for Health Statistics, in which our participation is highly leveraged. This work has become a more expensive federal program over the last several years, but our leveraged participation in such an important study makes it worthwhile to continue. The particle personal exposure monitor development is progressing nicely and was anticipated to be a multiyear effort. It has drawn considerable attention from the scientific community, including the federal agencies. The Health Effects Research at Washington State University is continuing and is showing interesting results on the effects of toxic exposures on human respiratory functions. The successful NUATRC Small Grants Program is a continuation of the current work at Johns Hopkins and the University of Illinois at Chicago and we have received considerable comment and support on these approaches. We must also initiate work to validate the accuracy of our passive exposure monitors at the very low concentrations that are becoming more common in the field. The emphasis we place on having Workshops and/or Symposia every year has proven cost-effective in advancing our understanding of these health effects. The Research Support category is very significant in providing funds for scientific peer-review, publications, reports and other activities of the Scientific Advisory Panel. The budget carried below is a "hold the line" effort recognizing the budget pressures that we all face. We will continue, as noted elsewhere, to seek alternative funding sources for our research program.

Budget

Asthma/Air Toxics Research Program	$250,000
Population-based Air Toxics Exposure Studies	250,000
Collaboration with NHANES	150,000
Particle Monitor for air Toxics	250,000
Health Effects Research	100,000
Small Grants	100,000
Personal Monitor validation studies	100,000
Workshops, Symposia	50,000
Research Support	200,000
Administration	750,000
Total	2,200,000

PREPARED STATEMENT OF THE PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS

Chairman Bond and Members of the Subcommittee: People for the Ethical Treatment of Animals (PETA) is the world's largest animal rights organization, with more than 700,000 members. We greatly appreciate this opportunity to submit testimony regarding fiscal year 2002 appropriations for the Environmental Protection Agency. My testimony will focus on the EPA's Endocrine Disruptor Screening Program (EDSP). The EDSP is the largest government-sponsored animal-testing plan in U.S. history. Millions of animals are slated to die in painful toxicity tests in this program.

Congress included language in the 1996 Food Quality Protection Act mandating a screening program to determine whether pesticides and certain other chemicals disrupt the human hormonal (endocrine) system. It's a laudable goal. However, the scientific justification of the EPA's large-scale testing program, with regard to human health effects, has been widely questioned.

For example, the chair of the EPA's joint Scientific Advisory Panel/Science Advisory Board (SAP/SAB) subcommittee on endocrine disruptors stated at the conclusion of its deliberations on the EDSP that "there was an undercurrent through the whole [SAP/SAB] discussion that the EPA program was ahead of science." [1]

As Dr. Bernard Schwetz, acting deputy commissioner of the Food and Drug Administration, has written, "With the passage of the Food Quality Protection Act in 1996, enormous amounts of resources were plowed into developing agreement on test batteries to detect hormonal activities of chemicals [while] determining whether there were, in fact, adverse effects in humans seemed a much lower priority. . . . We do not know if there is a causal relationship between adverse health effects in humans and exposure to endocrine disruptors in our environment. It

[1] Bureau of National Affairs, *Daily Environment Report*, 2 July 1999.

seems obvious that our focus should be on determining whether such a relationship exists and, if so, characterizing the extent of the problem."[2]

A senior scientist with the National Institute for Environmental Health Sciences who concurred with an international expert panel critical of the existing structure of the program has stated nevertheless that "due to commitments by laboratories and government agencies and the availability of funding, the program will proceed—justified or not."[3]

The Food Quality Protection Act states that the program will provide for the testing of all pesticide chemicals (of which there are only several hundred) to determine whether their effects in humans are similar to effects produced by naturally occurring estrogen. However, the law gives the EPA administrator authority to include other chemicals suspected of having estrogenic effects or other endocrine effects. Although it was not the intent of Congress, this allowed the program to mushroom into its current proportions. The EPA has used this leeway to include all 87,000 chemicals on the market and has broadened the scope of effects to include androgen and thyroid as well as estrogen effects. Meanwhile, other sections of the law, including the requirement to consult with the Department of Health and Human Services and the requirement to use appropriate validated tests, are being ignored.

Currently, the EPA is planning to test tens of thousands of chemicals. Yet the agency is unable even to define what an endocrine disruptor is, and officials cannot agree on what constitutes an adverse effect. Worse, the agency is planning to proceed with tests that have not been appropriately validated, thereby generating huge amounts of data that cannot be interpreted.

Current scientific estimates are that between 600,000 and 1.2 million animals will be killed for every 1,000 chemicals tested under the EPA's plans—thus resulting in the suffering and death of an astronomical number of animals. In addition to ethical concerns raised both by animal protection organizations and by a joint subcommittee of the EPA's Science Advisory Board and Scientific Advisory Panel,[4] the proposed tests also raise questions concerning the reliability of the data. Numerous reports, including the National Academy of Sciences' exhaustive 1999 study,[5] cite not only the enormous differences between animal and human endocrine systems, but also widely varying differences between the endocrine systems of different strains of the same species of animals.

With the EPA's present plan, millions of dollars, hours of labor, and animals' lives will be spent to generate data that will be meaningless. However, there are several concrete steps that the EPA can take to reduce unnecessary animal tests, ensure that all test methods are appropriately validated, utilize other research methods, which will provide more scientifically relevant data on how humans are affected by endocrine disruptors, and put the millions of dollars for this program to use in ways that will actually benefit human health and the environment. We request that the Senate Appropriations VA–HUD Subcommittee include report language to ensure that these steps are taken.

HIGH-THROUGHPUT PRE-SCREEN

At the outset of the program, the EPA's Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) recommended to the EPA that a non-animal test method, known as the "high-throughput pre-screen" (HTPS) be the first step before any other testing. The HTPS is crucial to the efficiency of the program, because without the data generated by the HTPS, the chemicals cannot be prioritized into a logical testing sequence. Although the EPA claims it will use structure activity relationship (SAR) modeling in place of the HTPS, SAR cannot be used without the data generated by the HTPS.

The HTPS could screen out many chemicals from further testing. Without it, millions of animals will be killed to test chemicals that would have been eliminated early on in the program.

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[2] Bernard Schwetz, Acting Deputy Commissioner, U.S. Food and Drug Administration, "Responding to Environmental Issues: Lessons Learned," *Environmental Health Perspectives*, v. 107(10), October 1999.

[3] Michael Shelby, Director, Laboratory of Toxicology, National Institute of Environmental Health Sciences (NIEHS), at the Third World Congress on Alternatives and Animal Use in the Life Sciences, Bologna, Italy, 1 September 1999.

[4] U.S. Environmental Protection Agency, *Review of the EPA's Proposed Endocrine Disruptor Screening Program by a Joint Subcommittee of the Science Advisory Board and Scientific Advisory Panel*, 1999.

[5] National Research Council, *Hormonally Active Agents in the Environment*, National Academy Press, 1999.

Congress appropriated $4 million in fiscal year 1999 to develop and implement the HTPS for chemicals proposed for the EDSP. After spending only $70,000 and conducting one feasibility study, it appears that the EPA is not applying the balance of the funds to develop the HTPS. The EPA appears to have abandoned further development of the HTPS, despite the ongoing progress being made on this technology by researchers in Japan.

Currently, the EPA intends to begin animal testing before the HTPS is completed. In response to a suggestion that the EPA take more time to develop the HTPS, Penelope Fenner-Crisp, senior science adviser in the EPA's Office of Pesticide Programs, explained that the agency is unwilling to miss legislative deadlines, saying, "We have to do something that looks like implementation."[6]

We request that the Senate Appropriations VA–HUD Subcommittee stipulate that no funds be used for animal tests until the development of the HTPS has been completed, and no funds be used to conduct animal testing on a chemical until that chemical has been analyzed by the HTPS.

VALIDATION OF TEST METHODS

The Food Quality Protection Act states that all tests must be "appropriate" and "validated." However, at present none of the animal tests planned for the EDSP are being validated for their relevance to human health effects. Therefore, the resulting data will not prompt any meaningful regulatory action to protect human health.

The EPA does not plan to require the rigorous validation of the animal tests that is required of all non-animal tests. Indeed, the agency recently awarded a $34 million contract to a laboratory for the development and validation of tests for the EDSP from a proposal in which validation experience was barely even mentioned.

The Advisory Committee on Alternative Toxicological Methods (ACATM) for the National Toxicology Program (NTP) has expressed "grave concern" over the EPA's double standard in validation and has twice unanimously recommended that all proposed test methods for the EDSP be validated through the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM).[7] However, the EPA rejected this recommendation. Although it does indeed require the validation of all non-animal tests to be assessed through ICCVAM with very rigorous and thorough standards, the EPA follows a dangerous double standard by not requiring this same validation assessment of the animal tests. Allowing quicker and less rigorous validation procedures for animal tests not only creates a bias against non-animal tests, it compromises the reliability of the resulting data as well.

We request that the Senate Appropriations VA–HUD Subcommittee stipulate that no funds be used for validation of test methods unless the validation of those test methods (both animal and non-animal methods) is assessed through ICCVAM and that all necessary funds for this assessment be provided to ICCVAM by the EPA as needed.

NON-ANIMAL TEST METHODS

Although the EPA requires more chemical toxicity tests on animals than any other federal agency, it currently spends virtually none of its $500 million research budget on developing non-animal test methods and has not adopted a proactive approach in this area. Frequently, non-animal test methods are more economical, more reliable, more relevant to human health than animal tests, and are also more humane.

We request that the Senate Appropriations VA–HUD Subcommittee stipulate that at least 20 percent of the funds appropriated for the EDSP be used to research and develop non-animal test methods.

THE NEED FOR STUDIES ON HUMAN POPULATIONS

There is much controversy in the scientific community regarding the existence, nature, and severity of adverse effects in humans from exposure to endocrine disruptors. For example, two of the most frequently cited effects in humans are an increase in the rate of hypospadias and a decrease in sperm counts. However, several recent independent studies have concluded that there has been no change in the rate of either of these occurrences.[8]

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[6] Bureau of National Affairs, *Daily Environment Report*, 1 April 1999.

[7] National Toxicology Program Advisory Committee on Alternative Toxicological Methods, resolution passed unanimously at its meeting on 28 November 2000.

[8] "Hypospadias Rate May Not Be Increasing," *Endocrine/Estrogen Letter*, v. 6(6), 22 March 2000; Acaio, B.D., T. Gottfried, R. Israel, and R.Z. Sokol, "Evaluation of a Large Cohort of Men Presenting for a Screening Semen Analysis," Fertility and Sterility, v. 73(3), March 2000.

The Food Quality Protection Act directs the EPA administrator to consult with the Secretary of Health and Human Services to utilize "other scientifically relevant information" (in addition to testing) in order to determine whether certain substances have endocrine effects in humans.

Contrary to those instructions, the EPA has no plans to involve the Department of Health and Human Services and is using no other source of information than its testing program. However, without knowledge of how human populations are being affected by endocrine disruptors, the EPA will not have the real-world data it needs to prompt regulatory action.

We request that the Senate Appropriations VA–HUD Subcommittee stipulate that at least 10 percent of the funds appropriated for the EDSP be given by the EPA to the Department of Health and Human Services to be used for human epidemiological studies, including short-term studies such as monitoring for biomarkers of estrogenic exposure, in order to characterize the existence, nature, and severity of adverse human health effects caused by exposure to endocrine disruptors.

SUMMARY

In summary, PETA requests that the appropriations for the EDSP for fiscal year 2002 be provided with the following stipulations stated in the report accompanying the appropriations bill:

(1) No funds may be used for animal tests until the development of the HTPS has been completed, and no funds may be used to conduct animal testing on a chemical until that chemical has been analyzed by the HTPS.

(2) No funds may be used for validation of test methods unless the validation of those test methods (both animal and non-animal methods) is assessed through ICCVAM.

(3) All necessary funds for the validation assessment of both animal and non-animal test methods by ICCVAM must be provided to ICCVAM by the EPA as needed.

(4) At least 20 percent of the funds appropriated for the EDSP must be used to research and develop non-animal test methods.

(5) At least 10 percent of the funds appropriated for the EDSP must be given by the EPA to the Department of Health and Human Services to be used for human epidemiological studies, including short-term studies such as monitoring for biomarkers of estrogenic exposure, in order to characterize the existence, nature, and severity of adverse human health effects caused by exposure to endocrine disruptors.

These steps will promote the sound scientific practices needed for the tangible protection of human health and the environment, as well as a significant reduction in the use of animals. Thank you for your consideration of our request.

PREPARED STATEMENT OF THE DORIS DAY ANIMAL LEAGUE

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to submit testimony relevant to the fiscal year 2002 budget request for the U.S. Environmental Protection Agency's (EPA) Office of Research and Development (ORD) and the Endocrine Disruptor Screening Program (EDSP). I hope the Subcommittee will consider the concerns of the 300,000 members and supporters of the Doris Day Animal League and take steps to ensure the EPA recognizes the necessity of sound science approaches in its research, development and validation of new and revised toxicological test methods. These methods can significantly reduce the numbers of, and ultimately replace, animals in its testing programs. In addition, I am hopeful that this Congress, with appropriate input from all stakeholders, can improve the coordination of science priorities at the EPA, perhaps by authorizing a new position, Deputy Administrator for Science.

RESEARCH, DEVELOPMENT AND VALIDATION OF NON-ANIMAL, ALTERNATIVE TEST METHODS

In the previous two fiscal years (2000, 2001), the enacted budget for the Office of Research and Development has hovered at approximately $500 million ($534 million and $492 million, respectively). Within these appropriations, we have found it difficult, if not impossible, to track funding by ORD for specific non-animal, alternative test methods to meet the EPA's needs in new testing programs. It is our contention that many emerging technologies, which often prove to be faster to run, less expensive and at least as predictive as current animal tests used for hazard and risk assessment, would benefit from research and development dollars. Therefore, we request that $10 million, from the current budget request or over and above the President's budget, be set aside for research, development and validation for regulatory acceptance of non-animal, alternative test methods. Activities funded by these allocations shall be designed in consultation with the Office of Pollution Prevention and Toxic Substances. It is our preference that these test methods have direct relevance to new EPA testing programs, including the High Production Volume chemical testing program, EDSP and Children's Health initiative. Our request for $10 million represents just 2 percent of the total ORD budget and would be perceived by all stakeholders as a genuine commitment by EPA to new non-animal, alternative test methods.

I also request that the Subcommittee require the EPA report to the Subcommittee by March 30, 2002 regarding expenditures and plans for additional expenditures for fiscal year 2002 funds.

ENDOCRINE DISRUPTOR SCREENING PROGRAM (EDSP)

The Environmental Protection Agency has been mandated, under the Food Quality Protection Act and the Safe Drinking Water Act Amendments of 1996, "to determine whether certain substances may have an effect in humans that is similar to an effect produced by a naturally occurring estrogen, or such other endocrine effects as EPA may designate." This statutory requirement was in response to concerns about abnormal reproductive and developmental effects in wildlife exposed to various chemicals in their natural environments. The EDSP is an effort to primarily assess the health effects to humans, with wildlife concerns a component of the program. On its face, it is a worthy endeavor.

However, as currently proposed by the agency, thousands of chemicals may be tested by a protocol comprised of 16 test methods, most which are animal tests. It has been estimated that as many as 1.2 million animals will be killed per every 1,000 chemicals tested under the current structure of the EDSP. These projections make this proposed program the largest use of animals in toxicological testing by a federal agency. For this reason, it is being carefully scrutinized by concerned animal protection organizations wanting to ensure that all concrete steps are taken with this new science to protect animals—both wildlife and animals in the laboratories.

The very language in the FQPA on which the EDSP is based can strongly address one of the concerns of the animal protection community. To my knowledge, this is the first time that the word "validation" has been used as a requirement for sound science in developing test methods for a federal toxicological program. The statutory language required the screens and tests used in the EDSP to be validated to ensure appropriately relevant, reliable and reproducible tests and screens for the best science. The EPA, as co-chair of the Interagency Coordinating Committee for the Validation of Alternative Methods, supports the following definition of validation: the process by which the reliability and relevance of a procedure are established for a specific purpose. ("Validation and Regulatory Acceptance of Toxicological Test Methods," NIH Report 97–3981).

In 1996, when the Acts were passed, the Interagency Coordinating Committee for the Validation of Alternative Methods (ICCVAM) was in its infancy. Since then, federal regulatory and research agencies, including the EPA, have benefited from the effective assessment of validity of new screens and tests afforded by ICCVAM. The ICCVAM assesses the validity of new and revised test methods, including alternatives, that have cross-agency application. In light of the interest by the Food and Drug Administration and other federal agencies and the fact that the proposed test methods for the EDSP are new or revised for new endpoints, the ICCVAM could clearly provide a uniform assessment of the validity of all EDSP test methods. Indeed, the ICCVAM was permanently authorized by Congress last year in recognition of the continuing crucial role it can play to facilitate assessment of test methods that have cross-agency application, while giving a level of confidence in the scientific assessment to various stakeholders.

The Advisory Committee on Alternative Toxicological Methods for the National Toxicology Program, comprised of scientists from the public and private sectors, passed unanimous resolutions on two occasions strongly supporting the ICCVAM assessment. However, EPA continues to assert that the non-animal, alternative test methods can be reviewed by ICCVAM, while the animal test methods will solely be reviewed by the agency's Science Advisory Board/Scientific Advisory Panel (SAP/SAB). This bifurcated approach gives animal protection advocates and other stakeholders cause to believe that two different standards of scientific validity may be applied. And while the agency claims it will use the same criteria for assessment of validation as the ICCVAM, the level of confidence in the ICCVAM is stronger. Also, any claim made by the agency that ICCVAM assessment may slow down implementation of the EDSP is simply hyperbole.

I urge the Subcommittee to support the assessment of validation of tests and screens for the EDSP by the ICCVAM with appropriate fiscal support from the EPA. This interagency process can provide appropriate peer review of new tests and screens proposed for the EDSP. The ICCVAM should work with the EPA's SAB/SAP to avoid unnecessary delay in the program. Among other things, ICCVAM's assessment can serve to ensure due consideration is given for the replacement, reduction and refinement of the use of animals in these new tests and screens. This request should in no way be perceived as calling for a reduction of the President's request for activities in the Science and Technology account addressing endocrine disruption.

I would also request that the Subcommittee require the Agency provide a report to the Subcommittee by March 30, 2002 regarding expenditures and plans for additional expenditures for fiscal year 2002 funds under the EDSP.

CONCLUSION

I respectfully request that the Subcommittee direct the EPA provide $10 million for the ORD to research, develop and validate non-animal, alternative toxicological test methods for regulatory acceptance.

I also respectfully request that the Subcommittee direct the EPA to provide appropriate fiscal support to the ICCVAM for assessment of validation of all tests and screens to be incorporated into the EDSP.

PREPARED STATEMENT OF THE NATURE CONSERVANCY

INTRODUCTION AND BACKGROUND

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to submit written testimony on fiscal year 2002 appropriations for the U.S. Environmental Protection Agency (EPA).

The Nature Conservancy is an international, science-based, non-profit organization dedicated to conserving biological diversity. Our mission is to preserve the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. The Conservancy has more than one million individual members and over 1,500 corporate members; we have programs in every state and in 27 nations. To date, our organization has protected more than 12 million acres in the United States and has helped local partner organizations preserve approximately 80 million acres internationally. The Conservancy itself owns more than 1,300 preserves—the largest private system of nature sanctuaries in the world.

Biological diversity is important for a number of reasons. Species and natural communities harbor genetic and chemical resources that contribute to advances and products in medicine, agriculture and industry. The value of these goods is enormous. It represents, however, only a fraction of the value these ecosystems provide to humanity in terms of services, such as waste assimilation and treatment, climate regulation, drinking water, and flood control. One estimate of the value of these services for the entire biosphere is $33 trillion, which is nearly double the gross national product (Costanza et al 1997). In addition to these benefits, the environment serves as an instrument through which educational, cultural, aesthetic and spiritual values are often expressed.

Last year, the Nature Conservancy and the Association for Biodiversity Information released a study documenting America's astonishing natural abundance. For example, we now know the United States is home to more than 200,000 native species of plants and animals and ranks at the top in its variety of mammals and freshwater fish. Ecosystems in the United States are also among the most diverse. They range from tundra, to deserts, prairies, and various forest types. However, as many as one-third of the nation's species are at risk and at least 500 species have already gone extinct or are missing. The single biggest threat to species survival is loss of habitat, which generally occurs as a result of human activities. Almost 60 percent of America's landscape is already severely altered.

Reversing the trend will require working at larger scales and across state and other jurisdictional lines. The Nature Conservancy is committed to this effort. In fact, we are pledging to invest $1 billion in private funds over the next several years to protect critical natural areas around the country and abroad. These investments alone, however, will not be enough. True conservation success will only be achieved through the work of partners, including the Federal government. Funding is needed at the Federal level to support on-the-ground conservation projects and to ensure policies that promote a sustainable environment.

SUMMARY OF RECOMMENDATIONS

EPA is responsible for administering a number of programs that protect public health and the environment. The Nature Conservancy recommends funding for seven programs with which we have had direct experience and that we believe help preserve biodiversity. The seven programs include the following:

THE NATURE CONSERVANCY'S FISCAL YEAR 2002 FUNDING RECOMMENDATIONS FOR SELECTED EPA PROGRAMS

Program Name	Fiscal Year 2002 Recommendations	
	EPM Account	STAG Account
Clean Water Act State Revolving Fund (CWASRF)	....	$1,350,000,000
Coastal Watersheds and National Estuaries Program	[1] $70,000,000	....
Non-point Source Management Program (Section 319)	16,900,000	250,000,000
Wetlands Protection Program	18,000,000	18,000,000
Great Lakes National Program Office	16,000,000	....
Gulf of Mexico Program	5,000,000	....
Regional Geographic Initiative	15,000,000	....

[1] Includes $35 million recently authorized for the National Estuary Program under the Estuaries and Clean Waters Act of 2000 and $35 million for other coastal activities.

These programs benefit public health, the environment, and, by extension, biodiversity conservation. For example, loans made under the CWASRF to establish or restore riparian corridors along streams (to address non-point pollution) will improve water quality, while also improving or providing important aquatic and terrestrial habitat. Section 319 funds can be used to produce a similar range of benefits.

The seven programs referenced generally satisfy niches filled by no other federal programs. For example, unlike Farm Bill programs, the Section 319 program can be used to address non-point pollution from diverse sources such as urban runoff and leaking septic systems, not just pollution from agricultural sources. Its broader focus reaches more vulnerable habitats such as grassed swales that are important to grassland birds, which as a group are the most threatened in the United States.

In general, the seven programs for which the Conservancy is advocating are holistically based. The geographically focused programs, in particular, enable multiple pollution problems to be addressed in an integrated rather than singular fashion for a given resource.

The Conservancy supports level or increased funding for each of the seven programs mentioned. Our remaining comments, however, focus on three of the seven programs: the Great Lakes National Program Office, the Gulf of Mexico Program, and the Regional Geographic Initiative. We would be happy to provide comments on the programs not covered below at the request of the Subcommittee.

GEOGRAPHIC-SPECIFIC RECOMMENDATIONS

EPA's geographic programs are extremely important to conserving and restoring areas of ecological, cultural and economic significance. Moreover, they address diverse environmental and public health threats in a non-regulatory fashion. They also provide opportunities for public and private parties to collaborate to achieve mutually beneficial goals. As Director of the Conservancy's Great Lakes Program, I know first-hand the importance of such collaborative efforts. EPA's Great Lakes National Program Office has helped catalyze some of the Conservancy's protection efforts in the region. The Conservancy, in turn, has significantly leveraged this federal investment to advance the science necessary for proper management and protection of the unique ecosystems of the Great Lakes region.

The Nature Conservancy recognizes the overall constraints through which EPA's fiscal year 2002 budget must be determined. As such, we recommend only modest funding increases. We wish to emphasize, however, the need for comprehensive legislative packages to be crafted to address the range of needs facing our Nation's geographic specific and important resources.

1. Great Lakes National Program Office

EPA's Great Lakes National Program Office (or GLNPO as it is commonly called) promotes activities that protect the safety of food and water drawn from the Lakes and seeks to protect and restore critical habitats vital to supporting healthy and diverse communities of plants, fish, and wildlife. GLNPO also has responsibility for meeting U.S. obligations under the Great Lakes Water Quality Agreement with Canada.

The Nature Conservancy considers GLNPO to be a significant conservation partner in the Great Lakes ecoregion. GLNPO provided 40 percent of a $500,000 Conservancy led effort involving over 400 public and private partners to develop a broad-based, ecoregional conservation plan for the Great Lakes region. The Conservancy's plan includes the Great Lakes watershed, an area covering 294,000 square miles. The plan identifies priority conservation areas that, if protected or restored, would conserve the full range of the region's unique biodiversity. GLNPO has also provided five percent toward an $838,000 Conservancy effort to identify priority aquatic communities in the near shore areas of the Lakes. These examples demonstrate how GLNPO, The Nature Conservancy, and other organizations have significantly leveraged resources to develop tools and preserve actual places for future generations to cherish and enjoy.

The Great Lakes Basin is a region of superlatives, of both great beauty and industrial strength. The Great Lakes represent the largest system of fresh surface water on Earth. They span parts of eight U.S. states and one Canadian province and house more than one-tenth of the U.S. population and one-fourth of Canada's. The lakes influence climate and hydrology, creating an ecologically unique environment in which a wealth of species and communities thrive. Among the many interesting features found in the Great Lakes region are thousands of freshwater islands (including Manitoulin Island—the world's largest freshwater island); the largest freshwater river delta on earth (St. Clair River Delta); the largest collection of sand dunes of freshwater origin in the world; wild, unfragmented northern forests; and 185 globally rare plants, animals and natural communities.

Activities in the region, however, have exacted a toll: vital wetlands have been dredged and filled, deepwater fisheries have been depleted, and vast forests have been cleared. Exotic plants and animals, such as purple loosestrife and zebra mussels, have been unwittingly unleashed in water and on land, decimating native species and inflicting massive economic costs. Species in trouble include the prairie whitefringed orchid, dwarf lake iris and lake sturgeon. High-impact recreation and tremendous loss of grasslands to farming and urban development pose threats as well.

Time is running out to protect the biodiversity of the Great Lakes region. For example, over half of the 271 sites identified by the Conservancy as harboring significant and viable species or natural communities are irreplaceable. That is, these sites represent the only opportunity to protect certain species or communities unique to the Great Lakes region. One-third of the sites need action right now. Partnerships with farmers and foresters, hunters and anglers, industry and homeowners, and various government agencies like GLNPO are vital if the Great Lakes region and all of its inhabitants are to remain healthy.

The Nature Conservancy, therefore, respectfully requests an appropriation of $16 million for EPA's Great Lakes National Program Office in fiscal year 2002. The additional funding should support GLNPO's grants program, which enables organizations like the Conservancy to further develop the science and tools needed to protect Great Lake resources. These funds have been considerably restricted in recent years, thereby limiting opportunities for the Conservancy and others to leverage GLNPO funds for environmental protection.

2. Gulf of Mexico Program

EPA's Gulf of Mexico Program protects public health, abates nutrient enrichment problems, conserves and restores habitat, and controls invasive species in the Gulf region. The program reaches its goals by providing technical and financial assistance to Gulf States and private partners to promote voluntary, incentive-based activities to remedy threats to the region's coastal rivers and estuaries.

The Nature Conservancy directly matched funds provided through the Gulf of Mexico Program to develop an ecoregional plan for the northern Gulf of Mexico. Like the Conservancy's other ecoregional plans, the Gulf plan identifies priority areas that, if protected or restored, will conserve the region's unique biodiversity. The plan was developed in consultation with approximately 75 partners, including some of the nation's leading experts in coastal and marine sciences. The Conservancy is presently working with the Gulf of Mexico Program and the United States Geological Survey to make the plan and its data available to all partners working in the region so that it can be used as a management guide.

The northern Gulf of Mexico is a productive environment, ranking as one of the nation's leading producers of finfish and shellfish. NOAA estimated the commercial value of the 1997 harvest to be $823 million. The Gulf of Mexico has been ranked as the number one region for seafood harvest in both poundage and monetary value.

The health of the Gulf and ultimately its productivity is at risk. Over 60 percent of the continental U.S. drains into the northern Gulf, thereby contributing excess nutrients and other pollutants. Additional stresses include hydrologic alterations in the watershed and direct and indirect habitat destruction. Excess nutrients flowing from watersheds, especially in the upper Midwest, have created an area of low oxygen that extends thousands of miles off the cost of Louisiana (an area commonly referred to as the "dead zone"). Few animals can survive in these conditions of low oxygen. This situation has emphasized to planners, conservationists, citizens, and decision-makers the importance of recognizing land and water connections on a broad scale in order to solve problems such as those found in the Gulf.

Now that a large-scale plan has been developed for the region, a greater infusion of federal resources is needed to fully address the critical and far-reaching threats facing the ecosystem. The Nature Conservancy recommends an appropriation of $5 million for EPA's Gulf of Mexico program in fiscal year 2002. These additional funds will enable the program to continue playing a critical organizing role for environmental protection and restoration activities in this region. The additional funds should also be used to support a more comprehensive monitoring and modeling program to evaluate the full range of the "dead zone." Additional funds should also be used to promote incentives and other voluntary measures to reduce nutrient loads to the system. Success in this area will require activities at multiple levels and by various public and private partners.

3. Regional Geographic Initiative

EPA's regional offices provide grants under this program for projects addressing complex ecological relationships, such as those occurring between land, water and air. Most EPA programs address environmental problems in an isolated fashion. That is, they approach problems within the confines of a single, environmental media, economic sector, or pollutant. The Regional Geographic Initiative, on the other hand, enables practitioners to address threats to multiple environmental resources simultaneously at a single site. Project sites can vary in scale according to the problems being addressed, thereby enabling sites to extend beyond state jurisdictional boundaries. These factors enable more comprehensive solutions to environmental problems to be derived. Examples of these multi-faceted projects include those that protect drinking water sources and aquatic habitat by preserving forest ecosystems and adjacent wetlands, remedy lead paint and air quality problems in low-income communities; and address exotic and invasive species, habitat loss for native species, and pollutant inputs.

The Nature Conservancy, in partnership with the Colorado, Montana, and Wyoming Natural Heritage Programs, received funding through this Initiative to inventory the critical biological resources of the South Platte, Upper Arkansas, and Upper Yellowstone watersheds. The data have been integrated with water quality, monitoring, land use, pollutant, GIS and other data to create comprehensive pictures of the threats facing these systems. The data, in turn, are being used to inform the threat abatement strategies of local partners, such as the Conservancy, and government stakeholders.

The Nature Conservancy recommends an appropriation of $15 million for the Regional Geographic Initiative in fiscal year 2002. Significant progress has been made in addressing some of the nation's most fundamental pollution problems. The problems that remain, however, are diffuse and will require comprehensive solutions if significant breakthroughs are to be made. EPA's Regional Geographic Initiative is one means through which the federal government can significantly foster such innovations in thinking and application.

CLOSING

Thank you for the opportunity to provide these brief comments and for your attention to the important role EPA programs play in protecting public health and the environment and in conserving regionally-unique ecosystems. While the charge to conserve biodiversity is a daunting one, public and private partnerships such as those afforded under EPA's programs offer the promise of success. The Conservancy would not be investing so heavily with its own resources if we did not believe this to be true. We look forward to continuing our work with Federal agencies, state and local governments, nongovernmental organizations, and the private sector to ensure the long-term protection and sustainable use of the environment toward the ultimate goal of preserving the diversity of life on Earth. We appreciate the Subcommittee's support for the EPA programs that help make this important work possible.

PREPARED STATEMENT OF THE NATIONAL JEWISH MEDICAL AND RESEARCH CENTER

Mr. Chairman, and Members of the Subcommittee, thank you for the opportunity to submit testimony to the hearing record regarding the Environmental Lung Center at the National Jewish Medical and Research Center in Denver, Colorado. The National Jewish Center, formerly the National Jewish Center for Immunology and Respiratory Medicine, is the world's foremost center for the study and treatment of lung disease.

As you know, funds for research at the Environmental Lung Center were included in recent EPA Appropriations. We successfully completed the Environmental Protection Agency peer review process and are now in our fourth year of working with the Agency. First, I would like to take this opportunity to thank the Subcommittee for its support and to report on the excellent research that is being undertaken as a result of this support. We believe that a very productive relationship with the agency has been fostered. Essentially, the mission of the Environmental Lung Center will be to provide the sound science necessary to assist the agency with regulatory policy in specific areas, specifically respiratory health effects of air pollution.

The goals of the Center include determining the health effects of air pollution in patients with pre-existing lung disease and the mechanisms whereby air pollutants produce adverse health effects. We are investigating the effects of air pollution in children with asthma and adults with chronic obstructive pulmonary disease (emphysema). We are working to improve our understanding of the scientific basis for evaluating health hazards and the risk for patients with pre-existing lung disease.

This research is extremely important given the fact that in the United States, lung disease is a leading cause of death. It is now well known that man-made environmental and occupational pollutants contribute significantly to the rising numbers of those afflicted, particularly impacting residents and commuters to urban areas and those who work in occupations such as mining, construction, textiles and manufacturing. Indoor air pollution and improper ventilation also cause the spread of respiratory illnesses. To eradicate these illnesses and address general environmental concerns, the Clean Air Act authorized EPA to set exposure standards for six widespread air pollutants. As you know, these standards continue to provoke heated debate in the scientific and regulatory communities. Our task is to find out the extent to which the exposure thresholds are true, as measured against individual susceptibility, and to assist the regulatory bodies in this country to come up with decisions regarding toxic thresholds of compounds and the medical relevance of the EPA's fixed testing-station data to surrounding populations.

As the only high ranking institute in the nation that concentrates on lung disease and the only one that sees patients as well as conducts research, National Jewish has made great contributions to the advancement of medical knowledge about the effects of environmental pollutants on the human pulmonary system. Its location in Denver is significant in that the city is plagued with environmental pollutants (nearly 300,000 Colorado residents have chronic lung disease, which is well above the national average, although our patients come from all 50 states). Our dedicated research at National Jewish has shown definite linkages between certain types of ambient air pollutants and asthma and chronic obstructive pulmonary disease (COPD). We are currently exploring this further.

The Environmental Lung Center's research efforts will range broadly from studies of molecular biology and immunology to direct studies of air pollution on patients with lung disease. The focus of our work is on the special features of the lung as an immune organ, the pathogenesis of oxidant and particulate inhalation injuries, and the effects of ambiant air pollution on two specific cohorts of patients, childhood asthma and adults with emphysema. For the purposes of this testimony, I will describe the proposed studies in a very general way that will give the Subcommittee a view into the complexities of determining safe levels of airborne toxins given human susceptibility factors.

Our research program is designed to determine the effects and mechanisms of injury of particulates and oxidant gases on the respiratory system. We have chosen particulates because of the national concern expressed by the Environmental Protection Agency and the National Academy of Sciences on how little we know about the health consequences of exposures to particulates. Our institution has great strength in respiratory medicine and immunology, so we can readily bring scientific expertise to bear on this program. Funding will have an immediate impact on our understanding of the scientific basis of the effects of air pollutants on the respiratory system. We have chosen to focus our clinical studies on two groups of patients who are thought to be very susceptible to air pollution. The first group are children with asthma. We have a school on site for children with asthma. We will have a unique opportunity to evaluate the relationship of particulate air pollution to asthma symptoms, clinical and physiologic changes, and medication use. The other group that we have chosen are patients with chronic obstructive pulmonary disease (COPD). This group of patients have a higher mortality rate during times of heavy particulate air pollution. To learn more about the mechanisms whereby air pollutants effect patients with asthma and COPD, we have developed unique murine models of these two human conditions. We will expose mice with genetically defined respiratory and immunologic abnormalities to air pollutants in a defined, well-characterized manner in order to determine the mechanisms of how air pollutants effect the respiratory system. Finally, we have two projects which will determine the effects of ozone on specific critical proteins and cells of the respiratory system. These systems might provide a new sensitive biomarker to detect adverse health effects without having to use complex clinical indicators of hospital admissions and morbidity.

In fiscal year 2002 we are again requesting $1.75 million to continue these projects. We are particularly proud of our studies on two susceptible populations of individuals with pre-existing respiratory disease. Children with asthma are a special patient population requiring additional studies to define the health risks of air pollution by the EPA. The second patient group are patients with moderately severe COPD or emphysema. It is in this latter group that epidemiologic evidence has indicated an increase in hospitalization and mortality related to particulate air pollution. We are in a unique position for studying the effects of air pollution on individuals with pre-existing respiratory disease.

The major thrust for the next few years is to take advantage of modern molecular biology and genetics in order to study environmental lung disease. Never before have researchers had the ability to determine the genetic basis for individual susceptibility and the molecular mechanisms of disease. Our institution is internationally known for its research in immunology, and we want to utilize this expertise to study environmental lung disease.

Mr. Chairman, we believe that we are the best partner to provide the type of sound scientific research necessary to assist the agency with its regulatory decision-making goals. Our desire is to grow this relationship and hope that the subcommittee will again provide $1.75 million for fiscal year 2002 to continue this relationship for another year. This federal investment will enhance our nation's commitment to protecting the health and safety of its workers, citizens and individuals the world over. The research conducted by the Center will lead to medical breakthroughs and environmental findings that will assist the federal government to set new standards for both government and business. Your support for these efforts will save lives and ultimately, save costs for the federal government and for businesses who are currently struggling to comply with new standards.

Thank you.

Prepared Statement of the Association of Minority Health Professions Schools

Mr. Chairman and members of the subcommittee, thank you for the opportunity to express the views of the Association of Minority Health Professions Schools (AMHPS).

I am Ronny B. Lancaster, M.B.A., J.D., Senior Vice President for Management and Policy at the Morehouse School of Medicine, and President of the Association of Minority Health Professions Schools. AMHPS is an organization which represents twelve (12) historically black health professions schools in the country. Combined, our institutions have graduated 50 percent of African-American physicians and dentists, 60 percent of all the nation's African-American pharmacists, and 75 percent of the African-American veterinarians.

AMHPS has two major goals (1) to improve the health status of all Americans, especially African-Americans and other minorities; and (2) to improve the representation of African-Americans and other minorities in the health professions. We are working toward achieving this goal by seeking to strengthen our institutions and fortify other programs throughout the nation that will improve the role of minorities in the provision of health care and research.

AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

Congress created the Agency for Toxic Substances and Disease Registry (ATSDR) to implement the health-related sections of law that protect the public from hazardous wastes and environmental spills of hazardous substances. The mission of ATSDR is to prevent exposure and adverse human health effects and diminished quality of life associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution. ATSDR works in partnership with Environmental Protection Agency, the Centers for Disease Control and Prevention, and the National Institute of Environmental Health Sciences to carry out its public health activities.

ATSDR is performing critical work in the field of environmental and toxicological studies that has a profound impact on public health. In order to carry out the level of activity that is called for in its mission statement, AMHPS recommends an appropriation of $75 million for ATSDR in fiscal year 2002, level funded from fiscal year 2001.

THE ATSDR/AMHPS COOPERATIVE AGREEMENT ON ENVIRONMENTAL HEALTH AND TOXICOLOGY RESEARCH

In 1992, ATSDR identified a need for enhanced information on 38 hazardous substances. Through a cooperative agreement between ATSDR and the Minority Health Professions Foundation (MHPF), the historically black health professions schools that I represent are engaged in research on twelve of these priority hazardous substances. They include:

(1) Lead	(7) Trichlorocthylene
(2) Mercury	(8) Toluene
(3) Benzene	(9) Zinc
(4) Cadmium	(10) Manganese
(5) Benzo (a) pyrene	(11) Chlordane
(6) Flouranthene	(12) Di-n-butylphthalate

Mr. Chairman, I would like to express my appreciation to the subcommittee for its support again last year of the ATSDR/MHPF Cooperative Agreement. The productivity of this research program is evidenced by the number of publication and scientific presentations made by the funded investigators. To date, more that 55 manuscripts reporting the finding of the various research projects have been published in peer-reviewed and prestigious scientific journals. These journals include: "Brain Research", "Neurotoxicology", "Journal of Neurochemistry", and "Environmental Health Prospectives".

Moreover, investigators have made more than 120 presentations at national and international scientific meetings, including the annual meeting of the Society of Toxicology, the Experimental Biology meeting, the International Congress of Toxicology meeting, and the International Society of Psyschoneuropharmacology meeting. Finally, the ATSDR/MHPF Cooperative Agreement has contributed significantly to the training of students in toxicology and environmental health. Annually, more than 30 students, both graduate and undergraduate, are actively involved in the research program.

Unfortunately, Mr. Chairman, it is our understanding that ATSDR is proposing a significant reduction in funding for the Cooperative Agreement in fiscal year 2002. Currently, funding for this program is $3.1 million. However, given ATSDR's budget constrains, we understand that support for the Cooperative Agreement in fiscal year 2002 may be reduced by as much as 75 percent.

Mr. Chairman, if this reduction were to materialize, it would:

—Terminate nine out of twelve ongoing research projects in their final year;
—Deprive science of some of the most significant findings from the research program;
—Waste $15 million invested to-date in research projects that will not be completed; and
—Terminate employment for approximately eighty percent (80 percent) of all project personnel.

The member institutions of the Association of Minority Health Professions Schools encourage the subcommittee to continue to support the ATSDR/MHPF Cooperative Agreement at the current level of funding. We should continue to build on the progress we have made through this important partnership, not abandon our efforts to improve our understanding of the effect that hazardous substances have on some of our nation's most at-risk populations.

Mr. Chairman, thank you very much for the opportunity to present the views of the Association of Minority Health Professions Schools.

PREPARED STATEMENT OF THE NATIONAL TREASURY EMPLOYEES UNION

Chairman Bond, Ranking Member Mikulski, and distinguished Members of the Subcommittee, my name is Colleen Kelley, and I am the National President of the National Treasury Employees Union. NTEU represents more than 150,000 federal employees, including the professional employees who work at the Environmental Protection Agency. I appreciate this opportunity to present testimony to you today on behalf of the men and women who work to ensure a cleaner and healthier environment for all Americans.

Day in and day out, the employees at the EPA are working to reduce the health risks to the American public through the enforcement of our environmental laws, the cleanup of contaminated lands and waterways, and the development of new scientifically sound environmental standards. If we want to continue our nation's progress in cleaning up our environment, then Congress must work to ensure the EPA gets the staffing and resources the agency needs to effectively carry out its mission. Unfortunately, the budget President Bush has proposed for the Environmental Protection Agency falls far short.

The Bush budget severely undercuts current EPA operations and fails to provide funding to support efforts to combat future environmental threats. Most troubling is the Bush proposal to cut the EPA workforce—those on the front lines in protecting the American public from environmental dangers—by 500 employees. Specifically, the budget would cut EPA's enforcement staff in Washington, DC, and in regional offices by 9 percent. While cutting the staffing and funding levels for the EPA, the Bush budget shifts significant power from the federal government to the states, many of which have questionable environmental enforcement records, and to private contractors, who are often more concerned with their quarterly financial reports than developing and enforcing fair and consistent environmental standards.

Environmental protection and enforcement programs and federal clean water and clean air programs take severe hits under the Bush budget. The budget proposed by President Bush slashes $500 million from the level of funding appropriated by Congress for 2001. The $500 million cut from the EPA budget includes a cut of $158 million from EPA's efforts to enforce laws that keep polluters from contaminating our air and our drinking water. It also includes cuts to the Safe Food Program, which is aimed at ensuring a food supply free of harmful pesticides; the Pollution Prevention Program, which helps reduce toxic emissions in our air; the Waste Management Program, which fosters the safe transport, storage, and disposal of solid waste; and the Global and Cross Border Environmental Risk Program, which helps reduce global atmospheric environmental health threats.

President Bush's budget even slashes $56 million from EPA's Science and Technology Account, the agency's primary stream of funding to support scientific and technological research into how best to protect the health of American families. This is particularly ironic since President Bush has rolled back many Clinton Administration environmental protection regulations—including the revised standard for cancer-causing arsenic in America's drinking water—claiming the EPA needs to conduct more scientific studies.

As the number and complexity of threats to our environment and to human health continue to increase, it is critical that the Congress provide additional funding for staffing at the EPA. We owe it to future generations of Americans to leave them with a clean environment. We are all stewards of the earth, and as such, we should continue to foster science-based innovation and public policy that protects the public health and our environment. The professional employees at the EPA are the ones who have years of expertise in these critical areas, and they are the ones who are in the best position to foster environmental progress. We cannot expect the EPA to continue to protect the public health without the staffing and resources necessary to do the job.

The work performed by the men and women at the EPA is often taken for granted. Yet thanks to persistent work by EPA employees, we are reducing air pollution, improving the quality of our drinking water systems, and allowing Americans to live longer and healthier lives. EPA scientists, analysts, lawyers, and others who have dedicated their lives to serving the public continue to work to find the most cost effective and most efficient solutions to addressing our country's greatest environmental threats.

Now is the time to build on our science base so that we can be assured that the planet we leave to our next generation is cleaner and in better shape than the one we inherited from earlier generations. The American people expect that their tax dollars are being spent to continue to expand the science base at the EPA so that we can better mitigate and prevent environmental threats. Unfortunately, the budget President Bush has proposed for the EPA would likely reverse years of environmental progress. I urge you to reject President Bush's EPA budget proposal and pass a budget that provides the EPA with the staffing and resources required to do its job.

I would like to thank this Subcommittee for giving NTEU the opportunity to present our views on the EPA budget for fiscal year 2002. As you continue your subcommittee's deliberations, I hope you will give special consideration to EPA's dedicated workforce, a team of public servants who have committed themselves to cleaning up our environment and protecting the health of the American people.

PREPARED STATEMENT OF THE STATE AND TERRITORIAL AIR POLLUTION PROGRAM ADMINISTRATORS AND THE ASSOCIATION OF LOCAL AIR POLLUTION CONTROL OFFICIALS

The State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO) appreciate this opportunity to provide testimony regarding the fiscal year 2002 proposed budget for the U.S. Environmental Protection Agency (EPA), particularly regarding grants to state and local air pollution control agencies under Sections 103 and 105 of the Clean Air Act.

STAPPA and ALAPCO are the national associations representing air quality officials in 54 states and territories and more than 165 metropolitan areas across the United States. Under the Clean Air Act, state and local air quality officials have the primary responsibility for implementing our country's clean air program on behalf of our citizens. This extremely complex and diverse program requires state and local air agencies to address particulate matter, ground-level ozone, toxic air pollution, acid rain and other types of air pollutants, many of which cause significant adverse health effects, including cancer, severe respiratory ailments and premature death. Air agencies must continue to carry out the core elements of our programs, which serve as the foundation of our nation's clean air effort, while, at the same time and with the same staff and resources, address new initiatives that focus on emerging problems.

With respect to fiscal year 2002, the President's proposed budget calls for $208.5 million for state and local air agency grants under Sections 103 and 105 of the Clean Air Act, which represents level funding from last year. While we understand that there are constraints throughout the federal budget, we are concerned that level funding will make it far more difficult for state and local air quality agencies to meet their health-based and environmental requirements under the Clean Air Act. Accordingly, we strongly urge that Congress recognize the severe and growing budget shortfall facing state and local air agencies and provide an increase of $33 million under Section 105 of the Clean Air Act.

AIR POLLUTION IS A SIGNIFICANT PROBLEM

Although we have made substantial progress in improving air quality, air pollution still presents a pervasive national public health and environmental problem. In fact, the health risks from exposure to air pollution are significant and far exceed those from almost every other environmental medium. Over 60 million people live in areas of the country where health-based air quality standards are violated. Further, 125 million people live in areas with air quality that does not meet the new health-based eight-hour ozone standard. Aside from our traditional air contaminants, more hazardous pollutants are emitted into the air than are released to surface water, ground water and land combined. In view of the importance of what is at stake—public health—and the difficulty and complexity of the task we still face, it is critical that we focus the necessary resources on ensuring that the air our citizens breathe is clean.

The magnitude of the national problem posed by air pollution and the tremendous risk to public health this problem presents demonstrate clearly that our nation's air program budget warrants far more resources than are currently being appropriated. No matter what efforts we make to address air pollution, and in spite of any innovations or plans we develop, we will not reach our goal—healthful air quality—without adequate funds. We believe increased funding for the air program should be a top priority—commensurate with the relative risk to public health and the environment.

STATE AND LOCAL AIR AGENCIES NEED ADDITIONAL RESOURCES

Several years ago, STAPPA, ALAPCO and EPA conducted a collaborative effort to assess funding needs, which concluded that federal grants to state and local air pollution control agencies under Section 105 of the Clean Air Act continue to fall short by nearly $100 million each year. Unless the fiscal year 2002 budget includes significant increases over recent years, state and local air agencies will continue to face a serious funding shortfall that would impede our ability to address the important public health problems throughout the country that result from air pollution.

This shortfall is growing larger because the demands being placed on state and local agencies are increasing. Since the completion of the collaborative effort, new ambient air quality standards have been promulgated for fine particulate matter and ozone, the regional haze program has been implemented and numerous standards to control toxic air pollution have been promulgated. Each of these has placed an increased resource burden on our agencies without commensurate increases in our Section 105 grants.

There are many who mistakenly believe that the federal permit fee program under Title V of the Clean Air Act, which requires the collection of fees from major sources to cover the costs of the permit program, is the solution to the funding woes of state and local air agencies. While the permit fees collected pursuant to Title V are essential to our efforts, they do not solve our funding problems for several reasons.

First, Title V fees may only support the operating permit program and cannot be used for other activities. Second, the fee program only applies to major sources, while most permits are issued for non-major sources, which do not pay Title V fees. The issuance of minor source permits is quite resource intensive. Finally, increases in costs for air quality programs (except for permit programs themselves) are not addressed by permit fee programs.

In other words, federal grants and permit fees support separate activities and cannot be mingled. Even if fees are adequate for major source permit programs, which they may not be in many cases, the funds are not available for the other elements of air quality programs.

Since fees are not the answer, federal grants are critical to the effective operation of our programs. While we feel the Section 105 program should be increased in fiscal year 2002 by at least the entire amount of the shortfall that the study identified, we recognize that this is unlikely in view of the very difficult task facing Congress in distributing finite resources to many worthy programs. We believe, therefore, that it is reasonable for the increase to be phased in over a three-year period, beginning with an increase of $33 million in fiscal year 2002.

On what would we spend additional resources? Increased grants would help to support many activities. For example, there is much that still must be done to address toxic or hazardous air pollution. We must assess the extent of the problem through monitoring and data analysis, implement technology-based (or "MACT") standards, develop strategies for addressing national and local problems, and issue permits to many minor sources (an expensive undertaking that is not covered by permit fees under Title V of the Clean Air Act), among other things. In addition to toxic air pollution, we must continue to address criteria pollutants, such as ozone and particulate matter, and regional haze and visibility. In fact, the list of our responsibilities for which additional funds are necessary is long and includes, among others, the following: transportation-related projects; land use and air quality programs; development, replacement and/or upgrading of monitors (apart from fine particulate matter monitoring); collection of essential emission and pollutant data; minor source inspections and permits; training; implementation of ozone strategies; multi-state approaches to regional air quality problems; and public education and outreach.

As we work to confront our air quality problems, we grow in our understanding of the nature of air pollution. This experience has allowed us to better define the issues we face and to recognize that the air quality problems before us are different from those of the past and will require new solutions. While many of the approaches that have served us well in the past will continue to play an essential role, it is imperative that we also explore new strategies to augment our programs and add more tools to our repertoire. For example, there is a greater need to reduce emissions from small industrial, mobile and area sources, which is more resource intensive than the traditional stationary source program. This has increased the demand for outreach, inspection, enforcement and compliance assistance. These innovative strategies, including additional flexibility for both state and local agencies and the regulated community, which the new Administration strongly supports, do not come without a price. The development and implementation of these new and flexible innovative strategies will also require significant resources.

ENFORCEMENT GRANTS

The President's budget request includes $25 million for a state enforcement grant program. While we are very gratified by the Administration's vote of confidence in the important work of state enforcement programs, and we hope Congress will include this program in the final appropriations, we wish to express two concerns.

First, STAPPA and ALAPCO are extremely concerned that EPA's current framework does not include local air pollution control agencies among those entities eligible to compete directly for enforcement grant funds. We find this omission to be very troubling, particularly in that Congress specifically recognizes local air pollution control agencies in the Clean Air Act and goes so far as to include such local agencies in the definition of "air pollution control agency" under Section 302 of the Act. Further, under Section 105 of the Act, Congress authorizes the EPA Administrator to make grants to local air agencies. But perhaps most important is the fact that many local air pollution control agencies across the country have been delegated direct responsibility for enforcement of programs under the Clean Air Act and, in effect, function similarly to state agencies with respect to enforcement. In fact, in some cases, local air agencies have greater knowledge and understanding of the sources in their respective jurisdictions, enabling them to bring unique and very valuable expertise to enforcement activities. Not allowing local air pollution control agencies to apply directly to EPA for enforcement grants and to be awarded such grants directly by EPA seriously undervalues the integral role of local air agencies and, moreover, is counter to the federal/state/local partnership principles upon which the air enforcement program is built. Therefore, we strongly urge that EPA's enforcement grant program ensure that local air pollution control agencies be allowed to compete directly for and be directly awarded enforcement grant funds.

Second, while some of the funds for the grant program are additional, approximately $10 million are merely resources transferred from EPA's own enforcement budget. While we think the new grant program will be very worthwhile, we do not believe these increases should be at the expense of EPA's enforcement budget, particularly if it leaves the agency with insufficient funds for important enforcement activities (e.g., enforcing consent decrees against heavy-duty diesel manufacturers). We would not want the national enforcement program to suffer—both EPA and state/local grants need to be adequate. We recommend, then, that the enforcement grant program remain at the $25-million level, but that EPA's enforcement budget also be preserved.

EPA'S BUDGET

During decades of air pollution control, state and local governments have gained substantial experience and expertise to employ in our quest for clean air. We have learned a great deal about the science of air pollution, the technology of control and strategies for addressing local problems. As a result, state and local agencies welcome the flexibility to craft and tailor programs that will best suit our needs. However, we cannot solve the problems related to air pollution alone; we need EPA to perform those duties that are best suited to a federal agency. It is only through federal, state and local cooperation that we will succeed. Accordingly, we welcome and support a strong federal role in the national air quality program.

Among the responsibilities EPA has undertaken and upon which we will continue to rely are establishing (and revising) strong national standards for pollutants, industries and sources, including motor vehicles; developing national guidance, conducting research, providing training and carrying out enforcement oversight and appropriate enforcement actions. As a federal agency with a national perspective, EPA is best suited to these tasks.

In order for EPA to fulfill its responsibilities with respect to the air program, it needs to be adequately funded as well. We touched upon this issue above, with respect to the enforcement budget. We urge Congress, therefore, not to reduce EPA's budget, since decreasing EPA's ability to carry out its programs will adversely affect the job state and local air agencies are able to do. In fact, we believe EPA's air quality budget should be increased to allow the agency to fulfill its responsibilities the way the Clean Air Act intended.

CONCLUSION

In conclusion, we strongly urge you to ensure that state and local air agencies receive significant increases in grant funding in fiscal year 2002, specifically by providing an increase of $33 million to state and local grants under Section 105 of the Clean Air Act in fiscal year 2002, as the first part of a three-year phase-in of at least a $100-million increase. Further, we recommend that the enforcement grant program be funded, but not by diverting EPA enforcement resources, and that local air quality agencies be permitted to apply directly to EPA for grants and receive grants directly from EPA under the program. Finally, we recommend that EPA programs be adequately funded.

Thank you very much for this opportunity to provide you with our testimony. Please contact us if you have questions or require any additional information.

Prepared Statement of the Southwest Center for Environmental Research and Policy

SCERP's role in improving environmental conditions in the U.S.-Mexican border region

Mr. Chairman and Members of the Subcommittee: Thank you for this opportunity to submit testimony regarding the current state of the U.S.-Mexican border environment and the region's need for the (SCERP).

As elaborated in the testimony below, the growth of trade and population in the region has exacerbated the environmental degradation and the resultant impacts on residents along the border. Despite SCERP's successes, this growth has outpaced the capacity of SCERP and other agencies in the region to effectively manage the environmental deterioration. Consequently, SCERP respectfully requests $6,000,000 for fiscal year 2002 to initiate needed programs that have been delayed for the past two years due to insufficient resources and to broaden the coverage of the programs to larger segments of the border region. Past funding has included $2,500,000 for fiscal year 2001, $2,375,000 for fiscal year 2000, and $3,000,000 for fiscal year 1999.

SCERP's mission is to help U.S.-Mexican border residents

The human population living on the U.S.-Mexican border, currently estimated at over 12 million, is expected to double to over 24 million by 2020, making it the largest rapidly growing region of North America. Most of the growth will occur in the already burgeoning twin cities of San Diego-Tijuana and El Paso-Ciudad Juárez, although smaller border communities such as Nogales, Arizona, and Laredo, Texas, have annual population growth rates that exceed the capacity of local governments to provide infrastructure and maintain environmental quality. This dynamic frontier, characterized by rapid environmental and social change, demands that border stakeholders not only have a comprehensive understanding of its current socio-economic and environmental conditions, but that we are prepared for alternative scenarios in the future.

The Southwest Center for Environmental Research and Policy (SCERP) is a binational consortium of five U.S. and four Mexican universities created in 1990 to respond to that challenge. Its original mission as a precursor to the United States and Mexican governments' Border XXI Program was to "initiate a comprehensive analysis of possible solutions to acute air, water and hazardous waste problems that plague the United States-Mexico border region." Since then, the consortium's mission has expanded from focusing solely on applied environmental research to include policy development as well as outreach, education, and regional capacity building for border communities—SCERP's ultimate customers.

SCERP achieves its mission by uniting academic expertise from multiple disciplines with policymakers at the binational, state, tribal, and local levels; with non-governmental organizations; and with private industry to address pressing trans-border issues. In addition to being a current partner of the Border XXI Program, SCERP has emerged to support the border activities of many organizations. Many federal, state, and local agencies have come to rely on SCERP as a source of high quality information and analysis, to support them in their work.

As agencies face the daunting task of satisfying growing community needs with already strained budgets, they value SCERP's flexibility in partnering across jurisdictions, using well-established crossborder networks, and providing the cutting-edge information that develops solutions. SCERP's vision is a vital region with a dynamic and diverse economy, sustainable environmental quality, intact ecological systems, and a high quality of life for all border residents.

SCERP has demonstrated value on over 200 projects

In its first ten years SCERP has produced a critical mass of data and analysis related to air, water, and hazardous pollution through the successful completion of applied research projects. The findings from these projects have been applied to grassroots environmental health education, to the development of new technologies, and to policy recommendations. Among our successes are:

—Informing communities about general environmental issues and solutions
—Providing safe drinking water for low-income residents throughout the border region
—Reducing risk from lead, cadmium, selenium, and arsenic to pregnant women in the El Paso-Ciudad Juárez area
—Developing membrane filtration methods to treat drinking water from the Rio Grande

—Developing training materials to facilitate conversion of Ciudad Juárez brick kilns to clean fuels that have applications throughout Mexico
—Producing Visual Decision-Support Systems based on our work on integrated cross-border Geographic Information Systems
—Developing pollution prevention and removal strategies for the Tijuana River watershed
—Influencing national legislation, such as the Border Smog Reduction Act of 1998 (H.R. 8) based on our advanced understanding of transborder air pollution sources and solutions

SCERP responds to grassroots concerns and priorities; applies data to binational management, monitoring, and enforcement decision-making challenges; and directly addresses key environmental threats. At the same time, SCERP is developing the local capacity of researchers, students, and organizations to handle current and future needs through advanced education, training, and partnering.

SCERP BUDGET REQUEST IS JUSTIFIED IN LIGHT OF GROWTH AND PRESSING NEEDS

SCERP has proven its ability to select timely projects that target high priority environmental concerns in the U.S.-Mexican border region, carry them out effectively, and disseminate their results to border stakeholders. Through the Transboundary Watershed, Paso del Norte Air Basin, Tribal Environment Resource Development, and Emissions Permit Trading programs, SCERP has also combined promising localized projects into muli-year, multi-disciplinary programs that cover broader segments of the border region.

In the past, SCERP has been very successful despite minimal levels of funding. By working with border stakeholders and providing education and training of the next generation of border leaders, SCERP has completed over 200 applied research projects with concrete benefits to border communities. Nevertheless, the unprecedented 151 percent expansion of trade due to NAFTA since 1994 and the immense increase in border traffic have overwhelmed existing infrastructure, thereby creating new environmental problems and exacerbating old ones. In addition, the population boom on both sides of the border has meant that border communities are falling further behind in their ability to handle key environmental problems.

Now, more than ever, border communities need SCERP to address this gap between the growing environmental problems and local capacity to analyze and manage problems. Despite SCERP's success in improving environmental conditions in some parts of the border region, there is still much to be done. Border stakeholders, including the U.S. EPA, BECC and NADBank, border states, tribes, nongovernmental organizations, cities, and other SCERP partners have asked SCERP to address the following high priority issues and their impact on public environmental health:
—the sustainable use of water
—the intersection of trade, energy, and air pollution
—pollution prevention and control of hazardous materials controls
—the future of agriculture in arid regions
—invasive species displacing economically important ones

SCERP program initiatives for 2002 will deal with these issues with thorough consideration of economic, legal, political, and social factors. For SCERP to effectively address these issues, it is imperative that SCERP's funding be increased to $6 million for fiscal year 2002.

The following table illustrates how funding has been used in the past and plans for the future. The program years marked with one asterisk (*) indicate that the program was leveraged and/or subsumed by outside funding sources. The program years marked with two asterisks (**) indicate that the program was delayed and/or downscaled due to insufficient resources.

RESEARCH YEARS	1999	2000	2001	2002	2003
MANAGEMENT & ADMINISTRATION	450	380	360	500	500
OUTREACH, TRAINING & COMMUNICATIONS	185	180	190	250	400
RESEARCH, DEVELOPMENT & POLICY:					
Researcher Initiated (Competitive) Projects	250	1,440	1,250	2,000	3,000
Trans-Border Watershed Research Program	413	(*)	....	....	....
Paso del Norte (Fine Particulate) Air Program	400	(*)	....	....	....
SCERP Tribal Environment Development Program **	300	150	125	250	250
Binational Emissions Permit Trading Program	308	(*)	....	....	....
Border Environment Scenario Prediction Program **	250	125	300	750	750
Border Water Quality and Supply Issues Program **	....	(**)	20	500	1,000
Trade, Energy and the Environment Program **	....	(**)	(**)	750	750

RESEARCH YEARS	1999	2000	2001	2002	2003
Human Environmental Health Program **	....	(**)	(**)	300	750
Living Resources and Restoration Program **	....	(**)	(**)	300	750
Research Planning and Faculty Development	444	100	255	400	500
TOTAL	3,000	2,375	2,500	6,000	8,650

While SCERP continues to leverage its congressional funding with support from other government, private, and philanthropic sponsors, the congressional support is still critical to maintaining current projects, developing new programs, and translating the results of those projects and programs to the communities that need them.

The federal component of support is key to our ability to leverage sustainable partnerships with other agencies in the immediate future. Congressional funds provide important seed money for critical projects that are later adopted and institutionalized by other funding sources, leaving a lasting impact in the region. The preliminary results of one SCERP member university's survey found that in the past ten years, the $2.5 million invested in SCERP by Congress leveraged another $3.4 million. At this university alone, one SCERP grant of $75,000 brought in five others that totaled about $1,000,000 from agencies as diverse as the Department of Defense and the National Science Foundation.

SCERP WANTS TO ADDRESS MORE OF THE CRITICAL ISSUES OF IMPORTANCE TO BORDER STAKEHOLDERS

The EPA, border states, tribes, BECC and NADBank, NGOs, and other SCERP partners have identified the need for applied research and projects in the following areas. Increased funding leveraged with other resources will enable SCERP to expand its focus and incorporate projects in these areas.

Area	High Priority	Medium Priority	Lower Priority, but Important
Air	Agricultural Burns Air Emissions Inventory Cost-Benefit Analysis	Air Deposition of Mercury and Other Airborne Pollutants and their Potential Impacts to Water Quality. Solid Waste Dumps	Fugitive Dust Sources and Transport
Water	Drinking water Toxic Plumes Regionalization of Water Systems Tracking System for BECC/NADB Projects.	Phosphates Watersheds and/or Total Maximum Daily Loads (TMDLs). Satellite Water Treatment Santa Cruz River Groundwater	Drinking Water Collection Systems
Hazardous Materials	Used Tires Needs Assessment for Hazardous and Solid Waste Management Infrastructure.	Spill Analysis and Damage Prediction Vulnerability Atlas Site Remediation	Risk Analysis of Transport, Storage and Disposal of Hazardous Waste Through State and Bordering Cities
Natural Resources	Endangered, Transboundary and Migrational Species.	Riparian Habitat.	
Environmental Information		Technology Transfer Source Books	
Pollution Prevention		Analysis of Installation and Operation of Fueling Facilities with Underground Storage Tanks (USTs). NAFTA Effects on Transportation Systems. ISO 14000 and Voluntary Activities	Industrial Ecology
Environmental Health	Human (Environmental) Health Potable Water Storage	Biomarkers	
Contingency Planning and Emergency Response		Landfills	Fires Agua Prieta Chemical Accident Hazards
Economics		Economic Assessments Environmental Accounting	

CONCLUSION

SCERP seeks to improve the quality of life of the people living in communities along the border through applied research information, insights, and innovations that address the complex environmental and socioeconomic issues they confront. Enhanced congressional support of SCERP will contribute significantly to the commitment of citizens of the United States to the principles of a sustainable border region, and our partnership with the people of Mexico.

PREPARED STATEMENT OF CASEY KROON, CHAIRMAN, BOARD OF SUPERVISORS, SUTTER COUNTY, CALIFORNIA

Mr. Chairman and members of the Senate VA–HUD and Independent Agencies Appropriations Subcommittee, I would like to thank you for this opportunity to testify before this committee. My name is Casey Kroon and I am the Chairman of the Board of Supervisors for Sutter County, California. On behalf of the County of Sutter, California, I would like to request your support for two of the County's highest priorities for fiscal year 2002.

Sutter County, located north of the City of Sacramento, is an economically depressed rural region which relies heavily on agriculture for economic stimulus. Sutter County ranks among the highest in unemployment rates—averaging two to three times the statewide figure—and among the lowest in household incomes. The County has one of the largest percentages of population on public assistance and one of the lowest employment growth rates in California. Given these demographics, the County must diversify its economy in order to improve the lives of its citizens.

First, Sutter County requests your support of an earmark of $300,000 under the Economic Development Initiative (EDI) account to complete preliminary design and environmental clearance work on water, wastewater, drainage, and transportation projects for industrial development in the County.

The South Sutter County Industrial/Commercial Reserve is well positioned geographically to provide an opportunity to develop approximately 3,500 acres of land near the Sacramento International Airport and major transportation corridors, including Interstate 5. While this area provides real economic development and diversification opportunities, the County lacks the financial resources to stimulate significant interest and development.

As part of its General Plan Update, the County prepared a South Sutter County Facilities Plan, which addresses infrastructure needs related to water, wastewater, drainage, and transportation facilities in the area to be developed. The requested earmark will be used for further design and environmental clearance work necessary to fully prepare the area for development. This work is the critical next step in the County's efforts to improve its economy by way of attracting industrial development.

Second, the County requests your support of an earmark of $3 million under the Environmental Protection Agency's State and Tribal Assistance Grants (STAG) Program to improve the Yuba City sewer and wastewater treatment system and extend it into an urban area immediately adjacent to the incorporated area.

Sewer treatment and disposal for developed areas west of Yuba City are provided by on-site sewer systems. The systems were constructed pursuant to obsolete standards and many of the systems are failing. Developing a sewage collection system to service these areas would replace the on-site septic tanks and leach fields currently in use. The septic tanks are responsible for many drinking water wells exceeding allowable nitrate levels. In addition, eliminating leach fields will reduce groundwater contamination. The alleviation of these problems will provide an opportunity for much-needed business expansion and economic growth. The City of Yuba City is in full support of the sewer/wastewater system expansion. The total cost of the project, including construction, is estimated at $14 million.

Once again, thank you for this opportunity to testify before this committee.

PREPARED STATEMENT OF THE SACRAMENTO COUNTY REGIONAL SANITATION DISTRICT

Mr. Chairman and members of the Senate VA–HUD and Independent Agencies Appropriations Subcommittee, I would like to thank you for this opportunity to testify before the committee. My name is Roger Niello and I am the Chairman of the Board of Directors for the Sacramento County Regional Sanitation District. On behalf of the citizens and communities of Sacramento River watershed, I request your support of a $3 million earmark under the Environmental Protection Agency's Environmental Programs and Management fund to continue the Sacramento River Toxic

Pollutant Control Program (SRTPCP) and the Sacramento River Watershed Program (SRWP).

The SRTPCP, a multi-year water quality management effort, and its companion stakeholder process, the SRWP, have worked together to successfully organize a regional program that includes representatives of federal, state, and local agencies, agriculture and industry organizations, environmental organizations, and citizen groups. The program uses a stakeholder-based, watershed management approach to develop and implement non-point and point source strategies addressing water quality standards for a number of toxic pollutants of concern to the Sacramento River watershed and downstream Bay-Delta.

The proposed earmark would allow the SRTPCP and the SRWP to continue the Sacramento River water quality monitoring program—including internet accessible data reporting—assess water quality problem areas and pollutant sources and trends, implement effective management strategies to meet water quality objectives, and promote public awareness of watershed issues through a strategic communications plan.

In the past year, the SRTPCP and SRWP have: continued work to develop stakeholder-led water quality management strategic plans for mercury and organophosphate pesticides in the Sacramento River watershed; implemented educational programs for landowners on management practices for OP pesticides; completed the third year of an integrated water quality monitoring program in the Sacramento River watershed linking multiple agency and watershed monitoring efforts; produced the second annual water quality monitoring report for the watershed that identified water quality problems and tracked progress of management efforts in the Sacramento Valley; coordinated and linked activities of watershed groups and local agencies within the Sacramento River watershed; established a resource center and website to provide technical information and assistance to local watershed groups and individuals; secured significant television coverage, distributed informational publications and regularly published newsletters, and hosted a watershed conference, and implemented K–12 educational programs to inform the public of watershed management and water quality issues.

The program has regional and statewide impacts that affect the Sacramento River watershed and downstream areas of the San Francisco Bay and Sacramento-San Joaquin Delta. Water quality management activities included in the program are geared toward the protection of human health, aquatic life, and drinking water and will benefit millions of Californians. The program will also assist local agencies, communities, and citizens by providing an open and equitable process for managing water quality and by promoting efficient use of resources through collaborative efforts of federal, state, and local entities.

Once again, I thank you for this opportunity to testify before this committee.

PREPARED STATEMENT OF STEVE MIKLOS, MAYOR, CITY OF FOLSOM, CALIFORNIA

Mr. Chairman and members of the Senate VA–HUD and Independent Agencies Appropriations Subcommittee, I would like to thank you for this opportunity to testify before the committee. My name is Steve Miklos and I am the mayor of the City of Folsom, California. On behalf of the citizens of Folsom, I request your support of two to the City's highest priorities.

The City of Folsom is one of California's fastest growing communities. Folsom is expected to reach its build-out population of 70,000 citizens by the year 2010. Additionally, Folsom continues to attract major corporate and industrial developments such as the Kikkoman Soy Sauce plant, the Gekkeikan Sake plant, and the continued expansion of Intel Corporation's major R&D facility that serves as one the Northern California's top employment centers. While growth benefits the City in many ways, the regional nature of the growth and related infrastructure needs puts significant strain on local government attempting to keep up with development.

First, the City requests $2 million under the Environmental Protection Agency's State & Tribal Assistance Grants (STAG) Account for engineering, construction and inspection to upgrade and replace failing portions of the City's sewer system.

The City's older, existing sewer system is heavily impacted by growth and needs immediate improvements. A critical consideration is the fact that Folsom is situated upon the American River, and problems with the City's sewer system may have immediate and damaging impacts upon this heavily used and highly exposed water resource. In January 2000, a significant storm event caused a great increase in infiltration and inflow of stormwater into portions of the City's older sewer system. Unfortunately, the sewer system was not capable of handling the event, resulting in a sewer spill into the American River. The State of California Regional Water Quality Control Board issued an Administrative Civil Liability Fine of $700,000, which was paid by the City. Currently, the City is undertaking an analysis of its sewer system, which is expected to identify the need for significant rehabilitation of the City's older sewer system.

Federal funding will be used to improve and enhance the safe transmission of sewer water to treatment facilities. The City is prepared to share the costs associated with this project at the required forty-five percent level.

Second, the City requests your support of a $4 million earmark under the Economic Development Initiative Account (EDI) for the design and construction of a new fire station facility.

As I mentioned before, the City of Folsom is experiencing great expansion and needs $4.0 million to design and construct a new fire station and training facility in the central business district area of the City. The new station would service the major portion of the population and the heaviest requests for service. The strategic location of this new station will improve response times, will consolidate services, and will take full advantage of a 360° response radius from the facility. The new fire station would, in addition to fire apparatus, house two paramedic staffed transporting medic units (ambulances) providing advanced life support to the growing number of citizens and those commuters on nearby U.S. Highway 50.

Thank you again for this opportunity to testify before this committee.

Prepared Statement of the American Public Power Association

The American Public Power Association (APPA) is the service organization representing the interests of the more than 2,000 municipal and other state and locally owned utilities throughout the United States. Collectively, public power utilities deliver electric energy to one of every eight U.S. electric consumers (about 40 million people) serving some of the nation's largest cities. The majority of APPA's member systems are located in small and medium-sized communities in every state except Hawaii. We appreciate the opportunity to submit this statement concerning fiscal year 2002 appropriations for programs under this Subcommittee's jurisdiction.

CLEAN AIR PARTNERSHIP FUND

APPA supports continued funding of the Clean Air Partnership Fund in the fiscal year 2002 budget. As locally-owned providers of electricity to nearly 40 million consumers across the country, we are strongly interested in pursuing projects that benefit the environment. Along with the states, local governments, business and the environmental community we lend our enthusiastic support for this program that offers an innovative approach to addressing multi-pollution problems in a cost-effective way. The fund would help finance environmental technologies and environmentally related energy technologies and programs.

We believe at an adequately funded level, the Clean Air Partnership Fund could become a significant incentive available to locally owned, not-for-profit electric utilities to make new investments in renewable and clean energy projects. Such projects have the potential of providing important economic and environmental benefits to the communities served by the municipal utility. Along with significant air quality benefits resulting from accelerated use of emissions-free energy sources, new jobs are created each time these technologies are deployed.

Among other projects, we would look to the Fund to spur development of landfill gas-to-energy projects. These projects are valuable in reducing methane gas emissions. As municipally owned electric utilities, we have unique opportunities to partner with cities and the landfills they operate.

Green Lights Program

The Green Lights program encourages use of energy efficient lighting to reduce energy costs, increase productivity, promote customer retention and protect the environment. Program partners agree to survey lighting in their facilities and to upgrade it, if cost-effective. Environmental benefits result from more efficient energy use and from reductions in emissions of carbon dioxide, sulfur dioxide and nitrogen dioxide, thus improving air quality. EPA provides program participants public recognition and technical support. Both large and small APPA member systems participate in this program including City Utilities of Springfield, MO; Concord Municipal Light Plant, MA; City of Georgetown, TX; Grant County Public Utility District, WA; Gray's Harbor County PUD, WA; Greenville Utilities Commission, NC; Indiana Municipal Power Authority, IN; Los Angeles Department of Water & Power, CA; Mason County PUD, WA; New York Power Authority, NY; Norwood Municipal Light Department, MA; Omaha Public Power District, NE; Orlando Utilities Commission, FL; Port Angeles City Light Department, WA; Puerto Rico Electric Power Authority, PR; Sacramento Municipal Utility District, CA; City of St. Charles Electric Utility, IL; Salt River Project, AZ; Virgin Islands Water & Power Authority, VI; Springfield Utility Board, OR, and Taunton Municipal Lighting Plant, MA.

Energy Star Programs

A number of EPA's Energy Star programs build on the successes of Green Lights. These important EPA programs are examples of successful public/nonpublic partnerships that promote the use of profitable, energy-efficient technologies as a way to increase profits and competitiveness while at the same time minimizing pollution. They include Energy Star Buildings, the Energy Star Transformer Program, Energy Star office equipment and the Residential Energy Star Program. APPA member systems participate in and support EPA's Energy Star efforts.

Landfill Methane Outreach Program

The Landfill Methane Outreach Program provides environmental benefits by encouraging utilities to make use of landfill gas as an energy source. Several APPA member systems participate in this program, including Illinois Municipal Electric Agency, IL; Jacksonville Electric Authority, FL; Emerald People's Utility District, OR; Los Angeles Department of Water and Power, CA, and Orlando Utilities Commission, FL. Utilities voluntarily agree to take advantage of the best opportunities to use landfill gas in generating power. EPA recognizes and publicizes the utility's efforts and provides technical assistance. One of the success stories cited by EPA occurred with APPA member system Emerald People's Utility District in Eugene, OR. This public power utility worked collaboratively with the State of Oregon, Lane County officials and a private investment company to develop a 3.4 MW plant at the Short Mountain Landfill. EPUD's general manager says landfill energy recovery is like "turning straw into gold," providing additional revenue to EPUD as well as a fee to the county.

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ)

APPA supports level funding in fiscal year 2002 of $3,020,000 for the Council on Environmental Quality (CEQ). As units of local government APPA member utilities have a unique perspective on environmental regulation. Public power utilities and others from industry have experienced a general lack of consistency in federal environmental regulation. While additional layers of government should be avoided, a central overseer can perform a valuable function in preventing duplicative, unnecessary and inconsistent regulations. The council is responsible for ensuring that federal agencies perform their tasks in an efficient and coordinated manner. For these reasons, APPA supports the existence and continued operation of CEQ.

Again, APPA member systems appreciate your consideration of our views on priority appropriations issues for fiscal year 2002.

PREPARED STATEMENT OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

I am Terrence J. O'Brien, President of the Metropolitan Water Reclamation District of Greater Chicago, and on behalf of the Water Reclamation District, I want to thank the Subcommittee for this opportunity to present our priority for fiscal year 2002, and express our appreciation for your support of our requests over the years. The Metropolitan Water Reclamation District (District) is the sponsor for the federally approved combined sewer overflow (CSO) project, the Tunnel and Reservoir Plan (TARP), in Chicago, Illinois. Specifically, we are asking that $15 million be included to continue construction of this project in the Subcommittee's VA, HUD and Independent Agencies Appropriations Bill for fiscal year 2002. The following outlines the project and the need for the requested funding.

INTRODUCTION

The District was established in 1889 and has the responsibility for sewage treatment, and is also the lead agency in providing sponsorship for flood control and stormwater management in Cook County, Illinois. In fact, the District was established in response to an epidemic of waterborne diseases caused by drinking polluted Lake Michigan water, which killed 90,000 people in 1885. By 1900, the District had reversed the flows of the Chicago and Calumet Rivers to carry combined sewage away from Lake Michigan, the area's main water supply. The District has been involved with major engineering feats since its inception.

In an effort to meet the water quality goals of the Clean Water Act, to prevent backflows into Lake Michigan, and to provide an outlet for floodwaters, the District designed the innovative TARP. The TARP tunnels, which were judged by the Environmental Protection Agency (EPA) on two occasions as the most cost-effective plan available to meet the enforceable provisions of the Clean Water Act, are a combined sewer overflow elimination system. The TARP reservoirs, also under construction, will provide flood control relief to hundreds of thousands of residents and businesses in he Chicagoland area.

TUNNEL AND RESERVOIR PLAN

The TARP is an intricate system of drop shafts, tunnels and pumping stations which will capture combined sewer overflows from a service area of 375 square miles. Chicago will remove three times the amount of CSO pollution as Boston's projected removal—for approximately the same cost. The remaining Calumet tunnel system will provide 3.1 million pounds of biological oxygen demand (BOD) removal versus Boston's one million pounds of BOD removal per year. In fact, Chicago's CSO pollution problems are worse than the combination of Boston, New York, and San Francisco's pollution problems. The Chicago Metropolitan Area's annual BOD loading is 43 million pounds per year. This contrasts with the combination of Boston, New York and San Francisco's combined annual BOD loading of 35 million pounds.

A good portion of the remainder of the TARP system is to be built in the southeast side of Chicago and the southern suburbs (Calumet system), a low-income, high neglected and highly polluted area. This community suffers from tremendous land, air and water pollution—literally a dumping ground for multi-media pollution ranging from chemical waste to serious water pollution.

Due to the enormous risk to the community, the District as the local sponsor cannot afford to leave the citizens vulnerable. Therefore, it is imperative that this work must continue. Because the construction industry is already doing work in the area, the climate is favorable for proceeding with this work at this time, producing significant cost savings. What we are seeking, then, is funding to advance federal work.

We have a proven and cost-effective program. In fact, we have estimated that TARP's cost is about a quarter of the cost of separating the area's existing combined sewer systems into separate sewage and stormwater systems. Upon reanalysis, the EPA has consistently found the TARP program to be the most cost-effective solution that will reduce the impacts by the greatest degree to meet the enforceable requirements of the Act, with the least amount of dollars. The project, while relating most specifically to the 52 tributary municipalities in northeastern Illinois, is also beneficial to our downstream communities such as Joliet and Peoria. These benefits occur because of the capture of wastewater in the tunnels during the storm periods and by treatment of the discharge before being released in to the waterways.

Since its inception, TARP has not only abated flooding and pollution in the Chicagoland area, but has helped to preserve the integrity of Lake Michigan. In the years prior to TARP, a major storm in the area would cause local sewers and interceptors to surcharge resulting in CSO spills into the Chicagoland waterways and during major storms into Lake Michigan, the source of drinking water for the region. Since these waterways have a limited capacity, major storms have caused them to reach dangerously high levels resulting in massive sewer backups into basements and causing multi-million dollar damage to property.

Since implementation of TARP, 358 billion gallons of CSOs have been captured by TARP, that otherwise would have reached waterways. Area waterways are once again abundant with many species of aquatic life and the riverfront has been reclaimed as a natural resource for recreation and development. Closure of Lake Michigan beaches due to pollution has become a rarity. After the completion of both phases of TARP, 99 percent of the CSO pollution will be eliminated. The elimination of CSOs will reduce the quantity of discretionary dilution water needed for flushing of Chicago's waterway system, making it available as drinking water to communities in Cook, DuPage, Lake, and Will counties, which have been on a waiting list. Specifically, since 1977, these counties received an additional 162 million gallons of Lake Michigan water per day, partially as a result of the reduction in the District's discretionary diversion in 1980. Additional allotments of Lake Michigan water will be made to these communities, as more water becomes available from sources like discretionary diversion.

With new allocations of lake water, more than 20 communities that previously did not get to share lake water are in the process of building, or have already built, water mains to accommodate their new source of drinking water. The new source of drinking water will be a substitute for the poorer quality well water previously used by these communities. Partly due to TARP, it is estimated by IDOT that between 1981 and 2020, 283 million gallons per day of Lake Michigan water would be added to domestic consumption. This translates into approximately 2 million additional people that would be able to enjoy Lake Michigan water. This new source of water supply will not only benefit its immediate receivers but will also result in an economic stimulus to the entire Chicagoland area, by providing a reliable source of good quality water supply.

TARP was designed to give the Chicago metropolitan area the optimal environmental protection that could possibly be provided. More importantly, no other project was found to be as cost-effective. In addition, the beneficial use of the project is being enhanced by the addition of the flood control reservoirs now being designed and constructed by the Corps of Engineers, which will be connected to the tunnels for additional capture and storage of combined sewage during flood events. We believe TARP stands as a tribute to our nation's Clean Water goals and one that is being accomplished within the most economical constraints.

REQUESTED ACTION

The $15 million we are seeking in fiscal year 2002 funding in the Subcommittee's bill will help keep the local sponsor whole for the advance construction it plans to accomplish on the Torrence Avenue and Little Calumet Legs for the Calumet System of the congressionally-authorized TARP project. While the TARP project was originally authorized at 75 percent federal funding, the District as local sponsor has been contributing at least 50 percent of the total project cost. We greatly appreciate the Subcommittee's endorsement of our request over the years to advance the construction of this work. This fiscal year 2002 will go a long way to address serious water quality, stormwater and safety problems. It will have a tremendously beneficial impact on a community, which suffers from water pollution and significant flooding problems. The EPA has approved the facilities plan for the overall TARP project and design has been completed. The EPA has identified this particular segment of work as the next critical section of the plan to be constructed based on significant water quality benefits.

Once on-line, the Torrence Avenue Leg of the Calumet System will capture 2.0 billion gallons of CSOs per year and will protect 15.6 square miles of the City of Chicago from raw sewage backup and flooding.

We urgently request that this funding be included in the Subcommittee's bill for the construction of the Calumet System of the TARP project. We thank you in advance for your consideration of our request.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

PREPARED STATEMENT OF THE PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS

Chairman Bond and Members of the Subcommittee: People for the Ethical Treatment of Animals (PETA) is the world's largest animal rights organization, with more than 700,000 members. We greatly appreciate this opportunity to submit testimony regarding fiscal year 2002 appropriations for the Department of Housing and Urban Development (HUD). My testimony will focus on HUD funds for the city of Virginia Beach, Va., for the expansion of the Virginia Marine Science Museum (VMSM).

PETA respectfully requests that the subcommittee include report language stating that no HUD funds shall be given to the city of Virginia Beach for any expansion of the VMSM. PETA makes this request in light of the city's intent to build a tank for a permanent captive dolphin exhibit, the city's repeated violations of the Virginia Freedom of Information Act (VFOIA) in connection with prior HUD funds, and the city's failure to document how the current proposal will meet the criteria established by HUD for the award of funds.

Funds awarded for the expansion of a stranding center are likely to predetermine the construction of an inhumane captive dolphin exhibit tank.

The VMSM currently has a stranding center for the rescue and rehabilitation of sick and injured marine animals. It is our understanding that the city of Virginia Beach intends to apply for HUD funds for the purpose of expanding the existing VMSM stranding center.

While PETA applauds the good work of the stranding center, we oppose the request for HUD funds because the VMSM's plans to expand the stranding center have been and are inextricably linked to the construction of a new controversial captive dolphin tank. Both a new stranding center and the captive dolphin tank are part of what the VMSM calls the Phase III Expansion. The city has repeatedly claimed that an expansion of the stranding center is not economically feasible absent the construction of the dolphin tank for which the sole purpose is to display and breed dolphins for profit.

A coalition of 28 animal protection organizations, including PETA, opposes the VMSM dolphin tank project.

Dolphins suffer greatly in captivity.

Confining dolphins to tanks shortens their lives through stress-related diseases and depression caused by swimming in endless circles. According to current U.S. National Marine Fisheries Service records, the mortality rates for captive cetaceans is greater than 60 percent. It is simply not possible to reproduce in captivity the natural habitat that cetaceans require. Because dolphins communicate and navigate by echolocation, the small confines of a tank are extremely stressful. The eminent marine mammal authority, Jean-Michel Cousteau, explained that "their world becomes a maze of meaningless reverberations."

The VMSM intends to populate the proposed dolphin exhibit tank with animals bred in captivity who supposedly cannot be released. However, the marine mammal science community acknowledges that there are no criteria (excluding extreme conditions such as blindness) upon which to base an evaluation of whether any individual animal is a suitable candidate for release. Even long-term captive dolphins have been successfully rehabilitated and released.

The VMSM also intends to contact other zoos and aquariums for dolphins, thereby becoming part of the chain responsible for the violent capture of wild dolphins. This trade includes chasing dolphins by boat, separating them from their families, netting them, and dragging dolphins onto the boat repeatedly until the "ideal" animal is captured. Frequently in this process dolphins drown or die of capture shock. Worse, the museum intends to breed the dolphins for display and profit. It is more than likely that either a baby or mother will eventually be sold to another facility (whose level of care we will never be able to monitor) and another closely-knit family will be broken up.

The city of Virginia Beach violated the Virginia Freedom of Information Act in connection with past HUD funds.

In an attempt to keep the animal protection coalition from learning of the VMSM's plans, the city of Virginia Beach has illegally withheld plans for the dolphin tank from the public. Beginning in January 2000 and continuing for fifteen months, PETA requested access to public records concerning the VMSM Phase III Expansion pursuant to the VFOIA. Museum officials and other city personnel continually denied the existence of a great number of public records that were the subject of a number of these VFOIA requests. As a result, in March 2001, PETA filed a lawsuit against city officials, including the director of the VMSM, based on over 100 violations of the VFOIA. In a settlement agreement dated April 9, 2001, city officials admitted to violations of the statute and released tens of thousands of illegally withheld documents.

Among the city's most egregious violations of VFOIA were the city's repeated denials that it had renewed efforts to obtain the funds awarded through a fiscal year 2000 HUD Economic Development Initiative (EDI) Special Projects Grant less than one month after HUD had denied the city's initial request for release of these funds (RROF). The initial RROF was strongly opposed by PETA and other citizens. Consequently, city officials intentionally hid from the public the city's resubmittal of the RROF for more than six months. Moreover, the RROF itself was not released until October 20, 2000, well after the Virginia Beach city council had already voted to accept the funds. Thus, the city was able to avoid timely public debate on this very controversial issue. The following chart details the serious nature of the city's illegal actions:

February 15, 2000—City submits request to HUD for release of EDI special project funds (RROF). No notice to public even though city manager certifies to the contrary.

February 22, 2000—PETA is made aware of first RROF by city's response to VFOIA request.

February 28, 2000—PETA submits written objection to the grant and requests that HUD disapprove the RROF because city did not provide proof of notice to public and did not conduct environmental review (both of which were required by HUD regulations).

March 7, 2000—HUD disapproves rrof because city did not provide proof of notice to public and did not conduct environmental review.

March 30, 2000—City submits draft revised RROF. Project description changed to avoid requirements for public notice and environmental review.

April 11, 2000—PETA requests all records regarding follow-up efforts to obtain HUD funds.

April 28, 2000—City fails to identify existence of, or release, second RROF even though the document was submitted on March 30 and resubmitted on the next business day that follows the city's response to PETA'S VFOIA request.

May 1, 2000—City resubmits revised second RROF.

August 14, 2000—PETA submits VFOIA request for records regarding effort to obtain funds but second RROF and related documents are not identified or released.

September 29, 2000—PETA submits VFOIA request for records regarding effort to obtain funds.

October 6, 2000—City council meeting notice lists vote regarding second RROF. This is PETA'S first notification of existence of second RROF.

October 10, 2000—City council votes to accept grant.

October 20, 2000—City releases second rrof to PETA more than 6 months after submittal to HUD.

The above is only one example of the city's ongoing crusade to avoid public participation in any and all decisions related to the controversial Phase III Expansion, in flagrant disregard of state law and the principles of open government. Specifically, the city crafted the RROF discussed above to avoid HUD regulations concerning public notice and environmental review and then violated the state Freedom of Information Act by withholding public records related to the submittal of the RROF.

The city of Virginia Beach has failed to demonstrate the existence of criteria identified by HUD as relevant to EDI Special Project Grants.

Last year's award of a HUD Economic Development Initiative Special Projects Grant to the city of Virginia Beach for the controversial Phase III Expansion raised a firestorm of protest by Virginia Beach citizens who questioned, and still do question, how HUD funds can be considered an appropriate means to finance projects seemingly so unrelated to the purpose of the agency, such as the construction of a captive dolphin tank and the design and engineering of museum exhibits related to the marine mammal stranding center.

In documents we received as a result of a recent VFOIA request, the city of Virginia Beach urged support for the request for the appropriation of HUD funds for the expansion of the stranding center with no more than a vague reference to a potential increase in employment and a potential beneficial tax impact, and thus an alleged economic benefit to the neighborhood near the museum. However, these statements are mere allegations. To the best of PETA's knowledge no details whatsoever—not even a basic description of the types of jobs that will be created by the expansion of the stranding center, much less an economic impact analysis—have been provided to support these statements. At the very least, HUD must require the city of Virginia Beach to demonstrate an adherence to the stated national objective of such grants, which includes a clear economic benefit to a target low or moderate-income neighborhood, before even considering appropriating these funds.

SUMMARY

Because of the immense suffering that captive dolphins endure, 28 animal protection organizations and thousands of local residents oppose the VMSM's plans to build the captive dolphin tank that is part of its Phase III Expansion. In an effort to bypass public debate, the city of Virginia Beach has acted illegally in its pursuits of HUD funds for this project. We therefore request that the subcommittee include language in the report accompanying the fiscal year 2002 VA–HUD Appropriations bill stating that no HUD funds shall be given to the city of Virginia Beach, Va., for any expansion of the VMSM.

If you do not feel that that would be possible, please consider including the following language in the report: No HUD funds shall be given to the city of Virginia Beach, Va., for the purpose of expanding the VMSM unless HUD receives plans from the VMSM specifying that the funds will not be used for any project that is part of an expansion that includes, now or in the future, a captive dolphin exhibit tank, and unless those plans include a meaningful analysis of the independent economic viability of the construction and operation of an expanded stranding center without the assistance of profits from a captive dolphin exhibit tank.

Thank you for your consideration of our request.

PREPARED STATEMENT OF THE NATIONAL AMERICAN INDIAN HOUSING COUNCIL AND COALITION FOR INDIAN HOUSING AND DEVELOPMENT

On behalf of the members and Board of Directors of the National American Indian Housing Council and the Coalition for Indian Housing and Development, I would like to thank Chairman Bond, Ranking Member Mikulski, and other distinguished members of the Subcommittee for the opportunity to submit public witness testimony today.

HUD'S BUDGET REQUEST

As Chairman of the National American Indian Housing Council and the Coalition for Indian Housing and Development and Executive Director of the Navajo Housing Authority, I write today as a voice for Americans who daily endure the most deplorable housing conditions in the country. These are people within American borders who commonly live 15 to 20 people in one small house. These are people for whom proper sewage facilities, roads, and indoor plumbing is often a luxury, rather than a standard. These are people who, like many other Americans, dream of owning their own homes.

Indian housing is at a crucial stage. Many of the housing problems that have long plagued Indian communities remain unresolved. The passage of the Native American Housing Assistance and Self-Determination Act of 1996 (NAHASDA) has given tribes and Tribally Designated Housing Entities (TDHEs) incredible new opportunities, and with adequate funding, NAHASDA can be the most important tool in building sustainable, healthy communities in Indian Country.

President Bush has requested $650 million for the NAHASDA block grant for fiscal year 2002. This is the same amount as was proposed and appropriated for fiscal year 2001. I am pleased to see that the President has lent his support to Indian housing by proposing funding for the program for at least last year's level, but unfortunately, maintaining current levels of funding will bring us nowhere near the levels tribes need to meet their members' housing needs.

FUNDING NEEDS FOR INDIAN HOUSING

Indian housing is in more need of federal support than any other housing program in this country. The lack of significant private investment and the dire conditions faced in many communities mean that federal dollars make up a larger portion of the total housing resources than in other areas.

NAIHC estimates that to meet the needs as presented to us now, we need at least $1.0752 billion in funding for the NAHASDA block grant, the basic housing program for tribes.

For the Navajo Nation in particular, the immediate need is between 20,000 and 30,000 housing units. Spanning over 18 million acres of land, the Navajo Nation suffers from chronic unemployment and massive housing need. Over 56 percent of Navajos live below the poverty level. As for many other tribes across the nation, this is a situation that requires drastically increased federal assistance to remedy.

Indian housing needs are many and varied. Basic infrastructure, low-rent housing, homeownership and housing counseling services are all crucial. The NAHASDA block grant allows tribes to determine their own needs and their own course of action. In this respect, NAHASDA is a model program and should be supported. In supporting NAHASDA, however, the Congress must also support improved technical assistance for tribes seeking to efficiently and effectively utilize NAHASDA's unique features.

THE EFFECT OF NEW CENSUS DATA

Recently released census data for 2000 confirm a major increase in the Native American population. Data show a doubling of the number of Native Americans and Alaska Natives from 1.96 million to 4.1 million, including Americans of mixed-race Native descent. For Native Americans and Alaska Natives that are not of mixed-race, data show an increase of over 28 percent for a total of 2.5 million.

For a population struggling intensely to provide adequate shelter for its families, an increase of this magnitude puts an incredible strain on the restricted funds tribes rely on. These census figures only confirm what tribal leaders and tribal housing administrators have known for some time—housing needs on reservations have outgrown available funding. While not all Native Americans live on reservations where housing needs are the most severe, tribal leaders attest to population increases across the board, including on reservations.

In light of this new data, it is NAIHC's hope that Native communities will receive the funding increases outlined below to offset hardship brought on by rapidly growing need.

Need for Indian Housing Program Funding, Fiscal Year 2002

Need Area	*Appropriation Needed*
Existing Housing	$113,600,000
Operation Housing Modernization/Improvements	[1] 306,600,000
New Housing Development Implementation/Program Operations Costs	[2] 432,000,000
Title VI Loan Guarantee Credit Subsidy	32,000,000
Section 184 Mortgage Guarantee Credit Subsidy	6,000,000
Fiscal year 2002 NAHASDA funding total	[4] 1,075,200,000
Community Development Block Grant Set-Aside	[5] 144,000,000
BIA Housing Improvement Program	[6] 33,000,000
Total Request for Indian Housing for fiscal year 2002	1,252,200,000

[1] NAIHC estimates 52,000 units currently need renovation and an additional 19,000 need replacement. This figure assumes an average of $26,000 per unit, for 11,792 units in fiscal year 2002.

[2] Assumes increase in annual development to 4,500 units at an average cost of $96,000/unit. HUD estimates new construction needs at one-third of the existing housing stock or approx. 50,000 units. In addition, this takes into consideration about 30 new federally recognized tribes that will be eligible for housing assistance.

[3] Includes $147 million for administration of the Indian housing program at the tribal level, and an additional $38 million for environmental reviews, planning and technical assistance as required under the Act.

[4] Compared to fiscal year 2001 Appropriations of $650,000,000.

[5] Assumes an increase of the CDBG Indian set-aside from 1.5 percent of the proposed $4.8 billion to 3 percent to develop much-needed infrastructure resources and economic development opportunities.

[6] Compared to fiscal year 2001 Appropriations of $11,000,000.

PUBLIC AND INDIAN HOUSING DRUG ELIMINATION PROGRAM

Eliminating funding for the Public and Indian Housing Drug Elimination Program (PIHDEP) would abruptly halt successful efforts by tribes around the country to combat drug abuse and its resulting effects on tribal communities. The President proposes an end to this program with a redistribution of funds to increase operating subsidies for public housing authorities in hopes that PHAs will use the funds for more effective anti-drug activities or for other priorities.

Tribes and TDHEs do not participate in public housing programs and therefore receive no public housing operating subsidies. The Administration claims the program should be eliminated because of general misuse of funds and ineffective anti-drug activities, but in Indian Country, these programs have seen remarkable success.

According to an eleven-month study conducted by NAIHC in 1999 and 2000, the PIHDEP has created an opportunity for TDHEs to develop innovative, creative, unique solutions to crime reduction in Native communities. The NAIHC study noted that, prior to the Public and Indian Housing Drug Elimination Programs, tribes reported feeling overwhelmed with the burden of having to address these problems on their own, without knowledge of how to solve the problems or money with which to build an infrastructure of programs and services designed to address these community issues.

HUD Secretary Mel Martinez has said that the PIHDEP is too open-ended and that HUD has no business being involved in such a program. While it is not possible at this point to come to quantitative conclusions about the percentage of improvement in these communities in regard to any decrease in crime or substance abuse, the NAIHC study indicates that the PIHDEP is having a positive effect in tribal communities. Decreased crime and improvements in community values can do much to support sustainable housing conditions on reservations.

NAIHC feels it was an oversight on the part of the Administration to end this program without arranging for supplemental funding for tribes elsewhere. A blanket verdict on the Drug Elimination Program does not take into account several successful programs around the country, including Indian Drug Elimination activities. If this is the direction the Department chooses to go, providing operating subsidies to take the place of PIHDEP, then the tribes must be compensated with an increase in the NAHASDA block grant to support drug elimination programs on reservations.

RURAL HOUSING AND ECONOMIC DEVELOPMENT PROGRAM

Of further concern to NAIHC and CIHD is the elimination of the Rural Housing and Economic Development Program from the President's budget. Although funded at only $25 million for the past two years, a large portion of RHED grant recipients have been tribes and TDHEs. Furthermore, although RHED has been said to duplicate USDA programs, on the contrary, this program has been able to fill in for tribes where other programs have not. It has been a new and useful tool in capacity building and for supporting innovative housing and economic development activities. Taking into consideration the limited resources available in Indian Country, taking away useful programs is counter-productive. If the goal is to increase the capacity of tribes and other rural communities in order to make them self-sustaining, this is just the sort of program that ought to be supported by the Congress and Administration.

FUNDING FOR NATIVE HAWAIIAN HOUSING

During the previous legislative session, the Congress enacted the Native Hawaiian Housing Assistance program (Title II, Public Law 106–568). This is the first such effort to provide aid for Native Hawaiians since the Hawaiian Homes Commission Act of 1920. Modeled after the NAHASDA, the new Native Hawaiian Housing Assistance program should provide the tools desperately needed to improve Native Hawaiian housing.

Although housing conditions for the greater Native American population are appalling, Native Hawaiians continue to have the greatest unmet need and the highest rates of overcrowding in the United States. Overcrowding is seen in Native Hawaiian homes at a rate of 36 percent as opposed to 3 percent for all other homes in the United States. While housing problems are seen in 44 percent of American Indian and Alaska Natives homes, the number is actually higher at 49 percent for Native Hawaiians, and only 27 percent for other homes in the United States. Right now there are 13,000 Native Hawaiians, or 95 percent of those eligible to live on the Hawaiian Home Lands, who are in need of housing.

In light of these desperate conditions in Hawaii, the Coalition for Indian Housing and Development requests $9.3 million to go directly to the Department of Hawaiian Homelands to support activities for fiscal year 2002, the first year of operation of this new program.

COMMUNITY DEVELOPMENT BLOCK GRANTS

The Community Development Block Grant (CDBG) program is a crucial tool for the development of infrastructure and economic opportunities. The Indian set-aside under the program has been 1.5 percent of the total appropriation for several years. NAIHC believes that both to develop effective housing strategies and for the economic development needed to support homeownership and job creation, this amount should be expanded to at least 3 percent of the total requested amount, or $144 million. Clearly, we must invest in infrastructure and job creation now if tribes are going to be successful in the long term. This money can do exactly that and eventually lead to stronger on-reservation economies.

CONCLUSION

In closing, I would again like to thank all the members of this subcommittee, in particular Chairman Bond and Ranking Member Mikulski, for their continuing support for Indian housing programs and the tribes. NAIHC and CIHD look forward to working with each of you in this session of Congress and I am happy to answer any questions you may have.

PREPARED STATEMENT OF THE NATIONAL ALLIANCE TO END HOMELESSNESS, INC.

Mr. Chairman and members of the Subcommittee, I am presenting testimony on behalf of the National Alliance to End Homelessness (the Alliance). The Alliance is a nonpartisan, nonprofit organization that has several thousand members across the country. These members are local faith-based and community-based nonprofit organizations and public sector agencies that provide homeless people with a roof over their heads as well as services such as substance abuse treatment, job training, and health and mental health care. We testify, however, on the needs of homeless people. It is our fervent hope that one day all of these wonderful organizations will be able to turn their formidable skills to other endeavors because the problem of homelessness will have been solved.

Thank you for allowing us to submit testimony on the appropriations for programs that assist homeless people. The National Alliance to End Homelessness has focused its work on solutions to homelessness since we were first formed in the early 1980s. Since that time, an infrastructure of programs has been built to meet the needs of homeless people. This homelessness assistance infrastructure, while over-subscribed, has learned how to help people manage the experience of homelessness. It is supported by substantial federal funding, as well as state and local government funds. It has many extremely positive attributes, including its ability to leverage tremendous volunteer and philanthropic resources and its foundation in social entrepreneurship and the faith community.

But despite the breadth and accomplishments of this infrastructure, homelessness has continued to grow. Despite the fact that there are now some 40,000 programs to assist homeless people, the number of people experiencing homelessness has gone up, from between 1.3 and 2 million in 1988 to between 2.5 and 3.5 million in 1998—1 out of every one hundred Americans.

Is this because the homelessness system is doing a poor job? The answer is no. The system does a good job of helping the majority of those who have become homeless, although it can always be improved. Rather, the problem is that the homeless system, itself, cannot stop more and more people from becoming homeless. Nor can it create the housing that is needed for people's homelessness to end. It can't close the front door into homelessness. It cannot open the back door out of homelessness.

The National Alliance to End Homelessness believes that as a nation we are at a critical juncture in dealing with the problem of homelessness. We can no longer afford to simply manage the problem. We must make changes in order to address the continuing flow into the homeless assistance system, and the backlog that has been created within it. If we do not make these changes—if we simply hold our current course—large-scale homelessness will be with us indefinitely. This is simply not acceptable.

The good news is that there is a set of practical and pragmatic steps that we believe can change the direction in which homeless assistance is moving and make the programs more outcome oriented. Over the past several years, you have taken action in many of these areas. My first order of business is to thank you. Because of your work on permanent supportive housing, data collection, services and coordination—and because of your generous funding of the homeless programs—we are beginning to turn the tide. This Committee has made a real and substantial difference in the direction of homeless assistance and the Board of Directors of the National Alliance to End Homelessness is deeply grateful.

There is more to be done, however. There are four areas in which we can focus our efforts to end homelessness. First, we can encourage local and state jurisdictions to plan for outcomes and not simply to manage the problem. Second, we can do a better job of preventing homelessness—in effect closing the front door into homelessness. Third, we can target the creation of more housing that will help those who simply have no where else to go—opening the back door out of homelessness. And finally, we can strengthen the infrastructure that helps families stabilize so that they are not threatened with homelessness.

FOCUS ON OUTCOMES

A first step in changing course is for jurisdictions to plan how to end homelessness, rather than simply managing the problem. To do this every locality must have good data that can tell local planners both how many homeless people there are, and even more importantly how they utilize the homeless system. Do homeless people enter and exit the homeless system quickly? Do they stay in the system for years at a time? What services have an impact on housing stability—and which do not? For the past two years, this Subcommittee has required the US Department of HUD to increase its data collection efforts and create real information on the result of spending. These requests are now having a major impact both on the Department, and in communities. Last year, the Subcommittee further instructed HUD to take the lead in working with jurisdictions to develop the types of data systems that can provide useful administrative data for planning purposes. We are grateful for these actions.

Recommendation.—We urge the Subcommittee to continue to provide funding for data collection efforts that tell us how the federal homeless assistance funding is being spent, and the outcomes of this spending at the local level. We also urge the continuation of requirements that improve administrative data collection and analysis at the local level.

CLOSE THE FRONT DOOR

A next step is to close the front door to homelessness. To do so we must ensure that many of the public so-called safety net systems that are supposed to prevent homelessness do their jobs better. One agency that has a major responsibility for people who are at high risk of homelessness is the Department of Veterans Affairs. Despite the rather extensive range of income, housing and health care resources that the Department has at its disposal, a shocking number of veterans becomes homeless. While we do believe that HUD should provide assistance to veterans commensurate with their percentage of the homeless population, we believe that it is the responsibility of the Department of Veterans Affairs to use its substantial resources more effectively to prevent homelessness among veterans, and to provide veteran-specific, veteran-run assistance to veterans who do become homeless.

Recommendation.—We urge that the VA Homeless Providers Grant and Per Diem program be funded as a line item in the Department at the level of $50 million. We further recommend that the Department be required to report upon the number of people exiting the VA system and entering the homeless assistance system; the number of homeless people it serves; and the outcomes of this assistance. We also urge Congress to require each VA medical center to describe the services it delivers to homeless people and how it plans to reduce homelessness among veterans.

OPEN THE BACK DOOR

Perhaps the key element in ending homelessness is to open the door out of homelessness. Most homeless people (perhaps 80 percent) enter and exit the system successfully and do not return. They are essentially very poor people who are experiencing a housing crisis in a period of affordable housing shortages. The homeless system essentially manages the churning in the bottom of the housing market. But there is a group of chronically homeless people for whom shelter is home. This group represents around 20 percent of the homeless population. Members of this group are almost all chronically disabled and many are unlikely to ever generate significant earnings through wages. Accordingly, to stay housed they will require long term housing subsidy. They live in the shelter system, where by virtue of their long stays, they absorb resources far in excess of their number. Further, they are high users of other expensive public systems such as hospital emergency rooms. Permanent supportive housing is a proven effective strategy for addressing the needs of this group. We believe that providing supportive housing to chronically homeless people is good public policy. It meets a tremendous human need, and also has the potential to pay for itself in reduced public service costs. Finally, it will free the emergency homeless assistance system to deal more effectively with people who are experiencing housing emergencies. This is truly opening the back door out of homelessness.

The Subcommittee has taken extraordinary leadership in this issue. HUD Continuum of Care spending on permanent housing for this population had been in rapid decline. The Subcommittee set aside 30 percent of the funds in the HUD Homeless Assistance Grant program for permanent housing for disabled homeless people. We deeply appreciate this step, which has made an enormous difference. In the last two year's competitions, nearly 30 percent of the funds were spent on permanent housing-up from only 18 percent a few years ago. Now we must take the next step.

Recommendation.—We ask the Subcommittee to make permanent the provision that requires that 30 percent of the HUD Homeless Assistance Grant program funding be spent for permanent housing for people with disabilities.

A second, equally important, measure is to shift the cost of renewing these permanent housing units out of McKinney and into the Housing Certificate Fund. If these programs continue to be funded from McKinney, we will not be able to build an adequate supply of supportive housing to achieve our goal. Permanent long-term housing should be funded out of housing accounts—the homeless funds cannot be used to assist people in crisis if they also have to pay for the continuing housing needs of anyone who has ever been homeless.

To end homelessness among chronically homeless and chronically ill people will require approximately 200,000 units of supportive housing. Currently there are as many as 80,000 units of supportive housing funded through the Homeless Assistance Grants. Creating enough supportive housing for all who are in the system is within our reach, but this important renewal shift must be made. Last year the Subcommittee took the critically important step of establishing a special account to cover the renewals of the Shelter Plus Care units. This has given stability to the housing of this most vulnerable group. We ask you this year to take the next step.

Recommendation.—We ask that you shift the renewals for Shelter Plus Care and permanent housing funded under Supportive Housing Program from the Homeless Assistance Grant Program to the Housing Certificate Fund. Renewal should be granted if the funds are appropriated and the sponsor is in compliance with its contract and with law, and should be subject to a verification of need via the Continuum of Care process. Compliance can be determined through monitoring by the local HUD office, including site inspections. Shelter Plus Care and SHP would retain their programmatic provisions.

We estimate that in fiscal year 2002, $120 million will be required for renewal of Shelter Plus Care and Supportive Housing Program permanent housing.

An additional source of funding for disabled homeless people is HOPWA (Housing Opportunities for People with AIDS). Stable affordable housing is essential to preventing the early onset of illness, accessing life-extending medical care and drug therapies, and maintaining quality of life for HIV-infected people and their families. HOPWA is the only federal housing program that funds comprehensive, community-based HIV-specific housing. It gives local communities the capability to devise the most appropriate and effective housing strategies for people with HIV/AIDS, whether those needs are for short-term or transitional housing, rental assistance, or community residences. It should be noted that it is far less costly to provide someone with HIV/AIDS related illnesses with a permanent place to live than to allow them to live on the streets where their exposure to opportunistic infection not only shortens their lives but also can require expensive medical attention.

The need for housing assistance among people with HIV/AIDS is demonstrated, yet the current level of HOPWA funding does not meet this need. The National AIDS Housing Coalition estimates that, conservatively, 500,000 Americans living with HIV/AIDS will need housing assistance to survive during the course of their illness. Last year, HOPWA funding could meet the needs of only approximately 50,000 people with AIDS and their families. Because there will be between four and eight new entitlement jurisdictions this year, failure to provide additional resources will result in funding cuts to jurisdictions currently receiving assistance, further exacerbating the problem.

Recommendation.—We ask the Subcommittee to provide $300 million for the Housing Opportunities for People with AIDS (HOPWA) program.

We must continue to generate new supportive housing projects and to fund the very effective network of programs that help most people exit homelessness.

Recommendation.—In order to maintain local efforts that help end homelessness for tens of thousands of people every year, the Alliance supports $1.6 billion in funding for the Homeless Assistance Grant program.

Recommendation.—We urge you to provide $150 million for the Emergency Food and Shelter Program administered by FEMA, which has a superb record of preventing homelessness and meeting emergency needs of homeless people.

BUILDING THE INFRASTRUCTURE

The provision of adequate housing that is affordable to very poor people is, ultimately, the solution to homelessness.

Recommendation.—The Alliance requests a funding level of $40 billion for the U.S. Department of Housing and Urban Development. This figure is based upon OMB and CBO assessments of what is needed to maintain on-going services in the Department, plus a modest increase to cover increasing energy costs and to maintain the much-needed growth in the incremental Section 8 allocation.

Senator Mikulski, Senator Bond and members of the Subcommittee, my Board members, including our Co-Chairmen Mrs. James A. Baker III and Mr. Eli Segal, join me in thanking you for what you have done in the past few years to change the nature of the homeless assistance programs. The changes you have made—requiring data collection, ensuring that a reasonable amount of the funding is spent on permanent housing for the most needy, guaranteeing that formerly homeless, chronically ill people have stably funded housing, and increasing the funding to make sure that such changes did not have an adverse effect on the homeless system—these changes have resulted in making the HUD Homeless Assistance Grant Program much more outcome-oriented and effective. The help and leadership of the Appropriations Committee have made a difference in people's lives. Thank you.

Homelessness is not inevitable. Only 25 short years ago there was virtually no homelessness—and this can again be the case. The federal programs to help homeless people leverage themselves many times over in volunteerism, in-kind donations and money. They are operated by faith-based and community-based organizations that are lean and effective organizations. Every year they help thousands of people escape homelessness forever. Federal funds are the critical element in this process, and they can do even more. We hope to continue working with you to make sure this money does the best possible job for homeless people and for the nation.

PREPARED STATEMENT OF COLLEGE PARTNERS, INC.

Mr. Chairman and distinguished Members of the Subcommittee, I am Dr. Audrey F. Manley, President of Spelman College. I am accompanied by Dr. Louis W. Sullivan, President of the Morehouse School of Medicine, and Dr. Willis Sheftall, Senior Vice President for Academic Affairs at Morehouse College representing Dr. Walter Massey, President of Morehouse College. We three presidents, have formed College Partners, Incorporated (CPI), a non-profit corporation. I want to thank you for allowing us to appear before you today as you consider funding priorities relevant to the fiscal year 2002 VA–HUD-Independent Agencies Appropriations bill. I am Chairperson of CPI, but for the purpose of today's testimony, I have asked Dr. Sullivan to deliver our remarks. Specifically, we are here today to request that the subcommittee provide $10 million over the next two fiscal cycles (@ $5 million a year) from the Economic Development Initiatives account to support an economic development initiative that is of critical importance to our campuses and the surrounding community. The requested funding is half of the total cost of the project, $20 million, which will come from other project resources. In the time that I have, I would like to talk about the CPI partnership, how it originated, and what we are trying to do for our institutions and the community in which they are located.

CPI is a not-for-profit organization comprised of Spelman College, Morehouse College, and the Morehouse School of Medicine. This partnership evolved out of a shared commitment to utilize and leverage existing individual resources in order to expand our individual capacities and to enhance the revitalization of the surrounding West End community of Atlanta, Georgia, which sits at the boundary of the Atlanta University Center (AUC), and is less than three miles from downtown Atlanta. Our goal is to integrate the academic community with the surrounding neighborhood and to create an educational corridor that will focus on quality housing, youth and adult education, job training, health services, child development and daycare services, public awareness, and scholarship support for at least 50 students.

In addition to being partners in CPI, Spelman College, Morehouse College and the Morehouse School of Medicine are all a part of the University Community Development Corporation (UCDC). UCDC was incorporated in 1988 and was designed to explore and execute ways for each of the six HBCUs that make up the Atlanta University Center (Clark Atlanta University, Interdenominational Theological Center, Morehouse College, Morehouse School of Medicine, Morris Brown College, and Spelman College) to become more involved in improving the physical, social and economic condition of the neighborhoods adjacent to, and contiguous with the AUC campus. In addition to university members, the City of Atlanta's Neighborhood Planning Unit and other community groups also are represented.

THE WEST END COMMUNITY

The immediate West End includes the now-demolished Harris Homes public housing project, minor retail and commercial properties, an insurance field office, and a MARTA rail and bus line. Moving outward, the property is three miles southwest of prime commercial developments such as Phillips Arena, the Georgia Dome, and the World Congress Center. Despite the West End community's strategic location, however, the area has been unable to significantly capitalize on the current renewed interest in "in town" residential and commercial development. Recent reports profile the West End as a community with high unemployment, low educational attainment, deteriorating and/or vacant housing, and a preponderance of families that live at, or below, the federal poverty level. According to the 1990 U.S. Census data, statistics show that this community suffers from an unemployment rate of over 25 percent, while the median income of the Harris Homes community in particular was a staggering $5,912. Moreover, while 61 percent of the families are living below the poverty level, over 70 percent of the female-headed households are similarly situated. Additionally, these and other statistics significantly affect the health and mortality rates of city residents. Subsequently, the overall mortality rate of Atlanta African American residents, which are the overwhelming majority in the West End community, is almost one and one-half times that of white residents.

THE VISION

Our vision includes transforming the under-developed property in the Lee Street Corridor into an inviting entrance to a vibrant learning and living environment. The development will integrate the colleges with the surrounding neighborhoods to create an educational corridor or "College Town" and will provide an improved physical linkage between the neighborhoods and adjacent college campuses. Ashby Street, traditionally a dividing line between the Colleges and neighborhoods west of the campuses, will be redesigned with a fabric of public spaces, landscaping and local-serving retail uses. Ashby Street will become a "seam" joining the neighborhoods and the Colleges, as opposed to the divider it has been in the past.

CPI is working in partnership with the Atlanta Housing Authority (AHA) to acquire the 11-acre tract of land in a value-for-value land swap. As part of an agreement signed in May 1999, CPI agrees to purchase real estate in other parts of southwest Atlanta in exchange for the 11-acre tract held by AHA. Acquisition of this property is critical to our efforts to expand the campuses for future growth. Such expansion is currently curtailed by Interstate Highway 20 and the 2,700 public housing units that are within a one-mile radius of our campuses. The requested land will enable the surrounding community development process to continue and remain on target with the objectives of the city's Empowerment Zone, which already has improved the neighborhoods east and north of the campuses.

With the acquisition of the requested land, the Colleges will be in a stronger position to expand their capabilities and establish and/or expand programs in our institutional areas of expertise and experience. For example,

Spelman College, through its Education department, plans to provide local residents with training in early childhood development and childcare while simultaneously providing a hands-on laboratory for student education majors. Through the College's Continuing Education program, Spelman would be able to work with single heads-of-households to transition from welfare to work. Additionally, Spelman would be able to expand it's Entrepreneurial Business Development Program, which already has provided nearly 200 local community residents with training on how to establish, maintain, and expand a home-based or micro-enterprise in retail, service, and manufacturing industries.

Morehouse College anticipates expanding its partnership with the Fannie Mae Foundation and HUD to provide leadership training to community organizers, local nonprofit organizations, and the members of the Neighborhood Planning Units (NPUs). The Fannie Mae project is designed to establish mutually beneficial relationships with adjacent communities that will result in sustained economic and social improvement and provide students with service-learning opportunities that cultivate civic growth and development. Additionally, Morehouse, in partnership with each of the other AUC institutions, has already taken the lead to work with the Atlanta Public Schools in the development of an application to establish a charter school, which will have an emphasis on mathematics and science and will provide clinical experiences for aspiring teachers from each of the AUC institutions.

The Morehouse School of Medicine has made health services an integral part of its focus in developing primary care physicians and anticipates expanding its Community Health and Preventive Medicine Programs. Several components of the program include a Health Promotion Resource Center, a Center for Public Health Practice, and a Preventive Medicine Residency Program. Each of these programs is designed to partner with communities to provide services to assist with health related issues. Additionally, the School would like to expand its Benjamin Carson Science Academy, an initiative to introduce minority elementary and middle school students to health and science careers early in their education. The program, which has worked aggressively with youth from Harris Homes, consists of a Saturday academy and a four-week summer component.

Additionally, the acquisition of the property will allow all three CPI institutions to expand their campuses, helping to alleviate problems associated with projected student enrollment increases and limited space within the AUC generally. The combined student enrollment for all six AUC institutions is approximately 12,700, up from 8,400 in 1990, an increase of over fifty percent. Moreover, combined enrollment is expected to grow by approximately 2,000 students over the next twenty years. All six AUC institutions are in full support of CPI and this initiative.

A study conducted by real estate appraisers Pritchett, Ball, & Wise comments on the West End community that, "within the life cycle of a neighborhood, including growth, stability, decline, and revitalization, we place this neighborhood in the early stages of revitalization." The West End's geographic proximity to the downtown epicenter, coupled with its balanced set of land uses, lends the area to reap secondary benefits from housing to entertainment to small-, mid- and large-scale commercial development. CPI acknowledges and appreciates the academic, community, and municipal support that it has received from the City of Atlanta generally and the West End community specifically. By acquiring this land and utilizing it, CPI will be able to give back to the West End community and assist it in its development efforts.

On behalf of Spelman College, Morehouse College, the Morehouse School of Medicine, and College Partners, Inc., we want to thank you for the opportunity to present this testimony to you today.

PREPARED STATEMENT OF THE ALACHUA COUNTY BOARD OF COUNTY COMMISSIONERS

Mr. Chairman: On behalf of the Alachua County Board of County Commissioners, I would like to thank you for the opportunity to submit testify before your Subcommittee regarding two critical projects. They are the Partners for a Productive Community Enhancement Initiative, and the Critical Services to Underserved Areas Initiative.

Priority # 1: Partners for a Productive Community Enhancement Initiative ($2.3 Million in Funding Requested)

In response to a spiraling crime rate in southwest Alachua County, the Alachua County Sheriff's Office requested help from the Board of County Commissioners in 1993. Specifically, the Sheriff reported that 57 percent of its 911 calls came from an area that had only 3.2 percent of the County's population.

The County Commission responded by providing $38,000 in funding for a Program Manager to staff the Partners for a Productive Community (PPC) Program in fiscal year 1994.

The PPC was launched as a strategic planning effort with three goals: the establishment of neighborhood-based services, the development of public/private partnerships and a focus on crime prevention. This Program has enjoyed great success due to the coordinated efforts of the Sheriff's Office, the Courts and the Alachua County Department of Community Support Services. Furthermore, since the inception of this Program, the County has budgeted over $1.6 million to support the Program through the Community Support Services Department and Sheriff's Office. Additionally, over $2.4 million has been leverage from other county departments, local social service providers and the Sheriff's Office through a local law enforcement grant.

The goal of the Sheriff's Office was to reduce the number of calls from the area, and to develop a relationship of trust with the area's residents. The goal of the Courts was to help with the swift prosecution of cases, and to increase personnel in key areas. Finally, the goal of the County's Department of Community Support Services was to develop and implement a neighborhood needs assessment, and to determine the social service needs in accordance with the results of the assessment. The Community Support Services Department was also responsible for developing public/private community partnerships, and community based organizations comprised of tenants, property owners and managers. Thus, this project represents a multi-agency strategy to stabilize, revitalize and sustain five specific neighborhoods of Alachua County.

In addition to improving the area's basic infrastructure, federal funding is also being requested to provide community recreational programs for the area's youth. These activities will provide positive alternatives to crime, and allow youth to participate first hand in community improvement programs. In doing so, these programs will build and encourage positive self-esteem, leadership skills and academic achievement. To complement these programs, additional improvements will be made in the community Safe Havens. Finally, the requested funding will also allow the PPC to expand this successful demonstration program into other at risk Alachua County communities such as Archer, Florida. Specifically, the PPC will develop a partnership strategy to address the unmet needs of health care, education, training, employment, youth recreation and transportation for the residents of Archer.

This request for federal funding is justified by the tremendous improvements and accomplishments that have been made in these neighborhoods since 1995. These achievements include: free community day care for 75 children, 30 community day care slots, 24 in-home day care slots, the creation of 30 new jobs by the Early Progress Center, the reduction in 911 calls from 57 percent to 14 percent of total calls in the area, and substantial increases in the property values for four of the five neighborhoods.

Furthermore, the implementation of seasonal recreation programs in the targeted communities by the Y.M.C.A. has been instrumental in providing positive, character building activities for children, teenagers and adults. Day camps are provided during the summer months, and back-yard sports are provided at the end of the school day during the school year. In addition, two 4–H Clubs serving 60 neighborhood children were established along with after school and community teen programs. Adult literacy and GED classes were made available at a nearby school campus. Finally, other programs have been established for the purpose of creating a sustainable neighborhood. These programs include quarterly informational forums concerning small business development, educational opportunities, self-help seminars, budget management and landlord/tenant issues.

With respect to community-wide improvement programs, a total of nine neighborhood cleanups were completed this year. With the active involvement of the residents of the neighborhoods, the Alachua County Office of Codes Enforcement has been able to reduce from twenty to two the number of abandoned and vandalized buildings. Furthermore, a new Waste Collection Ordinance which was supported by the PPC permits the efficient and timely citation of violators.

The sustaining factor within this program is the formally organized Partners for a Productive Community Council. The Council is the guiding force that deals with issues and determines unmet needs. For example, a block captain organization was started this year with the assistance of the PPC Council, and the Alachua County Sheriff's Office. This group monitors and manages crime prevention programs block by block.

In recognition of the numerous accomplishments described above, the PPC received the National Association of Counties' Achievement Award in 1996 for distinguished and innovative contributions to improving county government. Additionally, the League of Women Voters presented the County with a similar award for outstanding community service.

Furthermore, in December 1999 Alachua County received Official Recognition from the Executive Office of Weed and Seed for two of the neighborhoods being served by the Partners for a Productive Community Program. Pursuant to this recognition, these communities have been awarded a $175,000 Weed and Seed Grant for prevention and intervention strategies focusing on Cedar Ridge and Linton Oaks neighborhoods. This grant will further strengthen the long-term efforts to improve the quality of life in these neighborhoods.

As noted above, the federal funding requested will also be used to expand the successful Partners Initiative into the rural community of Archer, which is located in the southwestern portion of Alachua County. Archer and the rural areas surrounding it have a population of 6,348, of which 16 percent fall below the poverty level. While the City of Archer has one elementary school, emergency rescue, fire and police services are contracted from Gainesville/Alachua County. There are also two public housing communities, and a small obsolete community center which is used as a congregate meal site for senior citizens. Consequently, many of Archer's residents travel to Gainesville for employment, social services, recreational activities, adult and continuing education and health care.

Recently, the University of Florida, School of Nursing received $200,000 from the Florida Legislature to provide primary health care through a clinic based in Archer. Presently, this clinic is on the State Department of Health's list to be eliminated due to the limited area that it serves. Should this occur, there will be a need for additional funds to meet the health care needs in this area. Thus, a portion of the federal funding in this request could be channeled through the Alachua County Health Department in our continuing effort to develop partnerships, maximize resources and expand services to the citizens of Alachua County through our rural service initiative.

Employment opportunities, recreation for teens and outreach social services continue to be a challenge for the community of Archer. According to the Alachua County Sheriff's Office, Archer's crime rate is disproportionately high for a community its size. In 2000, the Alachua County Sheriff's Office received 2,657 calls for service. Of the dispatched calls, 30 were assaults and batteries, and 5 were for sexual battery. The largest number of dispatched calls (869) concerned burglary and theft.

In conclusion, Alachua County is requesting $2.3 million in federal funding to continue its highly successful and award winning neighborhood revitalization programs; and to expand these successful model programs to other neighborhoods, including the City of Archer, Florida.

Priority #2: Critical Services to Underserved Areas ($1.81 Million in Funding Requested)

Without a safe and reliable source of public utilities, the residents who live in the southeastern portion of the City of Gainesville and Alachua County must rely upon the use of obsolete private water systems, septic tanks and propane gas for their utility services. In addition to the health and safety concerns, this lack of a public utility infrastructure serves as a deterrent to the area's economic revitalization.

While several subdivisions in the target area are in immediate need of a public utility infrastructure, it is the County's intent to approach this model program by focusing on the Kincaid Road subdivision as Phase I of the Initiative. This subdivision currently has over 150 homes on septic tanks, with many of them also using propane gas for heating. Historically, there are numerous health risks associated with malfunctioning septic tanks, including the possible contamination of ground water which could lead to the development of diseases within the area.

Gainesville Regional Utilities (GRU) indicates that the infrastructure needed to provide wastewater service to this area includes: the wastewater collection system lift stations, grinder pumps and on-site plumbing to connect to a new gravity sewer system. GRU estimates that the construction and extension of a central wastewater system to the Kincaid Road subdivision will cost approximately $1,585,000, while the extension of the natural gas lines is estimated at about $225,000. Thus, the total cost of Phase I of this model program is $1.81 million. Finally, it's important to note that GRU is currently planning wastewater facilities to serve the Kincaid Road subdivision, and may perform additional engineering work as in-kind services. The additional engineering work is estimated to cost approximately $121,000.

While Alachua County is requesting assistance from the federal government in funding this portion of the model program for the area's revitalization, the County has already begun numerous other programs and projects that have had an positive, significant impact on the area's redevelopment. For example, in July of 1996, the County began a series of neighborhood meetings in Greentree Village, which is a subdivision of about 60 households in the target area. Residents were encouraged to express their concerns about the area's problems and establish priorities. As a result of these meetings, the County assisted Greentree Village in the establishment of a crime watch program and the creation of a backyard recreation program through the Y.M.C.A.

Several new public buildings and facilities have also been located within the target area to encourage its redevelopment. During 1998/99, Alachua County expended about $5.5 million to purchase and renovate the Eastgate Shopping Center for the Alachua County Sheriff's Office. This new facility is 56,200 square feet in area, and it serves as the base of operations for the County's 239 sworn deputies, and 260 non-sworn administrative and support personnel. Completing this law enforcement complex is the new Alachua County Communications and Emergency Operations Center which recently opened adjacent to the new Sheriffs Office. This facility cost about $5.3 million and operates as a joint center for both Alachua County and the City of Gainesville.

Finally, with a contribution of approximately $430,000 from Alachua County, the City of Gainesville is completing a new Technology Enterprise Center (TEC) within the target area. This $3.0 million business incubator consists of a new, two-story 30,000 square foot facility located in the City of Gainesville Enterprise Zone. Over 60 percent of the construction funds for the TEC were provided by a grant from the U.S. Economic Development Administration. The purpose of business incubators is to promote the growth and development of new enterprises by providing flexible space at affordable rates, a variety of support services, access to management, technical and financial assistance, and opportunities to interact with other entrepreneurs and business experts. Though not yet open, about 13,000 square feet of the TEC has already been leased to a leading technology accelerator company specializing in speeding pioneering technology entrepreneurs to the market. It is expected that when fully operating, the TEC will foster the creation of higher wage jobs, the expansion of the tax base and the augmentation of new business development within the target area.

In conclusion, Alachua County is undertaking the redevelopment of an existing urbanized area, which includes the modernization of its utility infrastructure. These improvements will build upon numerous previous programs and projects that have already had a positive impact upon the area. Phase I of this model program includes the extension of a central wastewater system to the Kincaid Road subdivision, as well as the extension of natural gas lines. The support of this Phase of the project through federal funding will serve as an impetus for the continued revitalization of these residential areas.

SUMMARY OF WRITTEN STATEMENT AND TESTIMONY

A detailed review of the two initiatives described above indicates a well-conceived program of significant model projects. Moreover, these programs have a proven record of creating employment opportunities while addressing compelling community needs. Additionally, these initiatives have benefitted low and moderate income neighborhoods through the elimination of physical and economic distress. Finally, these programs demonstrate the County's continuing commitment to those projects and initiatives that emphasize a balance between environmental protection, economic development and social equity for all of the residents of Alachua County.

Thank you for your consideration.

PREPARED STATEMENT OF FOUNTAIN HOUSE

Mr. Chairman and Members of the Subcommittee, I am Anne Mai, Secretary of the Board of Directors of Fountain House, which is located in New York City.

Thank you for this opportunity to present a $400,000 proposal for Federal Funding that is comprised of two components: $200,000 for Fountain House and $200,000 for its parent organization, the International Center for Clubhouse Development (ICCD).

This proposal addresses national, regional and local needs in the mental health care and services field. The economic empowerment of this grant should be considered along with the many social, community and personal benefits that this grant provides. The results of this grant can be measured in at least two ways. First, local and state funding will be freed to handle more severe patients and pressing needs in the community and the system. Second, gainfully employed Clubhouse members become taxpaying consumers with purchasing power, reducing State, and Federal benefit and service costs.

The Clubhouse Model of psychiatric rehabilitation begun by Fountain House over 50 years ago has spread across the country and around the world because it works so well and is so cost-effective. Operating on a nonmedical model, Clubhouses consider their participants as members of the Clubhouse, not patients, and the staff and membership are taught to recognize and stress what is positively working in people rather than their illnesses. Members are seen as people, not diagnoses. The therapy practiced within the Clubhouse is the healing that takes place in warm relationships developed while doing the work of the house in a work-ordered day. This is meaningful work, not make-work; the program depends on the participation of its members who are active partners in its day-to-day operations. The results of this simple, cost-effective, commonsense approach are remarkable. Members of Clubhouses recover, grow, and thrive in vital and culturally sensitive communities that offer hope, respect, support, friendship, education and employment. They get their lives back and get back to work in record numbers in our innovative transitional employment programs.

FOUNTAIN HOUSE

The first Clubhouse, Fountain House, was incorporated in 1948. It has served over 16,000 members since its inception and now serves 1200 active members annually. For thirty years Fountain House was alone in its unique way of working with ex-patients of psychiatric institutions. In the past several years Fountain House has helped to establish more than 250 Clubhouses in the United States and more than 100 overseas. Last year Fountain House won the Gold Medal Achievement Award from the American Psychiatric Association. As the Clubhouse model quickly spread, it became evident that a certification and standardization process was critical to maintain the quality and integrity of the original ideal. Because Fountain House's original mission was to serve its New York City membership, the International Center for Clubhouse Development was instituted to function as a parent governing and supportive body to encourage Clubhouse development and ensure programmatic quality control. All Clubhouses, including Fountain House, are submitted to a rigorous and ongoing certification process and staff and members undergo regular training in what the National Institute of Mental Health once described as the best training program they had ever funded.

Other ICCD Clubhouses in the United States serve an estimated 37,500 people with mental illness annually. The National Mental Health Association states that 5.5 million Americans experience one of three severe mental illnesses. Today the demand for quality services continues to far exceed current resources. The Clubhouse model provides members with cost effective, comprehensive supports that are unique to the health care system.

Overview of Fountain House Training Program

Fountain House, along with four other Clubhouses in the U.S. and three Clubhouses abroad, provides training in the Clubhouse model to help Clubhouses work toward certification. The training covers a three-week period and is based at the Fountain House Clubhouse, 425 West 47th Street, New York City. The trainees (colleagues) in each group are members and staff drawn from four or five different agencies, with each agency sending two or three people. Some of these agencies are organizations intending to build Clubhouses, while others are already-existing Clubhouses. Fees charged by Fountain House to each participating agency finance the program. The training is intense and highly effective and the residential action-learning component is critical. The guesthouse where the colleagues stay is now in desperate need of renovation. The request of $200,000 for the Fountain House component is entirely for the renovation of the guesthouse where the colleagues stay during their training.

ICCD

The mission of the International Center for Clubhouse Development is to build and coordinate a strong network of Clubhouse programs all of which meet the highest standards established by the overall Clubhouse community. In pursuit of this mission, the Center promotes the development and strengthening of Clubhouses; oversees the creation and evolution of Clubhouse standards; facilitates and assures the quality of training, consultation, certification, research and advocacy and provides effective communication and dissemination of information.

The ICCD has a research affiliation with the University of Massachusetts Medical School. The Clubhouse Research Program, housed in the Center for Mental Health Research within the Department of Psychiatry, provides ICCD a recognized and credible medical research base from which to access Federal grant funds for validating Clubhouse methods and procedures.

ICCD Clubhouses annually serve an estimated 37,500 people in the United States. As the demand fro quality services continues to exceed current resources, the Clubhouse model provides members with cost effective, comprehensive support unique to our health care system. The ICCD standards that must be met by all certified Clubhouses are aimed at securing and promoting the highest level of member growth and autonomy in the areas of work, housing and community living.

New York has a large number of Clubhouses supported by the ICCD. This strong network of Clubhouses has promoted an improved range of services and provides much needed services to individuals emerging from psychiatric hospitals. The Clubhouse concept of empowerment provides support, stability and training for those who need transitional assistance as they integrate into society as productive and balanced individuals. There is a constant shortage of trained and qualified Clubhouse directors. It is beyond the ability of the ICCD to raise funding for this training through private and state funding. This one-time grant will permit ICCD to establish the base needed to meet existing and future demand for coordination of certification and Clubhouse practices. The grant would allow the ICCD to strengthen its core management and coordinating capability.

This grant will benefit all existing 250 Clubhouses and the 37,500 people with mental illness whom they serve, as well as future Clubhouses (now opening at an average rate of 25 new houses a year).

We respectfully request your assistance in obtaining this $400,000 grant for Fountain House and the ICCD through the fiscal year 2002 VA–HUD Appropriations Bill.

Prepared Statement of the City of Palo Alto, California

Mr. Chairman and members of the VA–HUD and Independent Agencies Appropriations Subcommittee, I would like to thank you for this opportunity to testify before you. My name is Sandy Eakins and I am the mayor of the City of Palo Alto, California. On behalf of the citizens of Palo Alto, I request your support for two of the City's highest priorities.

The City requests your support of an appropriation of $500,000 under the Economic Development Initiative to assist in the rehabilitation and expansion of the Children's Library, the first stand alone library building in the United States built exclusively for children.

The Children's Library, designed by locally known architect Birge Clark and constructed in 1940 within a local Historic Resource complex, is a single-story historically significant building. It is currently overcrowded and in need of rehabilitation and expansion. It suffers from delayed maintenance and many of its original systems need replacement. It also has seismic and accessibility deficiencies. The adjacent "Secret Garden" is heavily used and has already been negatively impacted by previous building additions within the complex. Except for relatively minor repairs and modern accommodations, the building has not been remodeled since construction and is in need of rehabilitation to keep its childlike attractiveness and period historic appearance.

The Children's Library opened in 1940 as gift from Lucie Stern, a charitable resident of Palo Alto, in honor of her daughter Ruth. It was Mrs. Stern's requirement that it be for Palo Alto's children. All documentation shows this was a requirement of acceptance of the gift. This Library is the first separate public library building in the United States designed and built exclusively for children from birth to middle school. It is important to the community because it provides services that are not readily available at the main library. Approximately 115,000 patrons from Palo Alto and surrounding areas visit the Children's Library each year and there is a collection of about 40,000 volumes.

Some of the special features of the building and library include: 1940's decor including light fixtures, furniture, and colors; hand-thrown Mission tile roof that is believed to have been handmade by Ohlone Indians; Spanish style design by Birge Clark, well-known for hundreds of buildings listed on the Palo Alto Historic Resources Inventory, and David C. Clark, all surrounded and linked by a series of covered walks and landscaped spaces; a locally designed tiled fireplace with nursery rhyme themes; and a Secret Garden, bordered by six-foot high brick walls and enclosed by a series of high, curved hedges.

Second, the City requests your support of an appropriation of $275,000 under EPA's State and Tribal Assistance Grant for storm drain infrastructure improvements.

The storm drain system serving the Charleston Terrace neighborhood currently drains directly into Adobe Creek through a 36 inch-diameter outfall. When the creek level rises, the storm drain backs up until the water level in the storm drain reaches the creek level. During moderate storm events, the storm drain back-up causes ponding and minor property flooding on local streets. Sediments and other urban runoff pollutants flow directly into Adobe Creek causing degradation of the creek's water quality.

Due to the flood threat and negative water quality impacts attributable to the existing conditions, this is a high priority infrastructure project for the City. The construction of a pipeline connecting the Charleston Terrace storm drain system and the existing Adobe Storm Water Pump Station would allow the storm drain to empty when the creek is high, whereby, reducing street ponding and property flooding. The pump station wet well would capture some of the sediment and other associated pollutants from the storm runoff and facilitate sediment/pollutant removal.

This project is consistent with the City's Storm Drain Master Plan and with the Urban Runoff Management Plan managed by the Public Works Department as mandated by the City's National Pollutant Discharge Elimination System (NPDES) permit for discharge of storm water. It is also consistent with local, regional, and state goals for management of storm water discharges, protection of water quality in local creeks and San Francisco Bay, and reduction in pollutant discharges from urban runoff sources.

Thank you again for this opportunity to testify before this committee.

Prepared Statement of the City of Roseville, California

Mr. Chairman and members of the VA–HUD and Independent Agencies Appropriations Subcommittee, I would like to thank you for this opportunity to testify before you. My name is Claudia Gamar and I am the mayor of the City of Roseville, California. On behalf of the citizens of Roseville, I request your support for two of the City's highest priorities.

The City requests your support of a $2.5 million earmark under the Economic Development Initiative (EDI) account to renovate the historic Roseville Tower Theater into a multipurpose facility.

The Roseville Tower Theater, located in the City of Roseville's historic downtown area, is a 1,000-seat movie theater built in 1940. Vacant for the past 15 years, the theater deteriorated due to lack of maintenance. The theater is also contaminated by friable asbestos.

The Tower Theater was acquired by the City of Roseville in 1989. The City, in partnership with the Roseville Arts Center, a local nonprofit, has been working for the past 10 years to convert the theater into a modern multipurpose facility serving live entertainment and offering meeting space. Since assuming ownership of the Tower Theater, the City of Roseville and Roseville Arts Center have invested over $1 million to renovate the theater lobby, remove asbestos from the building, and develop a renovation plan for the auditorium. The renovation plan for the Tower Theater auditorium includes an auditorium space redesign for theatrical productions seating 550 persons, renovations to the auditorium floor including leveling and the installation of a movable stage, modernization of existing restrooms, installation of an elevator, and the 6,500 square foot addition to the back of the existing theater.

Upon completion of the Tower Theater renovation, its new addition and an adjoining property owned by the Roseville Arts Center will be effectively integrated as one facility offering, galleries, gardens, entertainment and a variety of meeting space arrangements. The new facility will also meet all current state and federal code regulations, including the Americans Disabilities Act.

The estimated cost for completing the Tower Theater renovation is $5 million. The Roseville Arts Center is currently pursuing $2.5 million in private funding and the City is pursuing $2.5 million. The City of Roseville is committed to arranging financing for the Tower Theater Renovation Project. However, federal assistance is needed in order to complete the theater renovation.

Second, the City requests a $5.1 million earmark under the Federal Emergency Management Agency (FEMA) for the Roseville Flood Control Project. This project includes flood control improvements to providing increased levels of flood protection to over 200 structures, most of which are single family homes.

Roseville suffered devastating flooding in January 1995. President Clinton and FEMA Director James Lee Witt visited the site and promised Federal funding for flood control improvements. In 1996, the city was awarded $6.27 million in FEMA HMGP funds to pay 75 percent of the cost of the City's flood control project, initially estimated to cost $8.3 million. In 1998, the cost estimate increased to $12.2 million due in part to requirements imposed by the State Reclamation Board and FEMA.

The State Office of Emergency Services (OES) encouraged the City to proceed with the project and to submit reimbursement requests beyond the $6.27 million in a "cost overrun" status. It is the City's understanding that OES believed additional FEMA funds would be available, as other disaster relief projects in California (e.g., Northridge Earthquake) were not expected to use all of their FEMA funding allotments. Based upon the OES position, the City began construction in May 1999. To fully fund the $12.2 million estimated project cost in the interim, the City overmatched by borrowing from our General Fund and road maintenance fund with the expectation of OES reimbursement via "cost overrun" funds.

Construction is nearly complete with total costs at $16.1 million due to legal challenges, construction costs, and soft costs. On October 18, 2000, OES surprised the City with the information that no surplus FEMA funds were available and that surplus funds had been redirected to other projects. The City temporarily used General Fund reserves and road maintenance funding to cover the shortfall of $5.1 million dollars.

Thank you again for this opportunity to testify before this committee.

PREPARED STATEMENT OF THE BABYLAND FAMILY SERVICES, INC.

Mr. Chairman: Thank you for giving me an opportunity to submit written testimony on behalf of Babyland Family Services, Inc. about an extremely important economic development initiative, "Project NET-TO-WORK:" A Neighborhood Employment and Technology Initiative for Healthy Children and Families. The agency is seeking $1 million in fiscal year 2002 appropriations as an Economic Development Initiative (EDI) under the Department of Housing and Urban Development.

Babyland provides child care and early childhood education services for 750 children (0 to five years old) at eight child care centers and provides emergency shelter and family support services to 750 other at-risk and low-income children and families. Babyland is currently Newark's Early Head Start grantee (serving children 0 to 3 years old, pregnant teenagers, young fathers and families living with HIV/AIDS) and has a partnership with the Newark Public Schools to provide Abbott preschool services to over 250 children. The agency has an extensive partnership with the New Jersey Department of Human Services for the provision of child welfare, family violence and child care services.

PROJECT NET-TO-WORK

Project NET-TO-WORK is a one-year capital and program start-up request in which federal funding will enable the agency to complete the construction or renovation of a major facility (approximately 36,000 square feet) that will thereafter offer the ongoing employment training, placement and support services necessary to promote economic development. It will also provide the necessary seed funds for program operations, which will be sustained through the generation of program income, local and state government contracts and grants from foundations.

Project NET-TO-Work will provide a comprehensive safety net and partnership—one-stop employment and self-sufficiency services that eliminate common barriers to employment for low to very low-income families in Newark and surrounding areas. Babyland's current service area includes those portions of Newark (Central, West and North Wards) and East Orange that are still economically distressed. The project will target low-income African-American and Latino families who are receiving public assistance or who are near public assistance. In particular the initiative will be addressing the needs of single mothers, teenage parents and males involved in or at risk of involvement in the juvenile justice system.

The project will create 30 new child care jobs and will provide employment training and placement services for 150 residents. In addition, the project will address multiple barriers to job training and employment retention, including: (1) Full-day year-round child care; especially for infants; (2) Pediatric health care services, including asthma management and preventive health education; (3) Family counseling, especially substance abuse and mental health services and (4) Quality of life and violence issues, especially family violence, crime and dilapidated housing.

The main components of the project include the following:

—Employment training, placement and follow-up support services—which includes individualized assessment, planning, basic skills development including literacy, mentorship, peer counseling, support service referrals, classroom instruction, internship placements, job placements and ongoing mentorship after placement.
—Child care and early childhood education services for 137 children, from infant to five years old, and their families through center-based and family child care options.
—Health services—basic preventive health services will be provided onsite at the facility, including assessment, screening and examination, education, referral and follow-up for children and families.
—Access to Computer Technology for community residents through the creation of a computer lab and training program.
—Family counseling to prevent and address family violence and child abuse issues, with an emphasis on parent education, substance abuse counseling and mental health counseling.
—Neighborhood safety and quality of life initiative that trains and empowers residents to develop a five-block safety zone around their neighborhood through the creation and development of block associations, community policing, local business associations and other community organizing efforts.

The goal of Project NET-TO-WORK is to help eliminate physical and economic distress in the communities that the agency services. Through this project, Babyland expects to create at least 180 new jobs, especially in the areas of education, human services, food preparation and fashion design. The agency also expects to create a facility that will serve as a stabilizing force in an economically distressed neighborhood. A child care component will promote the healthy development of 137 children as well as serve as a job-supporting service for 137 parents. A health component will directly benefit over 1,500 at-risk children in the Babyland service area through the prevention and management of childhood illnesses, thereby further preventing parent absenteeism from work. A computer technology component will provide over 300 low-income residents with access to basic and individualized computer technology knowledge that is essential to their long-term success at work. Finally, a grass-roots neighborhood violence reduction component will promote partnerships among residents, law enforcement, churches, businesses and other stakeholders and achieve the following: the reduction of physical blight (graffiti and dilapidated housing), prostitution, drug dealing, car jacking, domestic violence and various forms of crime.

There is widespread support for this very important initiative. Babyland Family Services, Inc. expects to receive funding for the project from the following non-federal sources:

—The Annie E. Casey Foundation Families Count Award—$500,000 unrestricted funds
—The Newark Public Schools—approximately $1 million for early childhood education
—Private lending institutions—$1 million for capital support
—Local foundations and government (City and County)—$250,000 for employment training and employment support services.
—The Dreyfus Health Foundation and Victoria Foundation—$70,000 for health and community organizing projects.
—United Way—$200,000 for program operations
—Other potential funders include The Healthcare Foundation of New Jersey and the Prudential Foundation.

It is our hope that the Subcommittee will favorably consider this one-time request that will enable the agency to leverage funding for this much needed economic development project.

Thank you for your consideration.

PREPARED STATEMENT OF THE NATIONAL FEDERATION OF THE BLIND

Mr. Chairman: My name is James Gashel, and I serve as Director of Governmental Affairs for the National Federation of the Blind. My address is 1800 Johnson Street, Baltimore, Maryland 21230; telephone, (410) 659–9314. Thank you for the opportunity to present this testimony concerning appropriations to the Department of Housing and Urban Development, Economic Development Fund.

For fiscal year 2002, the National Federation of the Blind (NFB) is requesting $4 million for construction and initial opening of the National Research and Training Institute for the Blind (NRTIB). This Institute is described more fully in information attached to my statement and is also shown in a picture provided.

Before I discuss the national significance of this project, I would like to mention some of its more important economic development features. First, you should note that the State of Maryland has acknowledged the economic benefits of this project by making a commitment of $6 million to be provided over a period of three years. The NFB's facility serves as an economic anchor that encourages the development of properties in the immediate area of South Baltimore and north toward Federal Hill. The present NFB operating budget of $16 million is projected to double to $32 million in the first ten years of the Institute's operation. Over 95 percent of the NFB's revenues are raised outside of Maryland, with the vast majority of expenditures being made in Maryland. It is estimated that there will be over $320 million of increased spending in Maryland during the next twenty years resulting from the establishment of the Institute, and the present NFB staff of sixty will expand to well over one hundred in the first years of the Institute's operation.

With this growth, the NRTIB will provide substantial economic benefits for the broader community. However, this project is especially important throughout the nation to people who are blind. For example, the modern technology being developed presents marvelous opportunities and manifold challenges for people who can't see. The opportunities include the potential of access to written communications, books, magazines, and virtually anything else in writing which would normally appear only in print. The challenges include being sure that the new devices used to communicate will support and accommodate to nonvisual as well as visual use. This can be done, but it will take a focused, vigorous, and sustained effort to make it so. The result will be a dramatic change in possibilities for people who are blind or become blind.

Providing blind people and those who teach them with literacy instruction—the ability to read and write in Braille—is a related challenge. Literacy and productivity in the workplace go hand in hand, not to mention being essential to just finding a job. Seventy-four percent of working-age blind people are unemployed, but eighty-five percent of those who can read and write in Braille are also working. Therefore, literacy is a critical factor for the Institute to address with distance learning technology and other methods.

Blind people serving as successful role models and planners of the program will lead this Institute in collaboration with several academic and research institutions including Johns Hopkins University, the University of Maryland, and the University of Louisville. In fact, leadership by blind people on behalf of blind people is a hallmark principle of the National Federation of the Blind and will be carried forward in the Institute.

Mr. Chairman, over half of the amount needed for construction has already been contributed by private sources, including our most recent grant of $800,000 from the Kresge Foundation. These contributions from private sources are in addition to the support already committed by the State of Maryland. The Community Development Fund under HUD and specifically the Economic Development Initiative or HUD section 107 earmarks are appropriate authorities for federal support for this project. Our request to this Subcommittee would provide sufficient funds to complete the project.

I thank you.

THE NATIONAL RESEARCH AND TRAINING INSTITUTE FOR THE BLIND

EXECUTIVE SUMMARY

The National Federation of the Blind (NFB), a membership organization of blind and visually impaired individuals, parents of blind children, and interested others, has maintained its National Headquarters in Baltimore, Maryland, since 1978. With a membership of over 50,000, the NFB has become the leader in innovations that result in improvements in self-determination, employment, and self-respect among the blind. The National Federation of the Blind is strategically positioned for growth and is in the process of establishing the first National Research and Training Institute for the Blind developed and operated by a staff responsible to an organization of blind persons. This consumer perspective will better ensure that the directions taken by the Institute will be those that we as blind people identify as critical to our full participation in society.

The NFB Research and Training Institute, in partnership with Maryland's foremost educational institutions, the University of Maryland and the Johns Hopkins University, will serve as the nation's hub for:

—Educational programs designed to upgrade the skills of teachers of the blind
—Training programs to inform parents of blind children of the newest teaching techniques and technology central to their children's success
—New ways to access computer information with speech and Braille technology
—Research that will improve mobility for the blind
—Methods that allow easy learning of Braille by older citizens losing vision
—Improving the chances small companies have for getting useful adaptive technology to market, through a dedicated adaptive technology incubator center

Just as Gallaudet is known throughout the world as the center for research, training, and new innovations for the deaf, the NFB's National Research and Training Institute for the Blind will be known internationally as the foremost center of major initiatives designed to improve the lives of blind individuals. Through technology innovations, highly qualified and dedicated staff, and strong collaborative agreements, the NFB Research and Training Institute will create the learning and research environments essential for true innovation.

The combination of economic growth, neighborhood and community development, and the need for innovation and training in the field of the blind serves as the basis for this request.

We are blind and visually impaired people committed to improving our lives and the lives of others. In order to maximize the impact of our efforts, we invite you to be our partner, joining thousands of individuals, foundations, and corporations throughout the country to make the dream of the National Research and Training Institute for the Blind a reality.

ECONOMIC DEVELOPMENT FEATURES

The present NFB operating budget of $16 million is projected to double to $32 million in the first ten years of the Institute's operation.

Over 95 percent of the NFB's revenues are raised outside of Maryland, with the vast majority of expenditures being made in Maryland.

It is estimated that there will be over $320 million of increased spending in Maryland during the next 20 years resulting from the establishment of the Institute.

It is projected that the present NFB staff of 60 will expand to well over 100 in the first years of the Institute's operation.

In 1999 the NFB was awarded a $3 million grant from the U.S. Department of Labor (DOL) for the establishment of America's Jobline®, a text-to-speech telephone-based technology network which delivers employment listings over the phone. Jobline®, first operational in Maryland and now available in 21 states, will soon be available throughout the country. In addition to the grant from the DOL, $4.5 million will be awarded to the NFB in the next two years from the states where Jobline® becomes operational.

Due to the efforts of the NFB, in 2000 The Institute of Museum and Library Services, an independent federal agency, received a $4 million appropriation designed to expand the NFB's Newsline for the Blind®. Soon these funds will make it possible for us to offer this text-to-speech telephone newspaper directly to all Americans who can no longer read newspapers visually.

The NFB's ongoing relationship with federal agencies such as the Office of Special Education, the Rehabilitation Services Administration, and the U.S. Department of Labor will be important funding sources for large national research and training initiatives of the new Institute.

The NFB's facility serves as an economic anchor that encourages the development of properties in the immediate area of South Baltimore and north toward Federal Hill.

THE BUILDING

The NRTIB will be a five-story structure built on the present block-square property known as the National Center for the Blind, which is owned by the Jacobus tenBroek Memorial Fund. The tenBroek Fund, a 501(c)(3) nonprofit organization was established after the death of the NFB's founding president, Dr. Jacobus tenBroek.

—The first story (which is underground on the north side of the building) as well as the second story will be for parking. The parking area will accommodate cars for visitors, trainees, and participants in conferences and is an important feature because the neighborhood is already short of parking spaces for the residents.
—The third floor will house an adaptive technology development center and instructional space, including classrooms, a distance learning center, and specially-equipped technology labs.
—The fourth floor will be designated for a Library Research Center and the Center for Braille Literacy, with their associated offices.
—The top floor will consist of a fixed 100-seat auditorium equipped with electronic capabilities and a large multi-purpose space, which can be separated into a number of smaller spaces to be used for the technology access incubator center, meetings, conferences, and public education events.

The NRTIB will be attached to the present headquarters building of the NFB at several points, thus integrating access to sleeping rooms, dining facilities, the International Braille and Technology Center, staff offices, and existing training space.

CHALLENGES

Nonvisual access to computer technology is an ever-increasing challenge for the blind. Most educational and employment opportunities are now and will continue to be dependent on the blind individual's ability to access and use a full variety of technology.

Presently it is estimated that there are 1.1 million blind persons in the country, including 788,000 over the age of 65. As the population ages, there will be a larger number of seniors experiencing severe vision loss (estimated 1.6 million by 2015). Independent living, Braille skills, and general adjustment training opportunities are lacking now and will be even more scarce in the future, without a significant intervention.

Despite federal and state annual rehabilitation expenditures of over $200 million, 74 percent of working-age blind adults remain unemployed.

The estimated cost for a lifetime of supported unemployment for each blind individual is $916,000. This includes only Social Security or Supplemental Security Income payments, lost tax revenues, and Medicare expenses.

Less than 10 percent of school-age legally blind children learned Braille in 1999, yet studies indicate that Braille is a critical factor in successful employment—85 percent of blind adults who use Braille are employed.

THE PROGRAMS

The following six Initiatives and their related programs will constitute the primary activities of the Institute.

Technology Access Initiative:

As everyday technology such as wireless phones, palmtop note takers, Internet access devices, VCRs, microwaves, ATMs, and even televisions become driven increasingly by pictures and onscreen menus, the NFB must play a critical role to ensure that such technology is adapted for the blind. Without nonvisual access to technology (via speech and Braille output), blind people will become dependent on others to operate devices that sighted people rely on every day. That level of dependence is unacceptable, inefficient, and unnecessary.

Unfortunately, due to the widespread obsession with visual design in technology, the shortage of good technology training, the cost of equipment, and the rapid advancements in technology applications, blind people now face the dismaying prospect of being left out if nonvisual access is not continually updated and improved. This means that advances in software and hardware must include design that allows nonvisual access.

The National Research and Training Institute for the Blind will be the center of technological advancement for the blind:

—Adaptive technology will be developed and promoted, in partnership with the University of Maryland's Technology Advancement Program, the Institute for Advanced Computer Studies, and the Office of Information Technology, as well as the Lions Vision Research and Rehabilitation Center at the Johns Hopkins Wilmer Eye Institute
—Adaptive speech and Braille training programs taught by staff at the Institute, using classroom and technology labs, distance learning technology, and online course formats, will be made available to professionals working with the blind, parents of blind children, and adults who are losing vision

—A technology incubator will be established within the Institute to provide entrepreneurs with the infrastructure to develop technology that will be useful to the blind and may have other applications

Below are examples of technology applications which will need the nonvisual solutions targeted to be developed through the direct and indirect programs of the Institute:

—Informational and service kiosks
—Electronic voting machines
—Electronic touch-screen applications
—Visual, menu-driven appliances
—The increasingly graphic Internet and the numerous alternative technologies to access the Internet
—Proprietary software used by employers

The NFB has a long record of helping to develop adaptive technology. Starting with Ray Kurzweil's first synthetic speech reading machine in the mid-70s, the NFB has assisted dozens of companies in designing and testing scores of innovative technological solutions.

In addition, the NFB continues to develop its own technological innovations. Newsline for the Blind® and America's Jobline®, two text-to-synthetic-speech national telecommunication projects, demonstrate the NFB's ability to respond to blind consumer needs with tailor-designed devices.

Blind Children's and Braille Literacy Initiatives:

The National Research and Training Institute will be the center of a growing Braille Literacy Initiative that will ensure that the progress led by the NFB continues and that Braille is recognized to be a communications tool as essential to the blind as American Sign Language is to the deaf.

—Educational classes, both on premises and via distance learning technology, will be offered for teachers of the blind, vocational rehabilitation professionals working with individuals experiencing vision loss, and parents of blind children.
—Model learning strategies will be developed, demonstrated in pilot projects, and disseminated throughout the country.
—Innovative methods for learning Braille will combine new technology applications with the experience of competent Braille users.
—The development of computer-based speech and Braille output learning games for blind children will motivate, teach, and prepare youth for the computer age.

Research Initiative:

A growing partnership with the Johns Hopkins University's Lions Vision Research and Rehabilitation Center will be the foundation for pragmatic research. This research will combine the expertise of one of this nation's foremost medical research institutions with the world's largest consumer organization of people who know firsthand what it takes to meet the challenges of blindness. The Institute's research agenda will include the development, evaluation, and dissemination of:

—Innovative travel aids for the blind
—Technology helpful in communication with the deaf-blind
—New methods for making the Internet easily accessible using nonvisual methods
—Intervention strategies useful to seniors with limited vision

These activities will result in technologies that aid individuals in their transition from medical patients to independent persons who happen to be blind.

Blind Seniors Initiative:

Less money is spent and fewer services are available to those over 55 losing vision than to younger blind people. Yet more than 50 percent of the 70,000 individuals who become blind in this country each year are over the age of 65. New approaches must be developed and taught to state and local staff members in rehabilitation, older Americans, and older blind programs and to staff and residents in centers for independent living.

The National Research and Training Institute will bring together knowledgeable professionals who will:

—Design education and resource materials useful for the older blind
—Develop training programs to assist state and local agencies in helping blind and visually impaired seniors remain independent and continue to participate in the activities they hope for in their retirement years
—Conduct projects to improve technology training methods used with this population

Employment Initiative:

The NFB has already demonstrated an ability to operate high-quality training programs. The NFB residential rehabilitation training centers in Ruston, Louisiana, Minneapolis, and Denver have 90 percent or higher success rates placing their graduates in competitive employment or higher education. The key staff members in each of these centers have been trained by the NFB. The blind need more successful centers like these, and the NFB needs the space to research and test program improvements and provide staff training for the new centers as well as refresher courses for existing staff.

The Employment Initiative of the National Research and Training Institute will provide focus, resources, and direction for a comprehensive evaluation of contemporary methods for helping the blind. From such an evaluation will come the necessary knowledge to develop, demonstrate, and replicate innovative training programs to replace existing efforts that have failed to bring the blind into the workforce. NFB partners in this effort include: United Parcel Service, The Gallup Organization, IBM, Marriott Worldwide Reservations, Countrywide Home Loans, Premium Office Products, Massachusetts General Hospital and Partners Health Care System, and Legal Sea Foods.

Prepared Statement of the City of Miami Beach, Florida

Mr. Chairman: On behalf of the City of Miami Beach, Florida, I appreciate the opportunity to present this written testimony to you today on two extremely important economic development initiatives, currently underway within our city. We respectfully request your consideration of these projects for funding from your fiscal year 2002 appropriations legislation.

—*Byron Carlyle Theater Restoration*.—The rehabilitation of a large downtown theater to serve as a cultural and community center.

—*Atlantic Corridor Greenway Network*.—An important project which brings together enhanced tourist/commuter transportation, alternative transportation, intermodal access, urban revitalization and economic redevelopment in a linear park or greenway setting.

BYRON CARLYLE THEATER RESTORATION

The City of Miami Beach wishes to pursue direct funding for the acquisition and redevelopment of this facility through HUD Appropriations as an Economic Development Initiative. The Facility will serve as a venue for cultural and non-profit institutions, functionally interacting with the North Shore Youth Center. The two primary objectives of this facility are: (1) to use cultural institutions as a catalyst for the revitalization of the North Beach area, and (2), to provide a facility that can house those organizations that are being priced out the their current locations. The City is seeking $2.1 million towards this project.

The Byron Carlyle Theater is a 7-screen movie theater that is located in the central business district of Miami Beach's North Beach area of. The theater was closed by Regal Cinemas in 1999, and has been vacant ever since, creating a void in what once was a thriving downtown neighborhood. The City of Miami Beach has begun the implementation of a strategic plan for the revitalization of the North Beach area, which includes approximately $124 million in capital improvement projects that will be implemented during the next 6 years. The redevelopment of vacant buildings such as the theater is crucial to the economic and business development components of the North Beach Strategic Plan. However, due to the unique layout and structural nature of older movie theaters such as the Byron Carlyle Theater, redevelopment options are limited and expensive.

There are two reasons that Miami Beach needs the Byron Carlyle Theater as a multi-purpose cultural facility. First, the redevelopment of this theater is an integral component of the Strategic Plan for the economic revitalization of the North Beach area of Miami Beach. While other areas of Miami Beach have enjoyed tremendous economic success over the last ten years, the North Beach area has lagged in its growth and continues to evidence a concentration of low income households and a lack of private sector investment. The emergence of cultural institutions during the beginnings of the economic revitalization of South Beach's Art Deco District directly contributed to the area's continued success. Secondly, the success that cultural organizations helped create in South Beach is also a reason for the creation of a cultural facility in North Beach. As South Beach boomed, local cultural institutions became self sufficient and successful, area market trends began to improve and property values appreciated significantly. In 1993, the primary cultural area in South Beach was on Lincoln Road, where rental rates averaged $12 per square foot.

In 2000, rental rates reached $75 per square foot, and many small businesses and cultural organizations were forced to either relocate or dissolve. Additionally, many cultural organizations currently housed in City-owned facilities will soon have to relocate as the City expands to meet the ever-increasing service levels expected by the citizens. A central facility that accomplishes both goals is critical to the economic revitalization of the North Beach neighborhoods.

The Acquisition and Renovation of the Byron Carlyle will also help develop the entire City of Miami Beach into a world-renowned center for the creation and consumption of culture. Miami Beach is home to many internationally acclaimed cultural organizations, such as the New World Symphony, the Miami City Ballet, and the Bass Museum. These organizations, however, are located in a small concentrated area of South Beach. The City also has over 75 smaller cultural groups that are the true cultural heart of Miami Beach. Organizations such as the Concert Association of Florida, Ballet Flamenco La Rosa, and the Performing Arts Network continue to struggle for their economic survival. The ability to provide a facility that allows these groups to remain in Miami Beach will provide a venue where many emerging and small organizations can continue to grow and prosper and at the same time provide a catalytic cultural component to the revitalization effort in North Beach.

In 1999, in an economic impact report to the City of Miami Beach's Mayor's Economic Council, Florida International University identified that investment in the cultural arts has the highest economic output multiplier of all local industries. The challenge for cities such as Miami Beach, however, is, providing the level of Cultural Arts investment that is required to generate this "biggest bang for the buck."

The City of Miami Beach estimates that the cost to acquire and rehabilitate the Byron Carlyle is $7.2 million. The City currently has approximately $2.2 million for this project, which will include the $1.7 million purchase price. The City has also identified funding sources that will be committed to the annual operation of the facility once it opens. The City of Miami Beach is requesting and additional $5 million for the renovation of this facility as an Economic Development Initiative.

ATLANTIC CORRIDOR GREENWAY NETWORK

(An Important and Innovative Program that brings together Enhanced Tourist/Commuter Transportation, Alternative Transportation, Intermodal Access, Social Justice, Urban Revitalization and Economic Redevelopment in a Linear Park or Greenway Setting)

The City of Miami Beach exists as an eight mile long chain of barrier islands that is separated from the mainland of Miami-Dade County by the Biscayne Bay Marine Estuary. The historic and scenic Indian Creek Waterway system snakes its way through the chain of islands. Miami Beach was settled in the late 1800's as a farming community. Just after the turn of the century, entrepreneurs recognized the area's potential and launched the development of a resort community. The result was a development boom which reached its peak in the 1930's & 1940's and established Miami Beach as the number one beach tourism destination in the world. At that time, an elaborate transit network effectively serviced the public's need and automobiles were of little use to Miami Beach visitors and business owners. As a result, very few parking facilities were developed Citywide.

The post-war prosperity of the 1950's brought on a vast expansion in the development of single family homes and lower density multifamily residential facilities to Miami Beach. By the time changes in world economic conditions brought new development in Miami Beach to a halt in the 1960's, the City of Miami Beach was a completely developed metropolitan area. The area remained in economic doldrums until the mid-1980's when Art Deco revival and a resurgence in beach tourism ignited a wave of redevelopment that has eclipsed any previous period of development in Miami Beach history. This resurgence in development has also brought on major changes in both Miami Beach's population demographics and traffic patterns. Since 1980, the median age of Miami Beach residents has dropped from 65 to 44 years old. During that time, approximately 25 percent of the City's hotel and apartment facilities that historically catered to the City's retiree and seasonal visitor populations, were converted to condominiums occupied by permanent residents. The number of vehicles owned by residents of Miami Beach has increased from approximately 40,000 cars in 1975 to more than 100,000 in 1995.

The traffic congestion caused by daily commuters, residents and visitors trying to traverse the city and vying for the scarce few available parking spaces seriously impedes access to area businesses, cultural/entertainment centers, residential facilities, public parks and greenspace. This traffic gridlock has also had negative impacts on tourist/convention bookings, local business revenues and has limited future economic development through concurrency constraints on growth.

Through the development of the Atlantic Corridor Greenway Network, the City of Miami Beach is creating a regional alternative transportation network which will interconnect key intermodal centers, area business districts, cultural/tourism centers, residential neighborhoods, parking facilities, parks, schools and the beaches. The Network will be comprised of a citywide system of bicycle/pedestrian accessways, enhanced public transit facilities, expanded Electrowave electric shuttle service and innovative regional parking improvement programs.

The system of bicycle/pedestrian trails will be created to provide continuous, multi-purpose public access corridors throughout the City. The access corridors will be developed as Greenways or linear parks which will snake their way along the City's beaches, waterways and natural ecosystems with connections to residential areas, resort areas, business districts, civic centers, transit sites and parking facilities. Rest areas, vista areas, waterway access facilities, and interpretive signage will be interspersed throughout the greenways to provide enhanced heritage and ecotourism amenities and recreational opportunities for trail users.

By connecting the Greenway trails with improved transit sites in strategic residential areas, employment centers and regional parking facilities, the Network will encourage greater utilization of public and alternative modes of transportation for daily commuting, lowering transportation costs and freeing critically needed parking in the business districts. Through the creation of innovative employee park & ride programs for local businesses, the Network will shift additional cars away from key business and tourist centers to less utilized regional parking facilities.

The alleviation of some of the traffic congestion and parking shortages along the Atlantic Corridor will encourage new economic development in Miami Beach by reducing the concurrency restrictions currently limiting new development and by increasing local business utilization by residents and visitors.

Local government has already made a substantial investment in the development of the Atlantic Corridor. To date, the City has obtained more than $12,000,000 in project funding, completed the design and permitting of more than 3.5 miles of the Network's trails, and will complete the construction of the first 2.5 miles of trail in fiscal year 2001–2002. If approved, this $3,200,000 appropriation request will allow the City to complete the development of a series of residential connector nodes, which will directly link the City's key residential areas with regional employment centers, transit facilities and the Citywide trail network.

PREPARED STATEMENT OF THE CITY OF GAINESVILLE, FLORIDA

Mr. Chairman: On behalf of the City of Gainesville, Florida, I would like to thank you for the opportunity to submit testimony before your Subcommittee on a major economic development initiative the City has undertaken to revitalize the Downtown area of Gainesville. The cornerstones of the City of Gainesville's Downtown Revitalization Initiative are: (1) the development of the Sweetwater Urban Stormwater Park which we are seeking $9.7 million from the U.S. Environment and Protection Agency (2) the right-of-way acquisition and construction activities of Depot Avenue for which we are seeking $6 million as a Housing and Urban Development Economic Development Initiative (HUD/EDI).

The Downtown Revitalization Initiative is a broadly developed, multi-faceted initiative that has an established goal of revitalizing Downtown Gainesville. The City of Gainesville has experienced a renaissance in establishing Downtown as a desirable place to live, work and play. The Initiative encourages the redevelopment of existing buildings and parking lots within Downtown into mixed residential, commercial, and office uses. Already the City has participated in two redevelopment multi-use projects in Downtown that have brought in residential, commercial and office spaces. The City's participation is providing streetscaping and stormwater management, both being vital components of the success of any redevelopment initiative. A third redevelopment project under way is Alachua County's proposed Judicial Complex and associated parking structure.

The Revitalization Initiative is dependent on a master stormwater facility that has been planned as a landmark stormwater park that will not only serve as a functional stormwater management facility, but provide an urban park setting for Downtown and nearby residents, visitors and employees. The proposed park is located on the southern boundary of Downtown adjacent to the City's Historic Train Depot (built in 1907) and the City's Electric Utility's repowering of the historic Kelly Power Plant that is currently underway. The Historic Train Depot was purchased by the City and is in the process of being renovated in accordance with Federal and

State Historic requirements and using Federal Transportation Enhancement Program and State Historic Preservation funding. The Historic Train Depot will be a vital component of the stormwater park to allow a center of activity that is complementary of the overall goals of the Downtown Revitalization Initiative.

The stormwater park will also function as a Rail Trail Hub to provide linkage of four primary existing and proposed rail trail systems. From the south the existing Gainesville Hawthorne Rail Trail provides a linkage to the Historic Boulware Springs facility and proposed park owned by the City, the State Payne's Prairie Preserve and further out to the City of Hawthorne.

The proposed Downtown Connector will connect the Gainesville Hawthorne Rail Trail through the stormwater park and is being implemented with funding through the Transportation Enhancement Program. From the east the existing Waldo Road Beautification Trail connects the stormwater park with the City's recently completed Martin Luther King Center, a community sports complex that provides much needed community meeting space and recreational programs. In addition, the Waldo Trail provides a linkage to many predominately African American neighborhoods including the City developed Cedar Grove residential neighborhood.

The proposed 6th Street Rail Trail will provide access to the north and west through three historic, and predominantly African American, Porters and Pleasant Street Neighborhoods and the Grove Street Neighborhood. The 6th Street Trail will be constructed using a combination of local, state and federal dollars. The existing Depot Avenue Rail Trail connects these trails along the borders of the stormwater park and Depot Avenue. The trail and enhanced roadway will provide a primary multi-modal transportation corridor connecting the University of Florida and Shands Medical Complexes to Downtown.

Sweetwater Urban Stormwater Park

The Sweetwater Urban Stormwater Park component will provide stormwater treatment for Depot Avenue, the proposed Rail Trails, as well as the Downtown portion of the Sweetwater Branch watershed located upstream of the park. The site of the proposed Park served as the rail transportation hub linking Fernandina Beach on the east coast of Florida to Cedar Key on the west coast in the mid-1800's. The Historic Train Depot's under-roof, otherwise open loading docks will provide open vistas to the proposed Sweetwater Urban Stormwater Park. The historic Depot building's unique character and location will serve to make it both a lively destination hub for the neighborhood and a catalyst for further redevelopment of Downtown. The building is a standing testament to and a significant visual emblem of Gainesville's rich history. The restoration of this building in conjunction with the restoration of the 22-acre Sweetwater Urban Stormwater Park is expected to provide a major community destination and regional "eco-tourism" attraction for the community.

The Park is in the planning stages as the centerpiece of a U.S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection funded Brownfields pilot project. This project consists of the cleanup costs, construction of the stormwater facilities, installation of reuse water system for irrigation, and development of the recreational components of the Park. The total cost of the Sweetwater Urban Stormwater Park is estimated at $17,200,000.00. The City of Gainesville currently has budgeted $571,000 for property acquisition, $1 million for construction of stormwater facilities and $5 million for coal tar remediation. A state grant of $400,000 is available for acquisition costs. Brownfield grant funds are being used for site investigation and design activities currently underway. An EPA grant for $500,000 is being used for preliminary engineering and environmental work for a portion of the stormwater component of the project. Federal funding request is for $9,700,000.00.

Depot Avenue

This component includes the enhancement of approximately two (2) miles of Depot Avenue from SR 331 to US 441. The enhancement will encourage increased utilization of mass transit, bicycle and pedestrian modes of travel; increase accessibility to a major public heritage and recreation destinations for the community; and enhance the linkage between Downtown and the University of Florida and Shands Medial Complexes.

Depot Avenue traverses Gainesville from west to east, approximately ½ mile south of, and parallel to, SR 26 (University Avenue). Its western terminus is at the eastern edge of the campus of the University of Florida and associated student housing developments, and its eastern terminus is at SR 331 in Southeast Gainesville. It skirts the southern edge of downtown Gainesville at its mid-point, and its intersection with SR 329 (Main Street) is considered to be the southern "gateway" to

Downtown. Main Street is being reconstructed by the State to include on-street parking, enhanced bicycle/pedestrian facilities and landscaping in conjunction with the Downtown Revitalization Initiative.

The enhancement of Depot Avenue will also provide infrastructure and improved safety while accessing Downtown, University of Florida area, the adjoining Porters Neighborhood, just west of SR 329 (South Main Street) and the SpringHill Neighborhood in Southeast Gainesville. The Porters Neighborhood lies within Census Tract 2, which extends north of University Avenue, and the SpringHill Neighborhood lies within Census Tract 7. Census Tract 2 is approximately 37.7 percent African American and Census Tract 7 is approximately 75.6 percent African American (Census, 1990). Approximately 35.1 percent of all families in Census Tract 2 are in poverty and approximately 31.6 percent of all families in Census Tract 7 are in poverty (Census, 1990).

The socio-economic conditions of these areas include high crime rates, sub-standard housing, and lack of access to services and investment. According to the Gainesville Police Department, there were over 3,000 reported crimes on the east side of Gainesville during 1996, the most common crimes included aggravated assault, burglaries and drug sales.

The enhancement of Depot Avenue provides for safer access to the higher employment areas of Gainesville, including Downtown and the University of Florida, improving physical infrastructure, including drainage improvements, lighting and streetscaping, and providing safe bicycle and pedestrian facilities that connect both east and west Gainesville to Downtown.

This project will encourage redevelopment and infill in Downtown and the urban core of Gainesville and its adjacent areas. The City, as the provider of urban mass transit service, is proposing to develop a multi-modal transportation center in the vicinity of Depot Avenue in order to take advantage of the transportation linkage between Downtown and the University campus. An enhanced Depot Avenue will provide a region-based incentive for reducing sprawl development in the Gainesville Metropolitan Area by providing an alternative east-west corridor to SR 26 that allows for maximum use of alternative transportation. As a consequence, this project will increase mobility while minimizing pollution and congestion associated with the use of single occupant vehicles.

The City of Gainesville obtained a HUD grant of $277,500.00 that is being used towards surveying and mapping costs. The Depot Avenue component includes right-of-way acquisition and construction activities at a cost of approximately $6 million.

Federal support is critical for the success of the City's Downtown Revitalization Initiative. It is our hope that the Subcommittee will give our request every consideration.

Prepared Statement of the City of Fairfield, California

Mr. Chairman and members of the Senate VA–HUD and Independent Agencies Appropriations Subcommittee, I would like to thank you for this opportunity to testify before this committee. My name is George Pettygrove and I am the mayor of the City of Fairfield, California. On behalf of the citizens of Fairfield, I request your support of a $2 million earmark under the Economic Development Initiative (EDI) account for the construction of the Solano County Government Center.

Fairfield has been the county seat of Solano County since 1858. Today, downtown Fairfield is the administrative center of the Solano County government, including the offices of the County Administrator, the Board of Supervisors, several general government agencies, and the County law and justice center. Solano County has outgrown the existing facilities and the County will either build a new county building at the current site in the downtown or move county services to other suburban areas of the County. The City of Fairfield wants County offices and services to remain downtown, thereby maintaining the economic viability of the area and promoting redevelopment of adjacent private land.

The City and County jointly funded a Master Plan for the project in downtown Fairfield. In its final stages of completion, the Master Plan envisions multi-story county government buildings, parking structures, and support space. The first phase of the project will include a multi-story county government building up to 300,000 square feet in size, streetscape improvements and a parking structure with 1,180 spaces to serve the new facility and downtown office and retail businesses.

This project is a key element in the City's strategy to redevelop the downtown. It will create a distinctive new landmark in the center of Fairfield. By retaining and expanding existing County government functions, the project will provide a customer base and an economic engine for growth in the adjoining business district.

The project will also result in significant upgrades to adjoining streets, with new street trees, public places, landscaping, and public art. The new County Government Center will also encourage intensification of development in the City center, leaving raw land in areas outside the City's core available for more suitable uses.

The estimated cost of the first phase of the Solano County Government Center is $75 million. Solano County and the City of Fairfield are working together to develop a funding plan for the project. As part of this joint effort, the City seeks Economic Development Initiative funding to leverage city and county funds for the design and construction of the new County Government Center.

Once again, thank you for this opportunity to testify before you.

NATIONAL SCIENCE FOUNDATION

Prepared Statement of the American Society for Microbiology

The American Society for Microbiology (ASM), the largest single life science organization in the world, comprised of more than 42,000 members, appreciates the opportunity to provide written testimony on the fiscal year 2002 budget for the National Science Foundation (NSF) and the Environmental Protection Agency (EPA).

The ASM represents scientists who work in academic, industrial, medical and governmental institutions worldwide. Microbiologists are involved in research to improve human health and the environment. The ASM's mission is to enhance the science of microbiology, to gain a better understanding of basic life processes, and to promote the application of this knowledge for improved health, and for economic and environmental well being.

The following testimony will outline the ASM's funding recommendations for both the NSF and EPA research and development programs for fiscal year 2002.

NATIONAL SCIENCE FOUNDATION

The ASM, as a member of the Coalition for National Science Funding (CNSF), endorses the recommendation to provide no less than $5.1 billion, a 15 percent increase, for the NSF in fiscal year 2002. This would raise the NSF budget by $765 million from its current $4.4 billion level of funding for fiscal year 2001. The ASM strongly supports Congress's bipartisan commitment of last year to strengthen science and long-term investments in basic research by significantly increasing the National Science Foundation's budget. It is critical to sustain this strong federal investment in fiscal year 2002 and beyond in order to maintain U.S. competitiveness and leadership in science and technology, which depends on adequate funding for basic research.

The NSF is the primary source of nonmedical basic research support in the nation's colleges and universities. NSF is the only federal agency whose mission consists of comprehensive support for the sciences and engineering and is thus a major source of funds for training of our nation's intellectual capital. It is a key agency for supporting research that uses genomic information in new and creative ways. Other NSF initiatives will result in increased understanding of environmental and human microbial interactions, which have particular relevance to global environmental change as well as infectious diseases and represent a new frontier in scientific research.

NSF's mission to promote and advance research and education in the United States is accomplished by funding the highest quality academic research and education programs. A 15 percent increase would enable NSF to support additional excellent research projects in pursuit of important discoveries and innovations. Enhanced support for the NSF's efforts to improve education will help expand our nation's intellectual capital. Strong links between research and education are essential to a healthy research enterprise, an educated public, and a well trained future workforce.

Continued research concerned with the impact of microorganisms on the well being of humans, animals, plants, and the environment is critical. The ASM supports NSF's increased focus on microbial biology and the diversity of microorganisms, an initiative under the auspices of the NSF's Directorate for Biological Sciences (BIO). Studies on the unknown microbial biomass provide opportunities to discover new knowledge about microbial life forms and their potential application in industry, medicine and agriculture. In addition, microbiological research continues to provide the foundation for advances in biotechnology. These advances are based on understanding the molecular basis of microbial physiology and the biology, genetics, and molecular biology of viruses, yeast and bacteria and the vectors derived from them.

BIOCOMPLEXITY

ASM urges support for NSF's bold initiative to better understand the complexity of interactions between organisms and their environment so that human impact and trends in our global environment can be better understood and properly managed. Advances in the underlying disciplines from molecular biology, ecology and the geosciences to mathematics and the computational sciences have now made it feasible to begin to understand more complex interactions. Microorganisms are key components of the soil, water, plant, and animal environments and therefore are dominant factors in understanding these interactions. Furthermore, only a small percentage of the microbial species on earth are known, leaving their functional role unknown. These unknown organisms are the largest untapped source of biodiversity and a potential source of new pharmaceuticals, enzymes, biocontrol agents, and tools for nanotechnologies.

GENOMIC RESEARCH AND INFORMATICS

The tremendous advances in DNA sequencing technology have now provided the full genetic code for many organisms, and will include the sequences of probably 60 microbes by the end of 2001. This information is revolutionizing our ability to understand the common features of life as well as the differences among organisms. However, to capitalize on the sequence information research efforts on functional genomics and informatics needs to be enhanced. The function of most of the genes now discovered from sequencing are unknown. Functional genomics research provides the opportunity to understand the role of these genes. Informatics provides the common computer based information about these genes and the software tools to mine these data. As a new field in science, there is a great shortage of people with appropriate training in informatics. ASM recommends that programs in functional genomics and informatics be enhanced to meet this major national need.

The ASM requests that Congress give high priority to increasing the NSF's funding by at least 15 percent for fiscal year 2002. Most of today's scientific achievements leading to the development of biotechnology, antifreeze proteins, improved crops and plant-based products, new antibiotics and pharmaceuticals and DNA fingerprinting have their roots in basic research supported by the NSF. The many future public health and environmental challenges the United States will face can only be overcome through the potential of basic research to generate crucial new scientific knowledge and advancements that lead to new technologies for the future.

ENVIRONMENTAL PROTECTION AGENCY

The EPA's scientific research and development programs are critical to researchers in the fields of applied and environmental microbiology. Research on environmental microbiology is essential for improving air, water, and soil quality; for assuring the safety of potable water supplies; for providing safe means for waste disposal; and for cleanups of environmental contaminants. The ASM believes that sound public policy for environmental protection depends on adequately funded programs of intramural and extramural research based on a system of peer review to assure that support is awarded to research programs having both quality and relevance. The EPA has begun its own peer review system based upon the National Science Foundation model. Critical peer review of both the intramural and extramural research programs of the EPA are necessary for ensuring the quality and scientific validity of studies that are funded.

SAFE WATER AND WATER RESEARCH

Control of water pollution in the United States over the past two decades has focused on chemical risks, overshadowing the significant risks associated with microbial pollutants. Waterborne microorganisms pose increasingly greater threats to public health, due to changing patterns in water use, increased water pollution, the nation's aging water treatment systems, and out-moded risk assessment protocols. The Centers for Disease Control and Prevention (CDC) estimates that each year in the United States up to 900,000 cases of illness and possibly 900 deaths occur as a result of waterborne microbial infections. Disease causing microbes are responsible for a variety of maladies from diarrhea (*Cryptosporidium*) to respiratory distress to heart disease. In 1993, the *Cryptosporidium* outbreak in Milwaukee cost that community well over $55 million. The 1997 *Pfiesteria* bloom in the Chesapeake Bay area caused $43 million in economic losses. The ASM believes it is imperative to provide support to EPA efforts to address risk associated with microbial contamination, such as, the Waterborne Microbial Disease Program (WMDP). The WMDP is an internal EPA effort to examine the coverage of current programs related to waterborne microbial disease and develop an integrated strategy that will assure current and future regulatory programs adequately address microbial public health concerns. The ASM has recommended that EPA work with the CDC, National Institute for Environmental Health Sciences (NIEHS), and other federal agencies, as well as universities and other key nongovernment groups to provide the needed reliable science.

The ASM also recommends that biological research could be strengthened within EPA by initiating an independent scientific assessment that:

—Focuses on the appropriate and necessary human and financial resources needed for research, development, and implementation of water protection programs focused on waterborne microbes.

—Identifies the education and training programs needed to improve surveillance of our waters and our human population for outbreaks.

—Determines which programs and methods must be developed or expanded to monitor the microbial threat in the nation's water systems.

SCIENCE TO ACHIEVE RESULTS PROGRAM

The EPA's Science to Achieve Results (STAR) program is an important mission-driven, extramural research initiative. This program funds important environmental research proposals from scientists outside the federal government and is a valuable resource for the EPA in finding solutions to many complex environmental problems. Grants made under the STAR program last from two to three years and provide about $150,000 of scientific support per grant year. The STAR program funds projects in specific focal areas including global warming, drinking water, ecology of harmful algal blooms, water and watersheds, ecological indicators, and pollution prevention, which have significant microbiological components. ASM applauds the EPA's new initiative to develop multi-year plans (e.g., for Particulate Matter and other programs) that will relate STAR and intramural research products to the Agency's strategic goals for different program areas. These plans will help provide a framework for the Agency to consider, and to explain the balance of R&D performers in individual research areas.

ASM recommends that 20 percent of the STAR budget remain open for exploring broader issues not covered by targeted RFA's. This mechanism captures the creativity of the scientific community to foresee EPA relevant needs and solutions.

GRADUATE ENVIRONMENTAL FELLOWSHIP PROGRAM

The EPA's Graduate STAR Environmental Fellowship Program has been an outstanding success in attracting some of the best young talent to environmental research. ASM strongly endorses this program and, based on its success, suggests that the funding be increased for fiscal year 2002. Both the public and private sectors will benefit from a steady stream of well-trained environmental specialists. The fellowship program has had a major impact in attracting exceptionally talented young scientist to pursue careers in environmentally related fields. ASM also encourages the EPA to fund additional environmental microbiology fellowships in such research areas as bioremediation, global warming, and molecular methods to detect water contamination. The Fellowship Program will provide the critical expertise this nation will need to face today's challenges in industrial pollution, microbial contaminated water systems and general environmental quality. ASM also believes this program is critical to maintaining the highest level of competence in environmental science to address the challenges yet unseen.

During this year's appropriations process, the ASM urges Congress to consider these needs and provide the necessary incremental funding. The ASM appreciates the opportunity to comment and would be pleased to provide additional information.

PREPARED STATEMENT OF THE AMERICAN CHEMICAL SOCIETY

The American Chemical Society (ACS) would like to thank Chairman Christopher Bond and Senator Barbara Mikulski for the opportunity to submit testimony for the record on the Departments of Veterans Affairs and Housing & Urban Development, and Independent Agencies Appropriations bill for fiscal year 2002.

As you may know, ACS is a non-profit scientific and educational organization, chartered by Congress, representing more than 163,000 individual chemical scientists and engineers. The world's largest scientific society, ACS advances the chemical enterprise, increases public understanding of chemistry, and brings its expertise to bear on state and national matters.

We firmly believe that advances in science and engineering have produced more than half of our nation's economic growth in the last 50 years. They remain the most important factor in the productivity increases responsible for our growing economy and rising standard of living, economists agree. Each field of science contributes to our diversity of strengths and capabilities and has given us the flexibility to explore new fields and apply science in unexpected ways. Over the last 25 years, funding for biomedical research has increased while federal support for most other disciplines has remained flat or declined. Congress took an important step in the right direction last year when it increased funding for scientific research for fiscal year 2001. To nourish the roots of innovation in all fields and help ensure the success of growing investments in biomedicine, balance must be restored to the nation's R&D portfolio while supporting overall growth in the nation's science and technology budget. This should be a top priority for Congress and the administration as fiscal year 2002 appropriations are considered.

NSF BUDGET RECOMMENDATIONS

ACS commends Congress for providing NSF a 14 percent increase for fiscal year 2001. To meet the challenges of the nation's 21st century scientific, education, and workforce needs, ACS strongly supports funding the National Science Foundation (NSF) in fiscal year 2002 at $5.1 billion, a 15 percent increase. NSF supports research and education programs that are crucial to innovation and help meet the demand for a highly skilled workforce. The recommended funding level would allow NSF to more fully meet the unrealized opportunities in core disciplinary research areas, enhance multi-disciplinary research, and increase its impact on science and mathematics education.

NSF RESEARCH PROGRAMS

Progress in core disciplines such as chemistry, physics, and mathematics is essential to the success of complex, multi-disciplinary R&D in areas such as nanotechnology and bioinformatics. Support for core programs comes from several NSF directorates, including the Mathematics and Physical Sciences Directorate (MPS). MPS supports research to investigate the inner structure of matter, origins of the universe, dynamic chemical reactions, and new and efficient computational techniques. MPS research underpins many other scientific endeavors and fuels the development of new technologies, new markets, and new tools for discovery. The Society supports providing a strong increase for MPS that is proportional to other directorates.

ACS also supports fundamental, multi-disciplinary research programs supported by NSF. These include nanotechnology, information technology, and environmental research. With a variety of scientists working to study these complex problems, novel fields of investigation may emerge that will give us a better understanding of our world. The resulting multi-disciplinary workforce will advance the competitive edge of our nation's industries by creating innovative tools and technologies.

Developments in nanotechnology could one day revolutionize manufacturing processes, electronics, medicine, and environmental protection. NSF supports research on nanoscale chemical, biological, and environmental processes and on novel phenomena only visible with atom-scale control over matter. Information technology research, including computational chemistry, also holds enormous potential for technological advances and thus warrants strong support. Research on biocomplexity in the environment will improve science-based predictive capabilities for decision-making. Understanding the powerful interactions that occur within complex biological systems and between these systems and the Earth's environment will lead to a better understanding of natural processes and the effects of human behavior on the natural world.

NSF traditionally receives high marks for efficiency-less than 4 percent of the agency's budget is spent on administration and management. NSF awards funds to researchers only after a rigorous merit-review process using expert peers. Currently, the Foundation must decline almost as many highly rated grant proposals as it can fund. These are lost opportunities for significant discoveries. Increased funding will allow NSF to fund more outstanding proposals and increase the size and duration of its grants—a longstanding goal of the Foundation—without limiting the number of new awards.

NSF EDUCATION PROGRAMS

Improving K–12 science education should be a national priority. The Third International Math and Science Study-Repeat showed that the longer U.S. students stay in school, the lower they perform relative to students in other nations. Our 12th graders should not rank below their peers in almost all developed countries in science knowledge. If the U.S. is to retain its lead in science and technology, they must not.

We cannot meet the demand for skilled workers because too few Americans are choosing to study science and engineering. We must do a better job teaching our children science and mathematics and motivating them to choose careers in these fields. Better teacher preparation and continuing professional development are essential: of the 300,000 middle and high school science and mathematics teachers in the United States, nearly 30 percent have neither a major nor a minor in the subject they teach.

Although states play the lead role in funding education, the federal government must strengthen its long-standing effort to improve the quality of mathematics and science education across the nation. NSF's Education and Human Resources (EHR) programs are an essential part of this effort.

The nation's investment in EHR helps meet the demand for skilled workers and ensure that citizens have lifelong opportunities to learn about science and technology in all parts of the country. In fiscal year 2001, Congress appropriated $787 million for EHR programs. The 15 percent increase ACS advocates for fiscal year 2002 will advance efforts to improve science and mathematics curricula, reform education practices, and equip science teachers for success in the classroom.

EHR's programs are instrumental in efforts to achieve standards-based, inquiry-centered science and mathematics education. With an emphasis on curricula, assessments, and teacher preparation and professional development, EHR PreK–12 programs improve science and mathematics education in urban and rural states and school districts.

EHR programs help train the nation's technical workforce. Two-year college science, technology, and mathematics education is strengthened through the Advanced Technological Education (ATE) program. Since the two-year college system is especially important for economically disadvantaged students, who use it as a point of entry into higher education, we encourage EHR to develop other innovative programs to attract students from underrepresented groups.

EHR programs also play a critical role in providing advanced training for scientists, mathematicians, and engineers. Funding for graduate and post-doctoral fellowships can shorten the time to the Ph.D. degree, increase participation of underrepresented groups, and significantly broaden research and training opportunities.

Prepared Statement of Chicago State University

Mr. Chairman and other Members of the committee, my name is Elnora Daniel, and I am the President of Chicago State University (CSU). Established in 1867, CSU is the second oldest public institution of higher education in the State of Illinois. The University has a $75 million budget, sits on 161 acres on the South Side of Chicago and enrolls over 8,400 students. Of its student body, 85 percent are African American; 70 percent are female; and 80 percent are graduates of the Chicago Public Schools. Most students are the first generation of their families to attend college. Forty percent of the students have full-time jobs and 63 percent have at least one child. More than two-thirds of CSU students live within five miles of the campus. Most notably, the University enrolls one-third of all African American students attending public universities in Illinois, and ranks first among public universities in Illinois in conferring master's degrees to African Americans.

Despite the achievements and successes CSU has achieved in addressing the needs of a non-traditional student population, there are a unique set of challenges the institution faces as an urban campus, located in a high-poverty community. Therefore, assistance is needed from the federal government to help us (1) maintain our status as one of the lead educators of African American college students in the state of Illinois, and (2) develop and implement collaborative community revitalization and educational strategies needed to address the contemporary challenges affecting urban campuses such as CSU.

Specifically, during the fiscal year 2002 appropriations cycle, CSU asks that $1 million be provided to support planning and development for a residence hall that will house single parents pursuing undergraduate degrees. Funding is sought from the Economic Development Initiatives account in the VA–HUD-Independent Agencies Appropriations bill.

As stated previously, most of the students attending CSU are women with children. They are the first generation of their families to attend college, and more often than not come from low-income backgrounds. These circumstances present special challenges, and often obstacles, in terms of the University's retention and graduation efforts.

In fact, national student retention data suggest that only about 14 percent of the full-time students who are single parents persist from matriculation to graduation. This trend means that about 86 percent of single parents do not graduate—an occurrence that hinders economic, social and educational advancement, and fuels the multi-generational cycle of poverty that affects so many families who live in the area where the University is located.

The proposed residence hall will have an in-house child care center that will be open during the evening hours and on weekends to supplement the hours of operation of the current CSU child care center. The benefit of the proposed facility will be to address the primary factors that prevent single parents from completing college. The long-term benefit will be a reduction in the number of children raised by parents whose limited educational and academic development has a cyclical effect on their children, thus resulting in continued poverty. Children raised in a success oriented and educationally sound environment generally become success oriented and are more inclined toward generational independence, as opposed to the generational dependence that feeds urban decay, poverty and illiteracy.

The ultimate goal of building the facility is to increase the graduation rate of the selected single parent participants by 200 percent—from 14 percent to 42 percent. Moreover, in addition to consistent child care and a supportive environment, the parents will be able to receive emotional developmental counseling from the CSU Counseling Center, as well as academic developmental counseling from the CSU Academic support center.

In addition to this request, as a predominantly black institution, CSU supports the recommendations shared with the subcommittee yesterday by the National Association for Equal Opportunity in Higher Education (NAFEO) in support of increasing funding for the minority serving institution programs that are funded by the National Science Foundation (NSF) and the National Aeronautics Space Administration (NASA). Specifically, we support increased funding at the NSF for the Alliances for Graduate Education and the Professorate, the Louis Stokes Alliance for Minority Participation, HBCU–UP, and the Major Research Instrumentation/Facilities program. At NASA, $75 million is requested for the Minority University Research & Education program. These programs are playing a critical role in helping minority serving institutions like CSU to contribute to national science and technology goals.

Mr. Chairman, this concludes my testimony. I would be happy to answer any questions.

PREPARED STATEMENT OF THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY

The University of Medicine and Dentistry of New Jersey (UMDNJ) is the largest, free-standing public health sciences university in the country. The UMDNJ statewide system is located on five academic campuses and consists of 3 medical schools and schools of dentistry, nursing, health-related professions, public health and a graduate school of biomedical science. UMDNJ owns and operates University Hospital in Newark, New Jersey, the largest provider of indigent care in the state. We also provide health care and educational services through our core and affiliated teaching hospitals and our higher education partners as well as through an integrated behavioral health care delivery system and a statewide system for managed care. No other institution in the nation possesses the resources that match our scope in higher education, research, health care delivery and community service initiatives with federal, state and local government entities.

The Robert Wood Johnson Medical School (RWJMS) is one of three schools of medicine at UMDNJ. Nationally, RWJMS ranks among the top ten medical schools in the percentage of minority student enrollment. The school ranks in the top one-third in the nation in terms of grant support per faculty member. It is home to four major research institutes: The Environmental and Occupational Health Sciences Institute (the only NIEHS-designated Center of Excellence in Environmental Health Sciences), the Center for Advanced Biotechnology and Medicine, and two of our top priority centers of excellence—the Cancer Institute of New Jersey (CINJ) and the Child Health Institute (CHI).

We appreciate this opportunity to bring to your attention these two priority projects—the Cancer Institute of New Jersey and the Child Health Institute—which are consistent with the mission of this committee. Both projects are statewide in scope and include collaboration within the University system and with our affiliates. Our research projects also underscore the University's commitment to eliminating racial and ethnic health disparities. We appreciate the past and continued support of this committee to sustain the high standards of excellence in the research and training programs of the University of Medicine and Dentistry of New Jersey.

The Cancer Institute of New Jersey (CINJ) was established in 1990 with $15 million in grant support, including a $10 million capital grant from the federal government. CINJ is a center of excellence of the University of Medicine and Dentistry of New Jersey (UMDNJ) and a partnership of UMDNJ-Robert Wood Johnson Medical School, Robert Wood Johnson University Hospital, St. Peter's University Hospital, and the Atlantic Health System. Over the past decade, CINJ has grown to become one of the nation's most successful cancer institutes and has garnered the distinction of being New Jersey's only NCI-designated cancer center. CINJ joins a select group of 60 cancer centers in the country to be awarded this designation based on the capability to integrate a diversity of research approaches with exceptional patient care.

CINJ is centrally located in New Brunswick, New Jersey, a city known as the "healthcare hub" of the state and home to two research universities (UMDNJ-Robert Wood Johnson Medical School and Rutgers University), two teaching hospitals, and headquarters of a national pharmaceutical company—Johnson & Johnson. New Brunswick serves the health care needs of nearly 3.5 million people who live within a 30 mile radius of the city.

New Jersey is the most densely populated state in the country with more than 8 million people occupying 7,500 square miles of space. New Jersey is especially devastated by cancer where incidence and mortality rates are higher than the national average. CINJ is dedicated to providing all New Jerseyans with the best cancer care through its comprehensive prevention, treatment and education programs. Its scientific research programs are designed to rapidly transform promising laboratory discoveries into clinical practice.

To achieve that mission, CINJ has developed a provider network that includes 20 hospital partners across the state that extend CINJ's resources to every county in the state and provides patients, residents, physicians and health care institutions with seamless access to the exceptional cancer programs that are available through CINJ. CINJ established the Dean and Betty Gallo Prostate Cancer Center which has garnered $9 million in federal support over the past 3 years. Because African-American males are 2.5 times more likely to die from prostate cancer, the Gallo Prostate Cancer Center has partnered with the 100 Black Men of New Jersey organization to offer prostate cancer screenings in minority communities throughout the state. Launched in 1999, this initiative has provided screenings for prostate cancer to more than 1500 men living within Essex, Hudson and Union Counties, using churches, schools and other community settings. Our goal is to extend prostate cancer screening services to all 21 New Jersey counties by 2003.

In New Brunswick, CINJ also works with the Chandler Health Center, a federally-qualified community health center operated by RWJMS, on early detection programs and examinations for medically indigent adults and children. CINJ provides outreach to make the benefits of clinical trials more widely available to the state's minority communities.

Cancer is the second leading cause of death in the United States. New Jersey is especially devastated by the disease and ranks 9th in the overall number of cancer deaths this year. The American Cancer Society estimates that 40,000 new cases of cancer will be diagnosed in the state and that about 18,000 New Jerseyans will die of the disease. CINJ has formed a partnership with the Environmental and Occupational Health Sciences Institute (EOHSI) to study the impact of pollution in New Jersey's environment on the high rate of cancer statewide.

CINJ's mission is focused on providing all New Jersey residents with a cancer institute of exceptional quality. CINJ is dedicated to the prevention, detection, treatment and care of patients with cancer. Its scientific research programs are designed to rapidly transform promising laboratory discoveries into clinical practice. CINJ physicians and scientists of CINJ are recipients of numerous distinguished awards and receive research grants totaling $50 million per year.

CINJ currently occupies a 76,000 square foot research and treatment facility, but the demands have outpaced its capacity and existing resources. The facility was originally designed to accommodate 16,000 adult patient visits, but last year there were more than 37,000 patient visits representing about 3,000 new patients. Patient visits continue to increase at an annual rate of 10 percent. We anticipate 50,000 to 60,000 patient visits at CINJ by 2003.

Our immediate objective is to expand our clinical and research units by constructing a 120,000 square foot addition to the New Brunswick facility. The facility will comprise adult and pediatric treatment and evaluation areas, a patient education center, offices and research laboratories and the Dean and Betty Gallo Prostate Cancer Center.

The new facility is expected to take two years to construct creating numerous construction-related jobs in the New Brunswick area. When completed, the new facility will accommodate nearly 200 additional employees including 30 additional faculty as well as support staff (nurses, social workers, pharmacists and clinical research associates).

When completed, CINJ's total operating budget is projected to be $65 million. Applying a standard economic multiplier of 5, the total impact on the New Brunswick area is estimated to be $325 million.

UMDNJ has approved the construction of the new addition to CINJ's New Brunswick facility and has commitments of some $16 million toward the construction cost of approximately $30 million. Within the next two years, the Cancer Institute of New Jersey will seek designation from the National Cancer Institute as a comprehensive cancer center. CINJ has completed and won the first two essential designations and is moving ever closer toward the crucial comprehensive center designation. The next phase of development for CINJ is critical and expansion of its New Brunswick facility is essential to achieving that goal. We respectfully seek $10 million toward the construction of a new addition to the CINJ New Brunswick facility.

The Child Health Institute of New Jersey (CHI) is integral to the long-term plan for the enhancement of research at the Robert Wood Johnson Medical School in developmental genetics, particularly as it relates to disorders that affect a child's development and growth. The program will enable the medical school to expand and strengthen basic research efforts with clinical departments at the Robert Wood Johnson University Hospital, in particular, those involved with the new Bristol-Myers Squibb Children's Hospital.

The Child Health Institute will fill a critical gap through the expansion, by new recruitment, of an intellectual base upon which molecular cellular studies of child development and health will build. The CHI facility is expected to cost about $40 million with an additional $10 million endowment. To date, CHI has achieved $4.8 million in federal funding; $1.9 million facility grant awarded by the National Center for Research Resources of the National Institutes of Health (NIH); $30 million from private, individual, foundation and other government sources including the State of New Jersey.

The Child Health Institute will focus research on the molecular and genetic mechanisms that direct the development of human growth and function. Scientists will investigate disorders that occur during the process of development to discover and study genes contributing to developmental disabilities and childhood diseases in order to determine how genes and the environment interact and to identify the causes and possible avenues of treatment of cognitive disorders such as mental retardation, autism and related neurological disorders.

The Child Health Institute will act as a magnet for additional growth in research and healthcare development in New Jersey. The Institute will encompass 100,000 square feet and will house more than 40 research laboratories and associated support facilities. Fourteen senior faculty will direct teams of M.D. and Ph.D. researchers, visiting scientists, postdoctoral fellows, graduate students and technicians for a full complement of about 130 employees.

At maturity, the CHI is expected to attract $7 to $9 million of new research funding annually. The Institute's total annual operating budget is projected to be $10–$12 million. Applying a standard economic multiplier of 5, the total impact on the New Brunswick area is estimated to be between $50–$60 million per year.

The strong support of parents and families of affected children has produced important collaborations for the Child Health Institute. Advocacy groups are convinced of the value of basic research as a critical strategy toward treatment and cures. An example is autism. The Child Health Institute serves as the administrative base for the Governor's Council on Autism, which distributes $1.5 million annually in grants from the State to provide education and treatment services for autistic children and their families.

The Child Health Institute represents the best hope for a sustained campaign against childhood diseases and disorders that affect our most vulnerable population—our children. Congress has recognized the importance of the Institute and has provided close to $5 million over the past two years. We respectfully seek $5 million this year to complete the federal government's commitment to the development of the Child Health Institute of New Jersey.

We want to thank this committee for supporting the critical needs of research and economic development throughout the nation. The ability of urban-based academic health centers such as UMDNJ and the Robert Wood Johnson Medical School to conduct research to address cancer and childhood diseases must continue to grow with federal, state and private support. We appreciate the strong support of this committee to sustain these efforts as medicine and its associated technologies are the engines for economic growth.

Thank you for your past support and for this opportunity to present testimony in support of UMDNJ's top priority projects—the Cancer Institute of New Jersey and the Child Health Institute of New Jersey.

PREPARED STATEMENT OF THE AMERICAN ASSOCIATION OF COMMUNITY COLLEGES

The American Association of Community Colleges (AACC) welcomes this opportunity to submit comments on fiscal year 2002 appropriations for the National Science Foundation (NSF). AACC represents over 1,100 public and private degree-granting, regionally accredited two-year institutions of postsecondary education.

Over the last decade, the National Science Foundation and America's community colleges have developed a strong partnership that is vital to carrying out their respective missions. Participation in NSF's programs that improve science, math, engineering, and technology (SMET) education has bolstered the educational offerings of community colleges. At the same time, community colleges' participation in these programs has broadened their reach and enhanced their effectiveness.

The Administration's fiscal year 2002 budget proposes a $56 million increase for the NSF, which is approximately 1.3 percent more than fiscal year 2001. This funding level is inadequate for the crucial role the NSF plays in the nation's scientific research and education. Fiscal year 2001 marked the first year of a five-year plan to double the NSF's budget, a plan supported by top appropriators in both parties. AACC urges Congress to appropriate sufficient funds next year to eventually bring this plan to fruition.

The majority of the NSF programs in which community colleges participate are housed in the Education and Human Resources (EHR) Directorate. While the Administration's budget calls for a nominal increase in fiscal year 2002 funding for EHR, from $787 million to $872 million, that increase is deceptive, since the EHR budget request also includes a $200 million Math and Science Partnership Initiative. Community colleges are ready and willing to participate in this new initiative to improve K–12 math and science education. However, achieving this goal must not come at the expense of other NSF education programs that are engaged in critical activities such as preparing students for technical fields, developing the instructional workforce, improving core science and math curricula, and providing necessary laboratory equipment. The $110 million that would be diverted from these programs to the Math and Science Initiative represents approximately 14 percent of the entire fiscal year 2001 budget for the NSF's Education and Human Resources directorate. Such a cut would severely compromise the effectiveness of these programs at a time when demand for them is at its peak.

AACC believes that a net increase in resources should be directed towards EHR programs, which improve SMET programs at a great number of institutions and provide opportunities for a broad range of students. Community colleges are particularly involved in the programs described below, and AACC urges the Congress to appropriate the funds specified for each of them.

The flagship of community colleges' partnership with the NSF, the Advanced Technological Education (ATE) program, promotes improvement in the education of science and engineering technicians at the undergraduate and the secondary school levels. The NSF recognizes that community colleges are essential to the education and training of qualified technicians, and for that reason the ATE program is dedicated to funding projects at two-year institutions. ATE grantees are producing technicians with the skills to operate cutting-edge equipment and the knowledge of science, math and engineering that are sorely needed in fields such as information technology, biotechnology, manufacturing, and environmental technology.

The ATE program has achieved these results by funding Centers of Excellence and individual projects that: develop and disseminate curricula; provide opportunities for faculty development; create internships and other hands-on field experiences for students and teachers; foster collaboration between community colleges, four-year colleges and universities, secondary schools, businesses and government; and recruit students into SMET education. The National Centers of Excellence are housed at community colleges across the country. Each Center focuses on a given field, such as engineering technology, and engages in all of the activities described above. The Centers are expected to have a national impact and create model materials and educational approaches. The approximately 150 projects that are active at any given time may engage in only one of the above activities and are generally more geographically and topically limited. The work of the Centers and the projects is complementary: the Centers disseminate materials created by the projects and the projects adapt these materials to other disciplines and different student populations.

In fiscal year 2001, NSF began several new initiatives within the ATE program. The program will fund regional information technology and manufacturing centers that will focus on reforming academic programs in a given region to produce highly qualified workers who meet industry's needs. NSF hopes to fund up to five of these Regional Centers each year.

In addition to centers and projects, the ATE program added a third category of awards for articulation partnerships in fiscal year 2001. Within this new category, NSF plans to fund two subcategories of articulation partnerships: those that impact two-year college programs for prospective K–12 teachers, and those that ease the transition of students in community college SMET programs into programs at four-year colleges and universities.

The NSF has recognized that community colleges play a significant role in the preparation of K–12 SMET teachers. Department of Education statistics show that 20 percent of all teachers began their higher education in community colleges. According to the NSF, that number is greater than 50 percent in some states, and many new teachers have taken all their mathematics and science courses at a community college. Projects funded under this new category will aim to increase the number, quality, and diversity of prospective K–12 SMET teachers in pre-professional programs at community colleges, and provide opportunities for in-service teachers to become certified in mathematics, science, or technology.

The Administration has requested $39.16 million for ATE in 2002, level with fiscal year 2001 funding. In fiscal year 2001, this program received a record number of proposals—reflecting the growing need to produce skilled workers for the technology-based economy. AACC urges Congress to appropriate $50 million for this vitally important program.

The Course, Curriculum and Laboratory Improvement (CCLI) program is another important component of NSF's support for community colleges. This program improves SMET education for all undergraduates, including community college students. Unlike the ATE program, CCLI is not focused on particular high-technology fields, but rather core SMET education. The work of the two programs is complementary, as students interested in technology careers can benefit from the educational materials and methods developed under both programs. Like other NSF undergraduate programs, CCLI helps institutions of higher education better educate a broader array of students in SMET subject areas.

Funding in real dollars for the CCLI program has been eroding. The Administration has requested a modest fiscal year 2002 increase of $1.36 million, to a total of $57.54 million in fiscal year 2002. AACC supports a more robust increase in the CCLI budget to compensate for recent years of neglect. Congress should appropriate $65 million for CCLI.

Community colleges across the country thank this subcommittee for its ongoing support of NSF programs that strengthen their institutions and communities. AACC thanks the subcommittee for this consideration of our views.

Prepared Statement of New York University

On behalf of New York University, I appreciate the opportunity to speak in support of public investment in basic research and, in particular, to salute the National Science Foundation, whose funding of fundamental research is so important to the health and well being of our nation.

The Foundation's support of university-based research is essential to our national ability to prepare for the scientific and technological challenges that we will face in the 21st century. NSF supports established as well as junior investigators, funds research as well as equipment, and shapes emerging areas of research in the physical, life, computational, and social sciences. NSF funding is critical both for its direct support of research, training, and education, as well as its indirect impact in enabling extramural (university-based) researchers to attract additional funding for research and science infrastructure from other federal agencies, private foundations, and industry. In that regard, I urge Congress and this Committee to support the proposal of the Coalition for National Science Funding for a 15 percent increase for NSF for fiscal year 2002.

At New York University, NSF funding has supported leading-edge research across a range of areas from quantum dynamics to computational biology to molecular evolution to developmental genetics to theoretical particle physics. I would like today to underscore genomics, an important and pervasive area of contemporary biological research that is a very important priority for NSF and an area in which NYU intends to make major contributions.

We applaud NSF's initiative in soliciting genomics approaches and grant applications to its several study divisions, and its special initiatives like "2010 Project", which aims to determine the function of the 25,000 genes in the mustard weed, *Arabidopsis Thaliana*, by the Year 2010. The implications of genomics, and NSF support of it, cannot be overstated. Its scope encompasses every living thing—humans, animals, and plants—and has the potential to revolutionize our understanding of all living things.

ADVANCES IN GENOMICS

The genome is the recipe or blueprint for life. During the last decade—and particularly during the last two years—the unraveling of the genetic code has opened up a vast range of new opportunities for evolutionary and developmental biologists, chemists, and information scientists to understand what genes are, what they do, and how they do it. Genomics is revolutionizing biology and is dramatically changing the way we characterize and address biological questions. As a field that straddles biology, chemistry, computer science, and mathematics, genomics is growing at an extraordinary pace and is transforming these disciplines as well as the social and behavioral sciences.

In its first stage, the revolution in genomics was characterized by a period of intensive development of techniques to analyze DNA, first in simple models, like yeast, bacteria, the worm, and the fruitfly, then in the mouse, and now in humans. The structure and function of genes are similar in these models, making comparisons useful. The second phase was characterized by the use of these tools to address whatever biological question was most easily approached, given the state of technique development. It may be described as structural genomics—which comprises the mapping and sequencing of genomes and is mainly driven by technology. The scientific community is now poised to enter the third phase of the genomics revolution in which investigators bring perspectives from other fields, like immunology, genetics, and neurobiology to pursue investigations that are driven by hypothesis rather than technique. This third phase is generally termed functional genomics and uses the map and sequence information already collected to infer the function of genes.

At New York University, we think the key issues facing genomics today are how to translate the enormous quantities of gene sequence data into knowledge of gene function. The answers lie, we believe, in comparative functional genomics, an approach that looks for the occurrence of the same genes in different species that share certain structures or functions, and provides a powerful method for understanding the function of particular genes. Comparative functional genomics uses two primary modes of analysis: (1) identifying what has been conserved over long evolutionary periods, and (2) determining crucial differences that distinguish two closely related species. This focus can provide the key to unraveling the complex regulatory networks for crucial biological functions.

Studies in comparative functional genomics are necessarily multidisciplinary. Comparative functional genomics synergizes basic science research programs such as those at NYU's Faculty of Arts and Science, with computational science, specifically bioinformatics, at its Courant Institute of Mathematical Sciences. Further, the scope of the enterprise is such to encourage collaboration not only within but also between research institutions. As an example, the concentration within NYU of strengths in evolutionary biology, neurobiology, developmental genetics, human genetics, applied mathematics research, imaging and computation is further extended through the University's research collaborations and affiliation agreements with major metropolitan area institutions. Productive affiliations that were recently articulated in response to New York State's major new initiative to develop the State's science and technology resources link NYU with The New York Botanical Garden and the American Museum of Natural History which house the world's largest collections of well-characterized specimens from the animal and plant kingdoms respectively, and Cold Spring Harbor Laboratory, one of the world's centers for molecular biology and genomics research.

New York University and other major research institutions are poised to make important contributions to the next phase of genomics research. NSF funding is critical to maintain and strengthen the vibrancy of university-based science research.

RESEARCH APPLICATIONS AND NATIONAL BENEFITS

Research in genomics can offer benefits to our citizens in a wide range of domains from new energy sources to crops that resist disease, insects and drought to better industrial processes to identification (or exoneration) of crime suspects. Genomics can be a major resource for directly energizing a range of commercial enterprises, and can provide a strong framework for economic development in vital, high-tech industries.

Advances in Biological, Computational, and other Research Fields.—The understanding of the human genome has very broad applications to cell biology, embryology, developmental biology, and population genetics. Genomics connects and illuminates science in all these fields. Further, functional genomics research has created a need for information processing structures that efficiently compare and analyze patterns in enormous data sets and allow ready representation and interpretation of their common elements and differences. As an example, computer scientists at NYU are working closely with molecular geneticists and business entrepreneurs to develop a library of genomics software tools. Some of these tools are already being considered by medical researchers for use in diagnosing tumors, which have a genetic structure different from healthy tissue.

Applications for Environmental Issues.—Genomics offers important new approaches to addressing environmental problems and conservation. As an example, knowing the genetic sequence of plants may allow us to identify clusters of genes and their function (to produce a flower from a shoot) and manipulate them (to cut flowering time); enhance seed viability without affecting the quality of a fruit; and increase the nutritional value of grains. As we continue to sequence new plants and isolate more genetic clusters, we can expect to discover how to develop crops that have increased resistance to temperature extremes and disease, and that can also grow in less hospitable soils. As we learn more about how genes are switched on and off by environmental factors, we may be able to predict how a crop will function in a particular climate before attempting to cultivate it. These discoveries and others can revolutionize agriculture within a decade.

Commercial Applications.—Fundamental studies in genomics are producing new data about the function of genes that will have widespread commercial applications for the development of novel human and veterinary therapeutics and diagnostics; "customized" patient care; the development of crops with improved growth capabilities or improved resistance to herbicides; and so on, in a list that can impact virtually every aspect of our health and well being.

Economic Development.—R&D investment in genomics is energizing biotechnology, pharmaceutical, biomedicine, agbiotech, computer software, and engineering enterprises, as genomics research begins to spawn a new generation of commercializable technologies, and new bioinformatics and software companies and genomics platform companies (that generate specific genomic data for product development).

More generally, investment in research can foster vital university-centered concentrations of industrial activity: In a now familiar dynamic, industry draws on the faculty's entrepreneurial energies, their expertise in training the personnel needed to staff high-technology firms, and the fundamental scientific research that can translate into practical applications. High-tech firms spring up near a research university and, in turn, attract or spin off additional high-tech firms in the same or related fields. The interaction of scientists across firms makes the spread of information quicker and the development of projects more rapid. Initial firms and newer firms share a growing pool of highly trained personnel. The expansion of the skilled labor pool makes hiring easier and attracts still more firms. And, once a core of high-tech industries locates in an area, venture capitalists identify the area as "promising" and the flow of capital—a key ingredient for high-technology growth—increases.

In a related economic spiral, R&D funding spurs job growth across a range of economic sectors. A conservative approximation that uses state employment multipliers maintained by the U.S. Commerce Department's Bureau of Economic Analysis points to immediate employment impacts: The BEA calculates that each $1 million in R&D grants supports roughly 34.5 full and part time jobs directly within the university and indirectly outside the university as the university's expenditures ripple through the local and state economy.

Biomedical Applications for National Health Needs.—An investment in genomics research will help us to understand complex, multi-gene diseases such as cancer, heart disease, and Alzheimer's; distinguish different forms of a disease, permitting precisely targeted treatment; and understand why drugs work and how to design better ones. Genomics has the potential to revolutionize the development of mass screening tests for genetic disorders, ultimately making it possible to identify the hereditary contribution to common diseases, predict individual responses to drug intervention, and design drugs that are customized for individual use.

In summary, investment in genomic science is a strategic and efficient vehicle for advancing fundamental studies in a wide variety of scientific fields, facilitating applications that can greatly enhance the public welfare, and energizing existing and new industries. Increasing the investment in state-of-the-art equipment and in research that enables geneticists, computer scientists and physical chemists to readily interact with each other is essential for the development of this important area. We firmly believe that a federal investment in these and other biomedical research fields repays itself many times over.

The commitment of this committee to support the National Science Foundation and its genomic initiative is greatly appreciated. We urge Congress to continue its commitment to increase the funding of the basic sciences and particularly to keep NSF on a doubling track.

PREPARED STATEMENT OF THE NATIONAL CORN GROWERS ASSOCIATION

The National Corn Growers Association (NCGA) appreciates the opportunity to provide the Subcommittee with our recommendations for fiscal year 2002 appropriations for the National Science Foundation's Plant Genome Initiative. The NCGA represents 30,000 corn growers in 48 states and the association's mission is to create and increase opportunities for corn growers in a changing world and to enhance corn utilization and profitability.

We, strongly, urge you to provide $90 million in fiscal year 2002 for the NSF Plant Genome Research Program, an increase of $25 million above the fiscal year 2001 level with the increase focused, primarily, on providing sequences and draft sequences of gene-rich regions (including full-length cDNA sequencing) of plants that are economically significant to the U.S. Obtaining a publicly accessible draft sequence of the gene-rich regions and the full-length cDNA sequence of the corn genome is our number one research priority.

We recognize that $25 million represents a significant increase for this program. However, this level will give the NSF the funds necessary to begin to support projects that will provide draft sequences of the gene-rich regions of large, complex plants, such as corn. The recent work to provide draft sequences of the human genome has paved the way for us to do comparable work in plants. Finally, it is feasible and cost effective to survey sequence the gene-rich regions of large and complex plant genomes, such as corn. In March, the Maize Genetics Community listed obtaining a draft sequence of the maize genome as its number one research priority. Last fall, the Interagency Working Group on Plant Genomes recommended that $100 million be invested in sequencing the gene-rich regions of economically important crops, such as corn, wheat, and barley. The $25 million increase for the NSF plant genome program will begin that investment.

As you know, increasing funding for plant genomics has been the number one appropriations priority for the NCGA since 1996. We remain convinced that the future of the corn industry is written in corn's genetic code and that plant genomics will give us the fundamental information necessary to revolutionize American agriculture. Plant genomic research offers us the greatest potential to increase the value and demand for U.S. crops, thereby increasing grower income and reducing grower reliance on Federal farm programs. Advances in basic plant science that result from a vigorous plant genomics program will allow us to create new hybrids and varieties that will—

—Improve human and animal health;
—Reduce medical costs due to more nutritious, healthier, food for individuals;
—Reduce worldwide malnutrition through higher yielding and more nutritious crops;
—Reduce environmental problems for crop and livestock growers;
—Expand plant-based renewable resources for raw materials, industrial feedstocks, chemicals, and energy; and
—Enable growers to get more income from the market, thereby reducing grower reliance on Federal farm programs.

The NSF plant genome program has revolutionized plant research and has rejuvenated the plant research community. Already, the NSF program has been a spectacular success during its short life. To date, 54 plant genome research projects have been supported by the NSF program, in addition to the Arabidopsis sequencing effort. The genome-sequencing project for *Arabidopsis thaliana* (a model plant species) was completed this past year, four years ahead of schedule. The biological tools and resources to study complex plant genomes, such as expressed sequence tags, and new plant-specific genome research technologies are being developed. Since the start of the program, there has been a 400 percent increase in the number of expressed sequence tags for plant species deposited into the public database. The NSF program is supporting whole genome research into plant processes that include plant productivity, pathogen resistance, and mineral nutrition. All of the tools and genetic resources developed under the NSF program are publicly accessible.

Ensuring that basic, fundamental knowledge of economically important plants is accessible to everyone is one of the critical components of the NSF program. The projects have created massive plant genomics databases, tools, and resources that are available to the scientific community at large. Now, we must bring into the public domain draft sequences of the gene-rich regions of economically important plants to make certain that this fundamental knowledge remains widely and freely accessible.

Recently, Monsanto provided a draft sequence of rice to the NSF supported International rice sequencing effort. The existence of the public sequencing effort encouraged Monsanto to provide its draft sequence to the publicly funded, research community. It is essential for us to act now to ensure public accessibility to draft sequences of other plants that are economically important to the U.S. An increase of $25 million for the NSF plant genome research program will help to ensure that public and private scientists and plant breeders have access to draft sequences of economically significant plants, such as corn, and to other basic, fundamental knowledge.

For fiscal year 2002, we, strongly, urge you to provide $90 million for the NSF plant genome research program with the increase focused, primarily, on providing sequences and draft sequences of gene rich regions (including full-length cDNA sequencing) of plants that are economically significant to the U.S.

Thank you for the opportunity to present our views.

PREPARED STATEMENT OF THE NATIONAL COUNCIL FOR SCIENCE AND THE ENVIRONMENT

SUMMARY

The National Council for Science and the Environment strongly supports the bipartisan effort to double the budget of the National Science Foundation (NSF) by fiscal year 2006. To that end, we encourage the Committee to provide at least $5.1 billion, an increase of 15 percent.

We emphasize the need for increased funding for the "biocomplexity in the environment" initiative and encourage the Committee to strongly support full and effective implementation of the National Science Board report, "Environmental Science and Engineering for the 21st Century: The Role of the National Science Foundation," approved on February 2, 2000. This report calls for significant improvements in the way that NSF supports environmental research, assessment and education, and proposes that the Foundation invest an additional $1 billion in these areas, to be phased in over 5 years. NSF has begun to implement this report and deserves Congressional support.

We also encourage the committee to at least double funding for the Environmental Protection Agency's Science to Achieve Results graduate fellowship program to total of more than $20 million.

Attached is a letter signed by more than 120 university and college presidents, business, scientific and environmental leaders calling for significantly increased funding for scientific programs about the environment in NSF, the Environmental Protection Agency, NASA and other agencies.

We appreciate the Committee's ongoing interest in science for environmental decisions.

TESTIMONY

The National Council for Science and the Environment (NCSE) thanks the Committee for the opportunity to provide testimony on the National Science Foundation (NSF) and its proposed budget for fiscal year 2002. NCSE is a nonprofit, nonpartisan organization dedicated to improving the scientific basis of environmental decisionmaking. We do not take positions on environmental issues, only the need for science and better connections between science and decisionmaking.

Our work is endorsed by nearly 500 organizations ranging, from the U.S. Chamber of Commerce to the Sierra Club, including the National Association of Attorneys General, National Association of Counties and other governmental associations, some 300 colleges and universities, and more than 80 scientific and professional societies.

We greatly appreciate this subcommittee's support over the last five years for our efforts to encourage the NSF to expand its scientific activities that can help to improve environmental decisionmaking. The appropriation provided for fiscal year 2001 and NSF's implementation of a new report from the National Science Board provide the first real opportunity for the significant realization of this goal.

OVERALL BUDGET REQUEST

The science, engineering, education and related activities supported by NSF are essential to the future well-being and prosperity of the nation and deserve the highest priority by Congress. The long-term prosperity of the nation and the maintenance of our quality of life depend on a steady and growing commitment of this Committee to providing support for science.

The National Council for Science and the Environment strongly encourages the Committee to provide at least $5.1 billion (an increase of $683 million or 15.3 percent) for the National Science Foundation in fiscal year 2002. This funding would be consistent with the bipartisan goal to increase the total funding level of the NSF to $10 billion by fiscal year 2006. This position is shared by the Coalition for National Science Funding, of which NCSE is a member.

BIOCOMPLEXITY IN THE ENVIRONMENT

NCSE is particularly supportive of NSF's biocomplexity and the environment initiative. This initiative provides a focal point for investigators from different disciplines to work together to understand complex environmental systems, including the roles of humans in shaping these systems. The resolution of many important environmental and societal problems is lagging, in part, because of insufficient scientific understanding. In most cases, because the problems are cross-disciplinary, an expansion of the biocomplexity approach at NSF could lead to significant progress in understanding. Despite the record budget increase for NSF last year, an important opportunity was missed when Congress provided only $75 million of the $136 million requested for this initiative. This innovative interdisciplinary initiative demonstrates the future of environmental research. There is strong justification for Congress to provide at least the $136 million that was requested in fiscal year 2001.

The time is indeed overdue for NSF to take a lead at providing a comprehensive scientific understanding of the environment. NSF is already the leading federal sponsor of peer-reviewed research regarding the environment, with a portfolio exceeding $700 million. Most of this investment is directed at scientific advances within particular disciplines. An interdisciplinary approach is needed to build on this base to truly understand the environment and the relationships between people and the environment. The biocomplexity and the environment initiative is the first step towards a comprehensive understanding.

The biocomplexity approach has been developed by some of the finest minds in the nation. There is no question that the scientific community is ready to take advantage of this opportunity. In fiscal year 2001 NSF received more than 300 full research proposals under this initiative. Topics that were funded included: how game fish populations are affected by human activities such as lakeshore development which causes shoreline erosion, the importance of parasites and viruses in causing extinctions of Hawaiian birds, and the biological, physical and human impacts of an non-indigenous plant on West coast salt marshes. Unfortunately, because NSF was only able to provide $52.5 million for biocomplexity in fiscal year 2000, only 16 proposals were funded, a success rate of only 5 percent. In fiscal year 2001 NSF will not have significantly more money for this competition. The lack of funding for such a promising area of scientific investigation is extremely unfortunate. Many innovative scientists and engineers will be discouraged from taking new approaches, if the growth of funding does not match the interest of researchers.

In fiscal year 2000, NSF also provided 57 awards of up to $100,000 over two years for "incubation activities" in the area of biocomplexity. As a result of this relatively small investment, many research groups are forming to develop an interdisciplinary approach to environmental science and engineering. Many of these awards went to smaller institutions that do not yet have the capacity to compete with the major universities which received the full awards. Again, if funding is not increased, these incubation activities will be for nought.

In fiscal year 2001, NSF is soliciting proposals in four topical areas: (1) Dynamics of Coupled Natural and Human Systems (CNH); (2) Coupled Biogeochemical Cycles (CBC); (3) Genome-Enabled Environmental Science and Engineering (GEN–EN); (4) Instrumentation Development for Environmental Activities (IDEA).

Each of these is a promising area of interdisciplinary science that, with sufficient investment, is likely to lead to significant advances in understanding the functioning of the environment and the way that humans interact with the environment.

We also encourage the Committee to provide start up funding for the National Ecological Observatory Network (NEON), which was proposed by NSF, but not funded in fiscal year 2001. NEON would integrate cutting edge computing power with a distributed network of environmental observation sites. The effect would be to create a nationwide virtual laboratory for research to obtain a predictive understanding of the environment. Each observation site would be a partnership of universities, government laboratories and private research facilities that would share equipment and be linked through a high speed telecommunication and networking infrastructure. Each site then would be linked electronically to create a geographically dispersed national network of observatories. Although this idea has yet to receive funding, it has already generated interest from other nations, raising the possibility of an eventual global environmental observatory network. The collaborations that would be facilitated by the network will greatly benefit the ability of science to observe environmental change, predict future change and support collaborative research to better understand the causes and consequences of environmental change.

New approaches and technologies are really fostering a quantum leap in the power of science and engineering to understand the environment. NSF's proposed investments in biocomplexity science and the collaborative tool of the National Ecological Observatory Network allow it to advance the cutting edge. However, if funding does not keep up with the intellectual and technological advances, not only will science suffer, but our nation that depends on scientific understanding for economic prosperity and environmental quality will suffer as well.

NATIONAL SCIENCE BOARD REPORT ON ENVIRONMENTAL SCIENCE AND ENGINEERING

The National Council for Science and the Environment is the primary proponent of the effort to expand, improve and enhance the relevancy of the scientific efforts of the National Science Foundation regarding the environment. We believe that NSF as an independent, non-regulatory science funding agency can be the ideal source for credible scientific information about the environment.

Our efforts have had considerable support from this committee. This Committee's report accompany the fiscal year 1998 Appropriations Bill directed NSF to study how it would establish and operate a National Institute for the Environment that, "provides a major role for stakeholders in defining questions needing scientific attention and which funds ongoing knowledge assessments, extramural research, online information dissemination, and education and training through a competitive peer reviewed process" (amendment offered by Representative Frelinghuysen and adopted by the Committee).

Ultimately, the National Science Board (NSB) responded by unanimously approving a report, "Environmental Science and Engineering for the 21st Century: The Role of the National Science Foundation," on February 2, 2000. The NSB report sets out a bold, ambitious set of recommendations that could transform NSF's role in support of science to improve environmental decisionmaking. The recommendations, if implemented effectively, have the potential to accomplish most of the objectives that NCSE and its supporters have worked for over the past decade and which are represented in the Committee's fiscal year 1998 report.

The NSB recommends that "environmental research, education and scientific assessment should be one of the highest priorities for NSF" with a significant increase of funding from the present $600 million to $1.6 billion annually, over 5 years. It further recommends the development of "an effective organizational approach that meets all the criteria required to ensure a well-integrated, high priority, high visibility, cohesive and sustained environmental portfolio within NSF". The NSB makes 10 recommendations in the areas of research, education, scientific assessments, infrastructure, information, and partnerships.

The NSB recommendations are consistent with the direction advocated by the Appropriations Committee and represent an expanded role and portfolio for NSF in environmental research, education, scientific assessments and information distribution. The recommendations of this report will need the support of Congress to become reality.

NSF has begun to implement the recommendations of the NSB. They have appointed an environmental coordinator and created a new position in the office of the Director. They have formed an Advisory Committee on Environmental Research and Education.

We respectfully request that this committee ensure that the recommendations become reality by providing the necessary funding as well encouragement for NSF's implementation activities.

EPA'S SCIENCE TO ACHIEVE RESULTS GRADUATE FELLOWSHIP PROGRAM

Finally, we also wish to comment favorably on the Science to Achieve Results graduate fellowship program of the Environmental Protection Agency. This is the only federally-supported fellowship program specifically aimed at graduate students in the environmental sciences and policy areas. Like the environmental programs at NSF, the STAR fellowship program suffers from a serious mismatch between resources and highly qualified applicants. Investment in environmental scientists, engineers, policymakers and professionals is essential for the nation to reap the benefits of scientific advances.

The STAR fellowship program began in 1995 and has funded approximately 100 students a year since then. The funding for this program has been capped by the appropriations committee at $10 million annually. The STAR awards are highly competitive; over the past three years 1400 to 1500 students have applied annually, and only 7 percent of applicants have been funded.

NCSE Senior Scientist David Blockstein participated in a review panel for fellowship applicants last February. He was extremely impressed with the quality of student applicants, but was very depressed that the lack of funding prevented many students who were rated as "excellent" by the review panel from getting funded. A majority of Dr. Blockstein's panel sent a letter to the EPA encouraging that the funding for the panel be doubled in the shortest possible time.

The National Council for Science and the Environment encourages the Committee to double the present appropriation for the STAR fellowship program to $20 million. Of the billions of dollars within the Committee's domain, this minor investment in our future scientists and engineers may have some of the largest payoff in terms of the nation's future.

If the nation is to be serious about taking a scientific approach to understanding, resolving, and preventing environmental problems, there must be a serious increase in funding for environmental science, engineering and education. The role of this subcommittee is pivotal in beginning that process. Thank you very much for your support of science to improve environmental decisionmaking.

Attached: Copy of letter calling for significant funding increases for environmental science, engineering, and education programs signed by more than 120 national leaders of academic, scientific, environmental, and business organizations.

LETTER FROM THE NATIONAL COUNCIL FOR SCIENCE AND THE ENVIRONMENT

DC, MARCH 8, 2001.

President GEORGE W. BUSH,
The White House,
Washington, DC.

DEAR PRESIDENT BUSH: During your recent election campaign, you talked about the importance of basing environmental decisions on science. We, as a diverse coalition of academic, business, environmental, governmental and community leaders, working with the National Council for Science and the Environment agree with you in this regard.

We are writing to urge you to implement your campaign commitment by making investment in science for environmental decisionmaking a priority in your administration. In particular, we are asking you to provide significantly increased funding for scientific programs to:

—Assess what is known about the environment
—Better understand the environment
—Provide scientific information about the environment
—Support science-based education about the environment.

These programs include:

—National Science Foundation's biocomplexity in the environment initiative and portfolio of environmental science, engineering and education programs
—U.S. Geological Survey's biological, geological, hydrological, and mapping divisions
—U.S. Environmental Protection Agency's Office of Research and Development, especially the Science To Achieve Results (STAR) research and fellowship programs
—National Oceanographic and Atmospheric Administration

—U.S. Department of Agriculture's environmental research programs through CSREES and the Agricultural Research Service, particularly the Natural Resource Initiative
—U.S. Forest Service forestry research
—Department of Energy's environmental science programs
—National Aeronautics and Space Administration earth exploration programs
—National Institute of Environmental Health Sciences

We hope that your initial budget will support science as an investment that will lead to a stronger economy, healthy people, and a healthy environment.

Sincerely,

PETER D SAUNDRY,
Executive Director.

DICK BARTLETT,
Vice Chairman, Mary Kay Holding Corp.

ROGER MCMANUS,
President Emeritus, Center for Marine Conservation.

JOAN VERPLANCK,
President, NJ Chamber of Commerce.

GEORGE COLVIN,
Certified Professional Geologist, Cox-Colvin & Associates.

CRAIG COX,
Certified Professional Geologist, Cox-Colvin & Associates.

MARTIN SCHMIDT,
Certified Professional Geologist, Cox-Colvin & Associates.

MICHAEL S. GIAIMO,
V.P. Energy and Environmental Affairs, Business and Industry Association of New Hampshire.

RICHARD A. ANTHES,
President, University Corporation for Atmospheric Research.

JOHN T. GIBSON,
President, Alabama A&M University.

MARY LYNNE BIRD,
Executive Director, The American Geographical Society.

RICHARD J. COOK,
President, Allegheny College.

LATTIE COOR,
President, Arizona State University.

JEANNE O'LAUGHLIN,
President, Barry University.

DAVID H. SWINTON,
President and CEO, Benedict College.

GLORIA R. SCOTT,
President, Bennett College.

LARRY SHINN,
President, Berea College.

OSWALD P. BRONSON,
President, Bethune-Cookman College.

JON WESTLING,
President, Boston University.

JEHUDA REINHARZ,
President, Brandeis University.

GWEN FOUNTAIN,
Interim President, Butler University.

JAMES ROSSER,
President, California State University, L.A.

JOHN D. WELTY,
President, California State University-Fresno.

MATHEW GOLDSTEIN,
Chancellor, City University of New York.

CLAIRE A. VAN UMMERSON,
President, Cleveland State University.

STEVEN K. KATONA,
President, College of the Atlantic.
WILLIAM CIBES,
Chancellor, Connecticut State University System.
JOSEPH R. FINK,
President, Dominican University of California.
DAVID R. BLACK,
President, Eastern College.
WILLIAM M. CHACE,
President, Emory University.
ANTHONY J. CATANESE,
President, Florida Atlantic University.
CARL V. PATTON,
President, Georgia State University.
EUGENE M. TOBIN,
President, Hamilton College.
THOMAS R. TRITTON,
President, Haverford College.
MYLES BRAND,
President, Indiana University.
LAURENCE I. PETERSON,
Dean, Kennesaw State University.
WESLEY C. MCCLURE,
President, Lane College.
MICHAEL MOONEY,
President, Lewis and Clark College.
DAVID B. HENSON,
President, Lincoln University.
CONSTANCE WOO,
Dean of Library, Long Island University.
MICHAEL S. MCPHERSON,
President, Macalester College.
GEOFFREY GAMBLE,
President, Montana State University.
EARL S. RICHARDSON,
President, Morgan State University.
DANIEL H. LOPEZ,
President, New Mexico Institute of Mining and Technology.
CLARA LOVETT,
President, Northern Arizona University.
DELBERT BAKER,
President, Oakwood College.
ROBERT GLIDDEN,
President, Ohio University.
DANIEL E. GARVEY,
President, Prescott College.
DANIEL O. BERNSTINE,
President, Portland State University.
ALICE CHANDLER,
Interim President, Ramapo College of New Jersey.
WILLIAM NEVIOUS,
President, Reinhardt College.
MALCOLM GILLIS,
President, Rice University.
PAUL B. RANSLOW,
President, Ripon College.
RICHARD YANIKOSKI,
President, Saint Xavier University.
PAUL LOCATELLI, S.J.,
President, Santa Clara University.

JAMES E. WALKER,
President, Southern Illinois University.
JOHN H. KEISER,
President, Southwest Missouri State University.
AUDREY F. MANLEY,
President, Spelman College.
PAUL YU,
President, State University of New York-Brockport.
ROGER W. BOWEN,
President, State University of New York-New Paltz.
HORACE A JUDSON,
President, State University of New York-Plattsburg.
BEHERUZ N. SETHNA,
President, State University of West Georgia.
PETER LIKINS,
President, University of Arizona.
M.R.C. GREENWOOD,
Chancellor, University of California-Santa Cruz.
LINDA BUNNELL SHADE,
Chancellor, University of Colorado-Colorado Springs.
GEORGIA LESH-LAURIE,
Chancellor, University of Colorado-Denver.
FREEMAN HRABOWSKI,
President, University of Maryland-Baltimore County.
DONALD N. LANGENBERG,
Chancellor, University of Maryland System.
BLANCH TOUHILL,
Chancellor, University of Missouri-St. Louis.
WILLIAM MCCOY,
Interim Chancellor, University of North Carolina-Chapel Hill.
JAMES WOODARD,
Chancellor, University of North Carolina-Charlotte.
PATRICIA A SULLIVAN,
Chancellor, University of North Carolina-Greensboro.
CHARLES KUPCHELLA,
President, University of North Dakota.
JESS K. ZIMMERMAN,
Director, University of Puerto Rico.
TERRY A. COONEY,
Acting President, University of Puget Sound.
ROBERT L. CAROTHERS,
President, University of Rhode Island.
WILLIAM E. COOPER,
President, University of Richmond.
STEVE PRIVETT,
President, University of San Francisco.
JOHN M. PALMS,
President, University of South Carolina-Columbia.
JOHN T. CASTEEN III,
President, University of Virginia.
JOHN D. WILEY,
Chancellor, University of Wisconsin-Madison.
THOMAS F. GEORGE,
Chancellor, University of Wisconsin-Stevens Point.
JULIUS E. ERLENBACH,
Chancellor, University of Wisconsin-Superior.
PHILIP L. DUBOIS,
President, University of Wyoming.
FRANCES D. FERGUSSON,
President, Vassar College.

EUGENE P. TRANI,
President, Virginia Commonwealth University.
CHARLES W. STEGER,
President, Virginia Polytechnic Institute and State University.
BERNARD FRANKLIN,
President, Virginia Union University.
KAREN W. MORSE,
President, Western Washington University.
MARK F. DEERING,
President-Ohio Section, American Institute of Professional Geologists.
DANIEL A. LASHOF,
Senior Scientist, Natural Resources Defense Council.
JAMES LAZELL,
President, The Conservancy Agency.
T. NEJAT VEZIROGLU,
President, International Association for Hydrogen Energy.
M. LEE PELTON,
President, Willamette University.
PERRY MOORE,
Provost, Wright State University.
RITA MCMANAMON,
Director, Conservation Action Resource Center.
WILLIAM C. BAKER,
President, Chesapeake Bay Foundation.
EUGENE V. COAN,
Sr. Advisor to the Executive Director, The Sierra Club.
GERLAD M. MERAL,
Executive Director, Planning and Conservation League.
JOHN G. ROBINSON,
Senior Vice President, Wildlife Conservation Society.
DONALD BRUNNING,
Chairman and Curator, Wildlife Conservation Society.
G. THOMAS BANCROFT,
Vice President, The Wilderness Society.
GREGORY H APLET,
Forest Ecologist, The Wilderness Society.
ROBERT ENGELMAN,
Vice President for Research, Population Action International.
MARK SHAFFER,
Senior Vice President, Defenders of Wildlife.
ALBERT C. YATES,
President, Colorado State University.
LAWRENCE K. PETTIT,
President, Indiana University of Pennsylvania.
JOANNE V. CREIGHTON,
President, Mount Holyoke College.
KENNETH P. MORTIMER,
President, University of Hawaii.
HENRY T. YANG,
Chancellor, University of California Santa Barbara.
ELLIOT NORSE,
President, Marine Conservation Biology Institute.
DAVID F. BRAKKE,
Dean College of Science & Mathematics, James Madison University.
HENRY N. TISDALE,
President, Claflin University.
ANIBAL COLON ROSADO,
President, Universidad Central de Bayamon.
WALTER M. BORTZ III,
President, Hampden-Sydney College.

TOM GERETY,
President, Amherst College.
MARTIN J. MUGGLETON,
President, Greater Corning Area Chamber of Commerce.
KAREN HITCHCOCK,
President, State University of New York-Albany.
BRIAN C. MITCHELL,
President, Washington & Jefferson College.
NANNERL O. KEOHANE,
President, Duke University.
ROBERT W. LAWLESS,
President, University of Tulsa.
GEORGE RUPP,
President, Columbia University.
SHIRLEY KENNY,
President, State University of New York-Stony Brook.
JUDITH S. WEIS,
President, American Institute of Biological Sciences.

PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR ENGINEERING EDUCATION

On behalf of the American Society for Engineering Education (ASEE) Engineering Deans Council, I would like to express appreciation for the opportunity to offer testimony on fiscal year 2002 appropriations for the National Science Foundation. This subject holds great importance for engineering educators as well as the country as a whole, given the NSF's vital role in advancing basic science and engineering research.

ASEE strongly urges the Administration and Congress to provide no less than $5.1 billion, a 15 percent increase, for the NSF in fiscal year 2002. We believe this increase to be a necessary step toward doubling the NSF's budget by 2006.

The NSF occupies a unique position at the critical juncture of economic strength, learning and discovery, and national well being. Pioneering basic research in engineering and the sciences funded by the NSF stimulates technological innovation, enables advances in medical care, and stretches the limits of human knowledge. In the current climate of heightened global economic competition and rapidly evolving fields of scientific inquiry, strong and steady support of the NSF serves a vital national interest.

In February of this year, ASEE urged Congress to consider an appropriation of $5.1 billion for the NSF in the fiscal year 2002 budget in order to bring balance to the federal research portfolio, maintain the global leadership of the U.S. in basic science and research, and educate a new generation of scientists and engineers. For these reasons, ASEE enthusiastically encourages the Senate to answer the call of Senators Christopher Bond and Barbara Mikulski to double the NSF budget over the next five years.

As innovation comes increasingly to determine market leadership, the NSF brings particular expertise to the task of identifying and nurturing the basic science and engineering research that underlies the dominant position of the U.S. in the global economy. A growing chorus touts the importance of this kind of federal engagement with science and technology, including Federal Reserve Chairman Alan Greenspan, the Council on Competitiveness, and Business Week, to name just a few. As David Baltimore, President of the California Institute of Technology, recently said of basic science and engineering research: "It is the seed corn of commercial innovation, but it is not carried out by industry because its value is too general. Instead it is a key function of government."

At the leading edge of learning and discovery, the NSF funds path-breaking research in core disciplines of science, engineering, mathematics, and computing. The performance of this research serves a host of broader needs. As the source of more than one-third of all federal support for basic engineering research, the NSF makes possible work that has led to such important technologies as computer-aided design, fiber optics, biotechnology, advanced composite materials, and magnetic resonance imaging. These discoveries render a vast range of benefits: increased efficiencies in manufacturing processes, more robust communications networks, less invasive and more accurate medical instruments, and more fuel-efficient cars and trucks.

NSF-sponsored research also underlies many advances in medical care. Harold Varmus, former Director of the National Institutes of Health and currently President of the Memorial Sloan-Kettering Cancer Center, has noted: "The NSF has a splendid history of sustaining fundamental research across a broad spectrum of disciplines, and this approach is especially important now as laboratory work becomes increasingly important." The field of bioengineering provides one venue for engineers to make contributions to such interdisciplinary work, applying engineering principles and methods to medicine, biology, agriculture and the environment. Such research has led to innovations in medical care and instrumentation, including ultrasound, prosthetics and synthetic transplants, pacemakers, and ocular implants.

NSF funding for the research underlying such advances also serves to educate the next generation of engineers and scientists. Doubling the NSF budget would enhance the development of more of these young researchers, whose skills and energy comprise the future of our nation's science and technology enterprise. As former Presidential Science Adviser Neal Lane recently observed: "Chief executive officers of American industry say that the biggest threat to U.S. competitiveness in the next century is a shortage of technologically skilled workers. Those future scientists and engineers must come out of the nation's universities and colleges. The surest way to leave the United States vulnerable to this threat is to cut funding for the NSF."

NSF support yields outsized results, as it is highly leveraged and attracts complementary funds from both public and private sources. For example, external support for cost-shared Engineering Research Centers registers two-and-a-half times the size of the initial NSF investment. The students who graduate with engineering degrees of all levels bring highly prized skills into all sectors of the American workforce. The most advanced carry on the research that pays off in many surprising ways. Other engineering graduates produce and manage many of the technological innovations said to account for one-third to one-half of the recent growth in the American economy. Still others bring advanced analytical abilities and knowledge of high technology to fields as diverse as health care, financial services, law, and government. Attached is further documentation of the many ways NSF support is promoting engineering education and research at U.S. colleges and universities (Att. A). This wealth of human capital owes much of its capacity to strategic NSF support for engineering education. Attachment B describes a range of outreach strategies engineering programs are pursuing to extend their science and math education expertise to K–12 schools in ways that complement these NSF efforts.

A succession of predictable, sizable increases to the NSF budget will permit even greater development of these human resources. A core agency focus for fiscal year 2002, the Math and Science Partnership Initiative, seeks to involve all the stakeholders in the development of human capital—from academe, industry, and government—in an effort to prepare Americans for a future that will increasingly require basic understanding of the technical material they will face at work, home, and in their civic responsibilities. NSF programs have also become important resources for broadening the participation of under-represented groups such as minorities and women in the fields of science, math, and engineering and, through programs like the Experimental Program to Stimulate Competitive Research (EPSCoR), for strengthening the research and development infrastructure of many rural and small states. A plan to double the NSF budget will permit the allocation and coordination of the activities needed to promote the broadest possible development of science, mathematics, and technology skills among all Americans. Attachment B conveys the broad strength of support for this position, expressed through the Coalition for National Science Funding (CNSF), which ASEE and the ASEE Engineering Deans Council have enthusiastically endorsed.

Doubling the NSF budget will enhance the value of the agency's other cross-cutting initiatives. New funding for multidisciplinary mathematics research will enhance the transfer of results and applications from mathematics and statistics research to science and engineering disciplines, expanding the cadre of researchers trained in both mathematics and science. Dynamic interdisciplinary work across engineering and science disciplines promise startling advances in, for example, medicine, manufacturing, and communications. The assurance of steady resources over extended periods of time for high-risk, high-reward endeavors—such as research in nanotechnology, biocomplexity, and high-speed computing—would greatly enhance their prospects for success. As Varmus says, "it is crucial that leaders of science agencies be able to anticipate several years of steady growth during periods of expansion. These agencies make multi-year awards and are responsible for training and research infrastructure, as well as the operational costs of doing research." In an increasingly interdependent research system, the NSF is uniquely situated to foster productive exchanges across the full range of scientific and engineering disciplines.

The Engineering Deans Council of the American Society for Engineering Education (ASEE) is the leadership organization of the more than 300 deans of engineering in the United States. Founded in 1893, ASEE is a nonprofit association of 12,000 members dedicated to the improvement of engineering and engineering technology education.

ATTACHMENT A.—NSF-FUNDED ADVANCES IN ENGINEERING RESEARCH AND EDUCATION UNDER WAY AT U.S. ENGINEERING PROGRAMS

Student Teachers.—Question. What do you get when you put a teacher, a kindergartener, and an engineering graduate student together in the same room? Answer. The NSF's GK–12 Fellows Outreach Program at the University of Colorado-Boulder's College of Engineering and Applied Science. The GK–12 program infuses pre-engineering education into public school classrooms from the K–12 grade levels. The result is a better education for school children, who are introduced to engineering and science concepts in a hands-on manner that promotes more effective learning.

Risky Business.—The U.S. electric utility industry is undergoing major functional and structural changes. Traditionally, prices of electric energy and related services have been determined through endorsement by regulatory authorities of rates proposed by utilities. As a result, this industry has been very much risk-averse and the utilities could pass on the risk to the end users because of their regulatory protections. But, little is known however about how financial risk management techniques apply to the electric power industry. Researchers from the Illinois Institute of Technology are planning to investigate the application of financial risk management techniques to technical innovation problems facing the electric utility industry today, hoping to craft a viable solution for the assignment of risk in a rapidly deregulating market.

Water Contaminant Removal.—Scientists at Penn State University are working to alleviate a common type of water contaminant called perchlorate which is extremely mobile and persistent in the surface and ground water of some areas in the U.S. Perchlorate has been detected in the water supplies of approximately twelve million people, and has proved difficult to remove through conventional water treatment technologies. Penn State researchers are investigating biological treatment of perchlorate where microbes reduce the contaminant to innocuous oxygen and chloride. The commercial effect of this would be to save large amounts of money, that has been currently ear-marked for water purification to be used for both future development and current residential and commercial usage.

Recycled Paper.—University of Florida researchers have developed a technique to remove ink from paper that is both cheaper and more effective than current methods, thereby increasing the viability of paper recycling enterprises. This new technique replaces traditional ink-removing surfactants with a blend of cheaper chemicals. The blend is not only more effective with a broader variety of paper stocks than the surfactants, it also nearly doubles the amount of recycled paper that can be used to produce new product for the same cost, researchers say.

Tired Tires.—In the wake of the recent mishaps plaguing the tire industry, researchers at Oakland University in Rochester, Michigan, have developed a technique to highlight areas of structural weakness of an object. This technique called shearography is finding use in some segments of the tire industry. The FAA has just approved the process for use in aircraft tires. Shearography, which uses a laser and a digital camera to compare views of the surface of an object under stress and normal conditions, serves to highlight areas of weakness and help prevent stress-related accidents. As well, the tire retread industry has adopted shearography, to determine which tire casings are suitable for reprocessing.

Manufacturing Education.—Lehigh University in conjunction with Focus: Hope and the Society for Manufacturing Engineers have created a new coalition named the Greenfield Coalition designed to teach engineering education to minority students from inner city Detroit. The Coalition has created and developed curricula and learning materials, delivered courses in Greenfield knowledge areas, taken the first steps in integrating experiential learning within the academic programs, and has graduated students from degree granting schools. A current focus is the application of new computer-based technologies to improve educational outcomes.

Jury Duty.—How can the views of ordinary citizens be used in making decisions about managing risks? Researchers in the Department of Engineering and Public Policy at Carnegie Mellon University have developed methods, which allow representative "jury-like" groups of lay people to become knowledgeable about scientific risks of government policies, and then rank them in order of concern. Repeated experiments have demonstrated that the method produces robust results, and that the people participating find it highly satisfactory. Such methods should help government and industry to make better, more democratic risk-management decisions.

A Family Affair.—At the Mother-Daughter Saturday Engineering Academy, sponsored and created by California State University-Los Angeles, technology runs in the family. Here mothers and daughters can work together alongside female engineers to explore engineering careers, visit high-tech companies, and take part in lectures and contests. Hands-on experiments include building a mini-bridge tower, subjecting a raw egg to a two-story bungee jump and racing a mini solar car. The program's four main goals are:

(1) To encourage high schools female students to consider engineering as a viable option for their future careers, thereby dispelling the myth that engineering is physically difficult and "non-feminine,"

(2) To provide bonding between teenage girls and their mothers. During six 4–5 hour sessions, girls and their mothers work as a team: they listen to lectures, work on computers and hands-on projects, and compete in contests.

(3) To raise the level of scientific knowledge and foster appreciation for engineering professions among the general female population.

(4) And to create a network of supporters and collaboration between different constituencies interested in women's education. Classes are small (20 teams per course), so attendees receive individual attention and have many opportunities to ask questions.

ATTACHMENT B.—BUILDING TOMORROW'S WORKFORCE

Engineering schools are forging new relationships with K–12 teachers to make science and math more exciting to kids. By Alvin P. Sanoff

Several times a week, University of Washington engineering students Lisa Behmer and Jessica Yellin enter Marcus Whitman Middle School in Seattle and head for the classroom of math teacher Joseph Hardy. There Behmer, a senior majoring in materials engineering, and Yellin, a doctoral candidate in mechanical engineering, join Hardy in teaching math to eighth graders. Rather than using a traditional approach of lectures and drills, the trio uses an inquiry-based teaching method designed to engage students in the learning process. Recently, they asked students to design bicycles for a fictitious race across the state of Washington. As part of that project, Behmer and Yellin brought three bicycles into the classroom, each with a different gear ratio, and asked the students to figure out which would work best given the terrain that the bike riders would have to traverse. "We set up the class as if it were a consulting engineering firm designing bicycles for the race," says Yellin. Behmer and Yellin are among some 15 University of Washington graduate students and undergraduates who, with National Science Foundation support, are working with teachers in middle schools in the Seattle area to make math and science more exciting for students. Denice Denton, dean of the College of Engineering at the University of Washington, says that the program "puts role models in front of kids who can get them excited about careers in math, science, and engineering and, at the same time, helps teachers get a better handle on what mathematicians, scientists, and engineers do so that they can better advise kids on these careers."

The project is one of many in which engineering schools are engaged in an effort to address a growing national problem: the weak performance of American students in math and science in comparison to their peers in other industrialized nations. Recently released results from the Third International Mathematics and Science Study-Repeat showed that American eight graders were outperformed in math and science by students in more than a dozen nations, including Singapore, Taiwan, South Korea, Japan, Hong Kong, Belgium, and the Netherlands. France and Germany did not participate in the test. The results are particularly disappointing because in recent years one blue ribbon commission after another has issued warnings about the perilous state of science and math education in the nation's schools, yet little has changed as a result. Dean Karl Reid of the College of Engineering, Architecture, and Technology at Oklahoma State University says that while the warnings have produced a number of programs that he describes as "islands of excellence," a coordinated national effort has been lacking. Says Reid: "We have to recognize there is a crisis and then attack the crisis in a much broader, well-planned way."

Last fall, in a report entitled "Before It's Too Late," the National Commission on Mathematics and Science Teaching for the 21st Century, chaired by former Senator John Glenn, warned that time is running out for action and laid out an ambitious agenda to improve the performance of American students. At the center of the agenda: an intensive program with a price tag of $5 billion to upgrade the quality, skills, and knowledge of math and science teachers.

Citing studies that show a linkage between student achievement in a subject and whether their teachers are certified and have majored in that subject, the commission argued that "the most direct route to improving mathematics and science achievement for all students is better mathematics and science teaching." A member of the commission, Rep. Rush Holt of New Jersey, has introduced legislation to fund the commission's recommendations. Holt said the legislation would establish "grant programs for states to improve the recruitment and retention of math and science teachers" as well as " the quantity and quality of their professional development programs."

The legislation would also create academies throughout the nation to train 3,000 fellows in math and science teaching. The fellows would be recruited for a one-year intensive course in effective teaching methods in math and science and, in return, would agree to teach for five years in districts with math and science teaching shortages, of which there are many. According to the National Commission, more than one in four high school math teachers and nearly one in five high school science teachers "lack even a minor in their main field of teaching."

Shortly before the Glenn Commission issued its report last fall, a committee of the National Research Council also focused on the need to upgrade math and science teaching. Its recommendations included a call for the nation's colleges and universities to work with local school districts to "establish a comprehensive, integrated system of recruiting and advising people who are interested in teaching science, mathematics, and technology."

Leaders in engineering education have long realized that they have a major stake in the quality of science and math teaching at the K–12 level. Students who are deficient or lack interest in math and science are unlikely to consider engineering as a career. Rep. Vernon Ehlers of Michigan, who along with Holt has led the charge on Capitol Hill for federal support to improve math and science teaching, says that "a preponderance of evidence indicates that our schools aren't preparing our students adequately for the knowledge-based, technologically rich America of today and tomorrow."

The test results from the international exam as well as the decisions made by today's college students about what to study bear Ehlers out. Despite the growing demand for trained engineers, enrollment in engineering schools has remained relatively flat for almost a decade, with the number of bachelor's degrees granted annually hovering between 62,000 and just over 63,000. The supply of engineers, say engineering educators, is simply not adequate to meet demand. In computer science alone, the Department of Labor estimates that postsecondary institutions will have to produce nearly four times as many graduates as they now do to meet demand. The lack of supply has led many employers to hire computer scientists from abroad under the H–1B visa program.

Despite a seemingly endless string of front-page stories about the growth of information technology and the availability of technology-related jobs, OSU's Reid says college students are more interested in pursuing the social sciences than in studying engineering. One reason for this, he says, is the lack of an adequate number of well-trained math and science teachers: "We simply do not place a value on teaching in science and math that is necessary to attract the caliber of people we need to stimulate young people to consider science and math-related careers. There ought to be differential pay scales to reward those who have the special abilities that are needed to teach science and math."

LENDING A HAND

As the lack of student interest in pursuing careers that require expertise in science and math has become more apparent, a number of engineering schools, like the University of Washington, have entered the fray, developing a wide variety of initiatives to help classroom teachers do a better job of engaging students. Some of the initiatives send engineering students into the classroom to work with teachers and students, while others bring teachers to university campuses where they hone their skills and upgrade their knowledge under the tutelage of engineering faculty.

One of the most ambitious ventures has been launched by Rensselaer Polytechnic Institute's Center for Initiatives in Pre-College Education. The center's main focus is on working with students and teachers in elementary and middle schools in the Troy, N.Y., area. Lester Rubenfeld, a math professor who directs the center, says that it has emphasized "trying to get teachers to change their pedagogical style to take a more interactive approach rather than to just be purveyors of information—and we are integrating computer technology into the process."

The center sends "technology mentors"—RPI undergraduates and graduate students in education from the nearby State University of New York at Albany campus, many of whom majored in math or a science as undergraduates—into 15 schools twice weekly. The mentors serve as resources for the teachers and, says Rubenfeld, “they become part of the educational environment in the building.” The mentors help the teachers integrate technology into their classrooms and serve as sounding boards. “We thought a lot about how to really gets kids interested in math and science,” says Rubenfeld, “and decided that you can’t go in at the high school level. You have to go back further in time and get kids interested when they are about to lose interest, somewhere between the 4th and 7th grades.”

Educators agree that the elementary and middle school years are crucial. If students get turned off to math and science when they are young, it is very difficult to turn them back on in high school. Yet it is in the earlier grades that teachers are least likely to be well-trained in math and science. Janie Fouke, dean of the College of Engineering at Michigan State University, recalls that shortly after graduating from college she took education courses so she could be licensed as a middle and high school science teacher. “I found that a lot of my classmates, especially those interested in elementary teaching, lacked a strong interest in science or math,” says Fouke.

Rick Cleary, associate dean for undergraduate programs at Cornell University’s College of Engineering, says that “a lot of elementary teachers didn’t have a good experience in science and math and that makes it hard for them to excite their students.” RPI is attempting to address this problem by obtaining funding for a program that would bring a number of elementary and middle school teachers to campus for a year and two summers. The teachers, who would be called Rensselaer Technology Fellows, would learn how to use technology in their teaching and then would return to their school districts to work with other teachers.

As for RPI’s existing “technology mentors” program, it is unusual in that it involves cooperation between two institutions of higher education, RPI and SUNY-Albany, and between faculty and students from different disciplines—the sciences and education. It is relatively rare for there to be close cooperation between science and education faculty members, in part because scientists often view their peers in education with a certain disdain. Stephen Director, dean of the College of Engineering at the University of Michigan, sees the lack of cooperation as unfortunate since each has distinctive strengths. “Engineering colleges understand the content, while education schools, in spite of all the criticism that is lodged against them, understand how students learn.”

NEW PARTNERSHIPS

Michigan is one of several universities at which a partnership has developed between education and engineering faculty members, with the goal of improving math and science education. At Michigan a member of the engineering faculty is collaborating with an education professor on an approach to teaching science in the middle schools that emphasizes having students actually do science. For example, says Director, rather than simply absorbing the basic facts about why earthquakes occur, the students are asked to “think about deep and interesting questions such as ‘Why do earthquakes stop?’ ”

At Ohio State University, collaboration between faculty in the sciences and in education has gone a step further. The College of Mathematics and Physical Sciences has hired a director of math and science education who is working with OSU’s College of Education to increase the number of ed-school students who will become math and science teachers. Ohio State’s College of Engineering, meanwhile, is sending teaching fellows—graduate students and upper level undergraduates—into several Columbus public schools to work with teachers in grades three to five.

Much like the participants in the University of Washington program, the fellows, who take a course in education and teaching methodology, spend six to 10 hours a week in the classroom working with teachers and their students. “Historically, it was the College of Education that was principally involved with grades K–12,” says engineering dean David Ashley. “But in the last few years the university has made a serious outreach and engagement initiative that includes the College of Engineering. If you had asked someone in engineering five years ago what we did in K–12, there would be nothing we could point to. But now K–12 is something that we are doing across the university.”

Similarly, at the University of Colorado at Boulder graduate students from the engineering college spend parts of two days a week in middle and high schools in the Boulder area introducing engineering concepts to students and teachers. “The schools are very receptive because we do not try to teach an engineering curriculum,” says engineering dean Ross Corotis. “We try to let them know that science and math principles can be used to create things that make society better.”

A different kind of partnership between engineering and education professors exists at Pennsylvania State University at University Park. There education and engineering professors co-teach a course for would-be math and science teachers called "Fundamentals of Science, Technology, and Engineering Design." David Wormley, dean of Penn State's College of Engineering, says that students in the course "gain a sense of the impact that engineering has on solving societal problems. It is an opportunity for us to impact secondary education."

Many colleges and universities have focused their efforts on special summer programs for teachers. The University of Virginia, the Georgia Institute of Technology, the University of Texas at Austin and the University of Colorado at Boulder are among a number of institutions that bring teachers to campus for training in engineering, math and science.

At Georgia Tech, about a dozen teachers from high schools around the state participate in a summer long program that involves working with a faculty member on a research project. "The teachers very often become co-authors of a paper and they go back to school with lots of ideas for the classroom," says Engineering Dean Jean-Lou Chameau. At the University of Colorado, the engineering school's Integrated Teaching and Learning Laboratory is utilized for summer programs involving both middle school and high school teachers and students. The programs for teachers range from a few days to a few weeks in length and emphasize projects they can replicate in their classes for under $20.

A TOUGH SELL

Still, getting engineering faculty interested in K–12 education can be an uphill battle at times. Administrators acknowledge that faculty members who operate in an environment where tenure and promotion are based primarily on research see little immediate payoff in putting a lot of time and effort into K–12 education. RPI's Lester Rubenfeld says flatly that such efforts "are not rewarded on research campuses. I do not recommend it for people without tenure." Rubenfeld says that faculty members are more likely to become engaged with K–12 education "when their kids get into high school and they realize the deficiencies of the system. Then they get concerned about why their kids' education in math and science is not what it should be."

In that regard, RPI has been instrumental in the development of a program called Project Lead the Way, which began in the 1980s when faculty members helped a teacher at a local high school develop a series of technology oriented courses. Project Lead The Way, which has since become an independently run national program, offers high schools a five-course sequence of pre-engineering courses and provides training for those who teach the courses. Some 175 high schools are participants. The Project has also created a middle school program called Gateway to Technology, a single course with four stand-alone units. Lester Gerhardt, associate dean of engineering at RPI, says that the program is "geared for students who like math and science and are curious about how things work."

In fact, a number of the K–12 initiatives in which engineering schools are involved focus not on average students, but on students who show promise and/or interest in engineering and related fields. Many of these programs are aimed at women and minorities. Cornell's Engineering School operates what it calls the Curie program, which brings about 150 female high school students to the campus for a week each summer to expose them to doing research. Michigan State's College of Engineering participates in a program to enrich math and science opportunities for students in the Detroit schools. Every summer 30 to 40 high school sophomores and juniors take part in a four-week residential experience focused on math, computing and engineering. A number of universities not only offer summer programs, but also run programs of much shorter duration during the school year that have a more modest goal than improving K–12 science education. These programs are designed simply to expose students to engineering and the sciences. A case in point is Michigan State's mechanical engineering design day. Twice a year several hundred students from schools around the state are bused to East Lansing for the event, which takes place at the end of each semester. They watch mechanical engineering students demonstrate the projects they have designed and take part in a design competition themselves, building bridges out of cardboard and tape or constructing models of the Leaning Tower of Pisa out of Popsicle sticks and tape.

Yet, despite the best of intentions, there is no indication thus far that the proliferation of programs is likely to measurably change the performance of U.S. students in science and math. "All these small efforts won't become synergistic if we continue to do them as ad hoc entities," says the University of Washington's Denton. "We need to make the sum greater than the parts. We need a national campaign."

ATTACHMENT C.—COALITION FOR NATIONAL SCIENCE FUNDING

The Coalition for National Science Funding (CNSF), a group of eighty scientific, engineering, and professional societies, universities, and corporations, commends Congress and the Administration for providing the National Science Foundation (NSF) with the largest dollar increase in the agency's history. The Coalition appreciates the efforts of Senators Christopher "Kit" Bond and Barbara Mikulski to double the NSF's budget, and the support of Representatives James Walsh and Alan Mollohan for the NSF. We applaud the goal of doubling the NSF budget and the fiscal year 2001 appropriation clearly sets us on the right path.

To maintain this momentum, CNSF strongly urges the Administration and Congress to provide no less than $5.1 billion, a 15 percent increase, for the NSF in fiscal year 2002. We believe this increase to be a necessary step toward doubling the NSF's budget by 2006.

Our national knowledge base in the sciences, mathematics, and engineering is increasingly important to broad economic and social interests. Doubling the NSF budget by 2006 will fund the crucial investments that the agency makes in key components of this vital knowledge base. These funds will permit investments in the basic research needed to rejuvenate and stimulate core disciplines of science, mathematics, and engineering, which are the underpinnings of technological innovation.

The primary source of federal support for non-medical basic research in colleges and universities, the NSF is the only federal agency whose mission consists of comprehensive support for the sciences and engineering. Equally important are investments in people who will apply new knowledge and expand the frontiers of science and engineering. Through its support of research and education programs, the agency plays a vital role in training the next generation of scientists, engineers, and mathematicians. Currently, the NSF must decline almost as many highly-rated grant proposals as it can fund. Increased funding for the NSF will not only enable the funding of more outstanding proposals that will help broaden the nation's knowledge base, it will also enable the agency to increase the size and duration of its grants.

Over the past half century the NSF has had monumental impact on our society. The NSF investment has paid dividends in building the infrastructure of the individual scientific disciplines, as well as laid the groundwork for innovative interdisciplinary research to meet modern day scientific and technical challenges. Many new methods and products arise from the NSF investment in research, such as geographic information systems, World Wide Web search engines, automatic heart defibrillators, product bar codes, computer aided modeling (CAD/CAM), retinal implants, optical fibers, magnetic resonance imaging technology, and composite materials used in aircraft. NSF-sponsored research has triggered huge advances in understanding our planet's natural processes, which lead to providing a sound scientific framework for better decision-making about earth's natural environment. These methods, products, and advances in understanding accrue from basic research performed over many years, not always pre-determined research efforts aimed toward a specific result. Furthermore, the NSF traditionally receives high marks for efficiency—less than four percent of the agency's budget is spent on administration and management.

For these reasons, CNSF highly recommends that Congress and the Administration continue to invest in NSF by providing, at a minimum, $5.1 billion for fiscal year 2002, and work to double the NSF's budget by 2006.

PREPARED STATEMENT OF THE AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

The American Institute of Biological Sciences, which represents 79 scientific societies with a cumulative membership of over 190,000 biologists spanning all of biology—from basic to applied, from molecular to organismal, from agronomy to zoology—submits the following written testimony regarding the fiscal year 2002 funding for the National Science Foundation (NSF).

The American Institute of Biological Sciences strongly supports the bipartisan effort to double the budget of the NSF by fiscal year 2006. To that end, we encourage the Committee to provide at least $5.1 billion for NSF, an increase of 15 percent over fiscal year 2001.

We recognize that the Subcommittee needs to know why an increase of this magnitude is justified. The answer—with regard to the kind of research conducted by our members—is that NSF funding is the primary source of federal support for basic research on the biology of the natural world (the non-biomedical life sciences) in colleges and universities. This funding is critical to some disciplines which have little private sector funding because research in these areas rarely results in marketable products. Yet, the knowledge gained in this kind of research is critical in many ways. The most obvious way this knowledge is used is in the management of our natural resources. Making choices about the often conflicting needs to extract and use resources and the competing need to protect our environment requires a strong foundation of biological knowledge. In fact, that knowledge can often help us develop solutions that allow us to minimize the impact of the use of our natural resources. But there are many other ways in which biological information affects our lives. For example—the anti-cancer drugs Vincristine and Vinblastine were first extracted from the Madagascar rosy periwinkle, while the anti-cancer drug Taxol was first extracted from the Pacific yew. Just this week, a an announcement was made that a new anti-cancer drug made from shark cartilage has been found to be effective. Without funding for the basic, biological research on our natural resources, we might never have known of these species, much less their usefulness to humans. And without understanding how human activities affect these species, we might not be able to prevent them from disappearing from the planet. We might not recognize the environmental threats that could have dire effects on humans. We again ask the Congress to take note of the recommendations of the National Science Board in its report, "Environmental Science and Engineering for the 21st Century: The Role of the National Science Foundation." The report calls for a $1 billion increase in funding for environmental research, assessment, and education, to be phased in over 5 years. It bears repeating that much research of this sort receives very little private sector funding.

Much biological and ecological research is inherently long-term research, because biological systems change slowly and it takes years, if not decades, to assess the change and determine the underlying causes. Two NSF programs—Long-term Ecological Research Network and Long-term Research in Environmental Biology (LTERB)—recognize the need for sustained funding for biological research, yet LTERB is limited to a five-year award. It is often said that research awards need to be longer so that scientists won't have to spend all their time writing grant proposals. While we share this valid concern, the justification for longer grants in the biological sciences is actually scientifically appropriate.

The research funded by NSF—particularly the Biocomplexity in the Environment Initiative—is therefore critical in understanding our complex environmental systems. The resolution of many important environmental and societal problems depends on our gaining sufficient understanding of these systems. The Biocomplexity Initiative gives us the rare opportunity to tackle these problems on a cross-disciplinary basis, with chemists, geologists, hydrologists, and biologists working together to learn how systems work and how to rectify imbalances that have grave consequences for humans, wildlife, and our ecosystems. For instance, a team of scientists funded by the Biocomplexity Initiative are looking at oceanic algal blooms, which absorb nitrogen and carbon from the atmosphere. Someday, this information could help us to mitigate the effects of greenhouse gasses. This kind of research is necessarily large in scope and often requires a long-term monitoring of the system. It is expensive but worthy research. Last year, NSF requested a $136 million increase for this initiative; Congress provided $75 million. We encourage the Congress to provide NSF with at least $150 million for this initiative in fiscal year 2002.

In fiscal year 2001, NSF was able to fund only 16 Biocomplexity proposals (a success rate of 5 percent), along with 57 small awards for "incubation" activities to allow research groups to begin smaller, preliminary efforts to undertake this complex research. These promising activities will have no future if the NSF does not receive a substantial increase for the Biocomplexity initiative.

Last year, NSF sought funding under the Major Research Equipment account to start a new effort to be known as the National Ecological Observatory Network (NEON). The goal of NEON was to create a nationwide virtual laboratory for research to obtain a predictive understanding of the environment. Each of 10 planned observation sites would consist of a partnership of universities, government facilities, and private research organizations that would share equipment and be linked through a computer network for the purpose of sharing information with one another, other researchers, and the public. Congress declined to provide the requested $12 million start-up funding for NEON last year. We urge the Congress to fund this project in fiscal year 2002.

As important as the new ideas and knowledge generated by scientific research are, the people educated to apply them appropriately and those educated to keep the knowledge continuum growing are just as important. For the last several years the number of U.S. students studying science, mathematics, and engineering has decreased to alarming levels. These students are the future of science and math research and education. Continuing investment in their education, at the undergraduate and graduate levels, is a critical need for this country. Students at all levels need strong training in biology and should have opportunities to study the natural world around them.

We appreciate the opportunity to submit this written testimony to the Senate Appropriations Subcommittee on VA, HUD, and Independent Agencies.

Prepared Statement of the American Society of Mechanical Engineers

The National Science Foundation (NSF) Task Force of the Council on Education of the American Society of Mechanical Engineers (ASME International) is pleased to provide comments on the NSF fiscal year 2002 budget request.

ASME International is a worldwide engineering society focused on technical, educational and research issues. It conducts one of the world's largest technical publishing operations, holds some 30 technical conferences and 200 professional development courses each year, and sets many industrial and manufacturing standards. This testimony represents the considered judgment of the NSF Task Force of the Council on Education and is not necessarily a position of ASME International as a whole.

NSF FISCAL YEAR 2002 BUDGET REQUEST OVERVIEW

The National Science Foundation plays a critical leadership role in directing the nation's non-defense related scientific and engineering research. Through thoughtful and visionary planning, NSF has greatly contributed to the technological superiority that the United States enjoys today. The Task Force shares NSF's broad-based, cross-cutting vision for basic engineering and scientific research. As such, we strongly endorse the Foundation's efforts to continually improve and expand the "innovative ideas, outstanding people, and cutting-edge tools" that comprise the nation's technological and scientific infrastructure.

While NSF had experienced substantial funding increases in recent years, the Budget Request for fiscal year 2002 reflects only a 1.3 percent increase to $4.47B. Within this request, funding for the Engineering Directorate would remain virtually unchanged in current dollars at $431M. In justifying this modest request, President Bush points back to the 5.8 percent and 17.3 percent increases in fiscal year 2000 and fiscal year 2001 respectively. In stark contrast, however, the funding rate for the National Institutes of Health will continue with the fourth year of a "doubling in five years" plan, increasing by 13.5 percent to more than $23B. In terms of the overall budget proposal, research funding for NIH would constitute about 50 percent of the nation's non-defense related science and technology portfolio.

NSF's four priority areas from the previous fiscal year continue to headline the fiscal year 2002 budget request. These are:

—Information Technology Research (ITR),
—Nanoscale Science and Engineering (NNI),
—Biocomplexity in the Environment (BE),
—Learning for the 21st Century (SMET).

TABLE I—NSF BUDGET OVERVIEW WITH AND WITHOUT SPENDING IN THE PRIORITY AREAS.

[DOLLARS IIN MILLIONS]

	NSF Agency Wide			Engineering (ENG)		
	Fiscal year 2001 current plan	Fiscal year 2002 request	Percent change	Fiscal year 2001 current plan	Fiscal year 2002 request	Percent change
Total Budget	$4,416.39	$4,472.49	$1.3	$430.84	$431.05	<0.1
Salaries and Expenses	160.54	170.04	5.9	n/a	n/a	n/a
Inspector General	6.27	6.76	7.8	n/a	n/a	n/a
Total Program Budget	4,249.58	4,295.69	1.1	430.84	431.05	<0.1
ITR	259.43	272.53	5.0	8.17	9.17	12.2
NNI	149.68	173.71	16.1	55.27	70.30	27.2
BE	54.88	58.10	5.9	2.69	3.69	37.2
SMET	121.46	125.51	3.3	2.70	3.40	25.9
Remaining Funds	3664.13	3665.84	<0.1	362.01	344.49	−4.8

Comparisons include both agency-wide and the engineering directorate.

Funding has been requested to expand ITR by 5.0 percent (to $273M), NNI by 16.1 percent (to $174M), BE by 5.9 percent (to $58M) and SMET by 3.3 percent (to $126M). Each of these priorities, but NNI and SMET in particular, continue to be strongly supported by ASME.

In light of the 1.3 percent overall increase, expansions in the priority areas necessarily imply reductions in other areas. Table 1 clearly shows the impact on funding for core programs. Agency-wide, there will be virtually no change from current year plans, while the Engineering Directorate (ENG) would experience a 4.8 percent decrease in funding for core research programs.

The Task Force endorses the leadership role that NSF has played in guiding the nation's basic research and development activities. By maintaining a balance between exciting new developments, and the core programs, which incubate such breakthroughs, NSF has built an outstanding record of supporting a broad spectrum of research of the highest quality. We continue to recognize the importance and timeliness of the four priority investment areas, ITR, NNI, BE, and SMET. These address major national needs for the 21st century and are being implemented at a critical juncture in the nation's technological development. (However, as will be discussed in the next section, it is not clear that an optimum balance has been achieved.)

There are a number of particularly noteworthy items in the fiscal year 2002, beginning with the planned increase in graduate fellowship stipend levels. Ensuring a continuous stream of well-trained, highly qualified research scientists into leadership positions is critical to the survival and growth of the nation. In this respect, the Task Force strongly endorses NSF's planned increase in stipends for graduate fellows from $18,000 to $20,500. The logical extension of providing the nation's children with a strong science and technology knowledge base is simultaneously maximizing the pool of science and technology educators and leaders. Making fellowship stipends attractive to the nation's best and brightest students is certainly a positive step.

Overall increases in the number of graduate fellowships awarded is also especially positive. NSF is the only federal agency with the direct charter of training graduate students for advanced research and development careers. It is therefore important that this continue to be a major priority area in perpetuity. It is not clear, however, that the correct balance in types of graduate fellowships has been struck. Plans to stabilize the Graduate Research Fellowship (GRF) program at 900 new offers per year while increasing the number of GK–12 Fellowship could be interpreted that research is becoming a lesser priority. If true, such a direction would not only compromise the vitality of NSF, it would also jeopardize the nation's world leadership role in research and development.

In general, we also support and applaud the activities within ENG. NSF's vision of a committed balance between people, ideas and tools is exemplified within ENG. The Directorate is justifiably proud of the large numbers of CAREER and GRF awards it supports. Integrating ITR and SMET principles into the Network for Earthquake Engineering Simulation (NEES) to create one of the three Major Research Equipment (MRE) accounts is an excellent example of the long-range crosscutting focus of the ENG leadership.

ASME has strongly supported the nanotechnology initiative since its inception as an NSF emphasis area in fiscal year 2000. In the past two years, funding for this initiative has grown substantially. With a growing record of research and development successes, the transitioning of nano-science and engineering into commercially viable technologies is becoming a pressing challenge for NNI. For this reason, the introduction of Nanotechnology Experimentation and Testing Facilities (NEXT) by ENG is timely. It is recommended that NSF look toward developing this effort in MRE in upcoming fiscal year planning.

Finally, the Task Force endorses NSF's participation in K–12 math, science and engineering education initiatives consistent with the agency's broader mandate to lead the nation's research and development enterprise. Most notably, NSF has included $200M in its fiscal year 2002 budget request to kick-off the Math and Sciences Partnership (MSP) program. The goal of MSP is coupling K–12 and higher education SMET education into a single integrated effort by encouraging universities to adopt SMET into their core missions.

Clearly, the future of this nation depends on how well its children are prepared to meet the socio-technological challenges that will arise in their adult lives. In this technological age, providing the highest quality math, science and technology education to all children should be a national imperative. We, therefore, applaud President Bush's "no child left behind" policy and NSF's willingness to contribute to making it a reality. However, it is important to note that the overall fiscal year 2002 Budget Request, coupled with this added emphasis on K–12 education, changes the balance between K–12 education and research. The Task Force cautions that a 'proper balance' must preserve the integrity of NSF's fundamental research and development mission.

QUESTIONS AND CONCERNS

Sky rocketing gasoline prices and the ongoing energy crisis in California serve as stark reminders of the need for balance in long range R&D planning. Thus, as in previous years, the Task Force's key questions and concerns arising from the fiscal year 2002 budget request center on matters of balance. In particular, we are concerned with:

—the gross funding imbalance in the federal R&D portfolio between life sciences and engineering/physical sciences
—insufficient support for core engineering programs at NSF, and
—inadequate funding levels for existing grants.

The fiscal year 2003 R&D budget request reflects continued imbalance. Funding for the life sciences (i.e. NIH) continues to increase at a rate that would result in a doubling from fiscal year 1998 to fiscal year 2003. At the same time, however, funding for all other non-defense agencies with a significant R&D component have seen moderate to negative increases over the same five year period. If the current budget request is enacted, funding for R&D in the life sciences will be roughly equal to all other non-defense R&D combined.

There is clearly no argument against attempting to eradicate life-threatening illnesses and developing technologies to improve the quality of life of those challenged by debilitating diseases. However, one must question the singular focus, which has already left the nation lacking adequate power and transportation infrastructure to provide a sustainable quality of life. Can the nation afford to pursue the ideal of eradicating diseases without concomitant advances in the nation's basic technological infrastructure?

NSF's conflicting commitments to building on its emphasis areas while effectively maintaining current spending levels in fiscal year 2002 has resulted in plans for dramatic cuts to core programs, particularly within ENG. As indicated in Table I, requested spending for core research in ENG not related to any of the four emphasis areas is 4.8 percent less than the fiscal year 2001 current plan. Since the 4.8 percent figure is a composite over the entire ENG directorate, obviously specific programs will be impacted differently.

One example of programs particularly affected by initiative driven spending is Chemical and Transport Systems (CTS). The fiscal year 2002 budget request for CTS is $50.15 M, down $0.57 M or −1.1 percent from fiscal year 2001 projections. Of the $50.15 M, CTS plans to spend $16.98 M (or 34 percent of its budget) on NNI alone,. Coincidentally, this is the same program from which basic R&D for future power generation and oil refinery technologies should come.

Ensuring adequate numbers of core and initiative efforts has been accomplished to-date in large part by limiting grant sizes. The projected median research award size for fiscal year 2002 will remain at about $77,000 per year. This continues to be in general sufficient to support one graduate student and a senior investigator. However, an extended period of constant grant sizes has eroded buying power and the ability to adequately support professional development. Further, forming small teams (2–3 senior investigators) to pursue and define the major initiative areas of the future is virtually impossible. Thus to truly advance the frontiers of science and technology, significant increases must be made not only to the number of grants, but to the size of each grant as well.

SUMMARY

ASME continues its enthusiastic support for the National Science Foundation and its leadership in articulating the nation's basic research and development vision. In fiscal year 2002, NSF has requested funding to expand major, cross cutting initiatives addressing pivotal technological issues facing the nation. This includes the nanotechnology initiative strongly endorsed by ASME. Expansion of the graduate fellows programs coupled with increases in stipend levels reinforces NSF's commitment to graduate education (i.e. developing people). The focus on developing people and ideas in general is certainly reflected throughout the ENG directorate's budget request as well. The challenge for this year appears to be maintaining a healthy balance between maintaining world R&D leadership and incorporating K–12 math, science and engineering education and between supporting core programs and expanding key initiatives.

There is great concern over the growing imbalance between life sciences funding and the rest of the nations research and development portfolio. Crises, such as those occurring in the gasoline and power production industries, reflect long term failure to value and support core research focussed at advancing the nation's technological infrastructure. The current budget plan does not appear to permit NSF to meet key fiscal year 2002 Performance Goals (i.e. Goals III–1a and III–2) By increasing the number and size of its awards, NSF will be better positioned to fulfill its leadership responsibility in directing the nation's research and development activities.

PREPARED STATEMENT OF THE AMERICAN PSYCHOLOGICAL SOCIETY

Mr. Chairman, Members of the Committee: Thank you for this opportunity to present the views of the American Psychological Society (APS) on the fiscal year 2002 appropriations of the National Science Foundation (NSF). I am Alan Kraut, Executive Director of APS. We are a 15,000-member organization of scientists and academics, most of whom are located in colleges and universities across the country. Many members of the American Psychological Society are supported by NSF, and much basic research in our field could not exist without NSF funding.

RECOMMENDATION FOR FISCAL YEAR 2001 NSF BUDGET

As a member of the Coalition for National Science Funding, APS supports the Coalition's recommendation of $5.1 billion for the National Science Foundation in fiscal year 2002. This would be the second installment of the five-year plan to double the NSF budget. The increase that you and your colleagues in the Senate provided for NSF in fiscal year 2001 was an important first step in offsetting the comparative underfunding that has been experienced in NSF's budget in the past several years. The scientific community is grateful for your support and it is our greatest hope that you will continue to support the much-needed expansion of NSF's budget.

Within the NSF budget, we ask the Committee to continue its history of support for behavioral and social science research at NSF. This Committee was instrumental in encouraging NSF to establish its Social, Behavioral, and Economic Sciences (SBE) Directorate a decade ago, and over the years has directly encouraged many of the initiatives coming out of that directorate.

Before discussing specific activities of the SBE directorate, I first want to provide a brief overview of basic psychological research, to give you an idea of the scope and breadth of the field that I represent.

AN OVERVIEW OF BASIC PSYCHOLOGICAL RESEARCH

APS members include thousands of scientists who conduct basic research in areas such as learning and memory, and the linked mechanisms of how we process information through visual and auditory perception. Others study decision making and judgement; mathematical reasoning; language development; the developmental origins of behavior; and the impact of individual, environmental and social factors on behavior. This basic psychological research conducted by APS members has implications for a wide range of applications, from the design of airplane cockpit control panels, to how to teach math to children; to how humans can best learn using technology; to the development of more effective hearing aids; to increasing workforce productivity; and to the amelioration of social problems such as prejudice or violence.

While this is a diverse range of topics, all of these areas of research are related by the notion that understanding the human mind and behavior is crucial to maximizing human potential. That places them squarely at the forefront of many of the most pressing issues facing the Nation, this Congress, and the Administration.

Turning now to the SBE Directorate, I'd like to highlight two programs, one in cognitive neuroscience, and one in child development. These initiatives exemplify SBE's essential leadership on the cutting-edge frontiers of research, and they illustrate the important work that will either languish or flourish, depending on the size of the increase for the NSF budget this year.

COGNITIVE NEUROSCIENCE INITIATIVE

Basic behavioral science supported by SBE traditionally has included research in cognition, perception, language, development, emotion/affect, and social psychology. These have been funded primarily through its Division of Behavioral and Cognitive Sciences. Recognizing the potential contributions of neuroscience to these and related areas, the directorate has added funds to these programs for the express purpose of bringing more neuroscience perspectives to bear on these topics—to map these psychological mechanisms onto the physical dimensions of the brain.

Theoretical work in behavioral science has greatly advanced our understanding of the basic mechanisms underlying memory, emotion, learning, and other psychological and cognitive processes. Now, with brain imaging and other non-invasive techniques, we are poised to confirm and extend these theories through studies of the living brain. Scientists from a range of areas will be able to test theories about normal brain functioning; assess the behavioral consequences of brain damage; and reach new levels of understanding of how the brain develops and matures, in terms of both structure and function.

This initiative will usher in a new era in cognitive and behavioral science research, one that has enormous implications for virtually all sectors of our society, including education, industry and technology, and health care. But reaching this new era depends on the basic science that only NSF can provide.

I should also note that NSF is providing larger and longer grants under this initiative, in recognition of the higher cost of conducting these kinds of interdisciplinary, technology-dependent studies. This new funding policy is an important development for behavioral science, in part because it reverses a previous trend toward smaller, shorter grants on average in behavioral science in comparison to the average grants in other disciplines.

CHILDREN'S RESEARCH INITIATIVE

Recognizing that a combination of perspectives—cognitive, psychological, social, and neural—is needed to fully understand how children develop and how they acquire and use knowledge and skills, the SBE directorate will support new interdisciplinary research centers that will focus primarily on integrating traditionally disparate research disciplines concerned with child development. Known as the Children's Research Initiative (CRI), this program will bring together such areas as cognitive development, cognitive science, developmental psychology, linguistics, neuroscience, anthropology, social psychology, sociology, family studies, cross-cultural research, and environmental psychology, to name only some of the relevant disciplines. Basic researchers from these areas will focus on problems that cannot be solved through single investigator studies. This initiative aims to enhance the content knowledge of the fields involved; build an intellectual infrastructure within and among disciplines; and build a program of research in relevant aspects of developmental, learning, and human sciences.

As with the cognitive neuroscience initiative, the CRI program illustrates the critical role NSF plays in creating and capitalizing on basic scientific opportunities that will have enormous implications for our nation's ability to realize the potential of all of its citizens.

The two initiatives I just described are in the Division of Behavioral and Cognitive Science. SBE's other main component, the Division of Social and Economic Sciences, also supports a substantial amount of basic psychological science. Examples of research topics being addressed in that division include: human dimensions of global change, group and individual decision making, risk management, and human factors. Research in these areas has the potential to increase employee and organizational productivity, improve decision making in critical military or civilian emergency situations, and inform the public policymaking processes across a range of areas. We ask the Committee to support this division's behavioral and social science research programs.

THE SCIENCE OF LEARNING

Another core area of interest at NSF is the science of learning. This field draws from a variety of research topics across psychology, such as brain and behavior, learning, memory, perception, social psychology, development, and so on. We have the knowledge base and a critical mass of scientists to help solve the educational and learning issues that have been identified by the government as high priorities. But getting that knowledge into the classroom is going to require a multi-disciplinary, multi-agency effort. The basic challenge is this: How can we apply and extend our knowledge of how people think, learn, and remember to improve education?

In early March, a diverse group of psychologists and other scientists and educators met at Kellogg West conference facilities on the campus of California State Polytechnic University at Pomona, to address this and similar questions about the problems and possibilities of linking the science of learning to educational practice. More specifically, our focus was on using science to improve learning in the university and beyond. The conference was supported by the Spencer Foundation, the Marshall-Reynolds Trust, California State University, San Bernardino and APS. Several representatives of NSF attended the meeting, as did Cal Poly President Robert Suzuki, a member of NSF's National Science Board and chair of the Board's Committee on Education and Human Resources.

It was agreed that although researchers know what cognitive, psychological, and social factors affect learning, this knowledge too often has not been put to use in the classroom or in industrial training settings. In fact, it would be difficult to design an educational model that is more at odds with current research on human cognition than the one that is used in most colleges and universities in the United States. For example, virtually all college science and math courses, especially at the introductory level, involve a lecture where a lone professor mostly talks (and writes on the board or on overheads) and the student takes notes. This is a satisfactory arrangement for learning if the desired outcome is to produce students who can repeat or recognize the information presented, but one of the worst arrangements for promoting in-depth understanding. We need instructional designs that maximize transfer to the real world, enhance critical thinking abilities, and encourage the habit of life-long learning.

The ultimate goal of the initiative that began with the March conference is to develop new models of learning that will help pave the way for our educational system to become more global, more integrative, more diverse, and more flexible. One step in reaching this goal will be the development of a research agenda that identifies critical questions that can advance the science of learning and provide help in solving national educational problems.

More generally, the science of learning is a topic that cuts across many areas at the Foundation, from Education and Human Resources to NSF's Workforce Initiative. For example, the Foundation has been planning a program of Centers for the Science of Learning under the cross-cutting 21st Century Workforce initiative. But these centers are in jeopardy in fiscal year 2002 unless adequate funding is provided. A delay in this and similar programs would mean a delay in the nation's ability to respond to the urgent, technology-driven need for new ways of training and education at all levels of learning.

We ask this Committee to monitor and support NSF's efforts to bring the science of learning to bear on the nation's educational needs. The expanded budget we recommend for fiscal year 2002 will allow NSF to capitalize on the growing momentum surrounding this issue both at NSF and in the field.

PUBLIC UNDERSTANDING OF SCIENCE

NSF has made public understanding of science one of its science education priorities. We applaud NSF's leadership in this area, and we believe that the success of these efforts will be enhanced by focusing on examples from behavioral and social science research. These sciences have unique potential to increase science literacy because of their intrinsic relevance to daily life. That is, in addition to promoting understanding of questions in physics and math, NSF could also be promoting scientific understanding by showcasing how processes of learning and remembering take place, or the scientific validity of certain organizational management structures in industry, or any one of a hundred other areas of NSF support in social and behavioral science.

Public understanding of psychological science is also a priority at the American Psychological Society. Last year we launched a new journal, Psychological Science in the Public Interest, which presents reports modeled after those generated by the National Research Council. Developed by panels of distinguished scientists, these reports focus on issues where psychological science can contribute to our understanding of topics of national importance. The first issue described ways to improve diagnostic decision-making over a wide range of situations using techniques from psychological science. Scientists have developed rigorous statistical procedures that have enormous potential to increase the accuracy and usefulness of such diverse applications as detecting breast cancer; improving weather forecasts; analyzing structural flaws in airplanes; and possibly even predicting violence.

The second issue of PSPI assessed the validity of popular psychological tests such as the well-known Rorschach and other projective tests, finding that the tests have limited value despite their widespread use in everything from diagnosing mental disorders to determining which parent gets custody in a divorce. Upcoming reports will address such questions as: Does class size matter? Do herbal remedies improve memory or intelligence? Does SAT coaching work?

To ensure that PSPI reports will reach the widest possible audience, we have been working with Scientific American to develop articles for the magazine that will be based on the studies published in Psychological Science in the Public Interest. We also are working with nationally-known newspapers and radio and television networks to reach an even wider audience. Our reports recently have been featured in the New York Times, on National Public Radio, and in many other outlets. I would be pleased to provide you with copies of the PSPI reports and their Scientific American counterparts, or you can view them on our website at www.psychologicalscience.org.

NSF is helping to support this initiative through a small grant that is allowing the PSPI editorial board to evaluate and refine its review and vetting processes, and is enabling the dissemination of the research reports to a broader audience.

In closing, I want to note that building and sustaining the capacity for innovation and discovery in the behavioral and social sciences is a core goal of the National Science Foundation. We ask that you encourage NSF's efforts in these areas, not just those activities I've described here, but the full range of activities supported by the SBE directorate and by NSF at large. As one example, NSF Director Rita Colwell has announced that a major new initiative will be launched in the behavioral and social sciences in fiscal year 2003. Your support in fiscal year 2002 will help NSF lay the groundwork for this long-overdue emphasis on these sciences.

Thank you again for the opportunity to appear before you to present our recommendations. I would be pleased to answer questions or provide additional information.

PREPARED STATEMENT OF THE NATIONAL ASSOCIATION FOR EQUAL OPPORTUNITY IN HIGHER EDUCATION

BACKGROUND

Mr. Chairman and distinguished Members of the Subcommittee, I am Dr. Henry Ponder, Chief Executive Officer and President of the National Association for Equal Opportunity in Higher Education (NAFEO). I want to thank you for allowing me to appear before you today as you consider funding priorities relevant to the fiscal year 2002 VA–HUD-Independent Agencies Appropriations bill. In the time that I have, I would like to highlight many of the accomplishments of NAFEO as well as some of the initiatives that we support and are looking to begin and/or expand upon in the new millennium.

NAFEO is the national umbrella organization representing the nation's 118 predominately and Historically Black Colleges and Universities (HBCUs). Our mission is to champion the interests of HBCUs through the executive, legislative and judicial branches of federal and state government, and to articulate the need for a system of higher education where race, ethnicity, socio-economic status, and previous educational attainment levels are not determinants of either the quantity or quality of higher education. The organization takes lead responsibility for the development and dissemination of public policy, programmatic efforts, and strategic and educational materials that: (1) enhance the role of HBCUs generally, and (2) promote minority student enrollment and attainment specifically. NAFEO is comprised of institutions of higher education that represent a broad spectrum of interests—public and private, large and small, urban and rural, liberal arts, agricultural, research, scientific and technological institutions. Of all of the HBCUs that belong to NAFEO, 46 percent are public, and 54 percent are private. The organization's membership is comprised of 2-year and 4-year institutions, as well as schools that offer advanced and professional degrees, and they are situated in every quarter of the country, the District of Columbia and the Virgin Islands.

NAFEO was founded in 1969 at a time when the nation had before it overwhelming evidence that educational inequality in higher education remained manifest. The 1954 Supreme Court decision, "Brown" vs. "Topeka Board of Education," and its progeny, focused national attention on the dual and unequal primary and secondary education systems nationwide and spurred two decades of litigation and legislation designed to redress the inequalities. But, the initial debate neither paid much attention to the inequalities in higher education nor focused on the nation's HBCUs as equal opportunity institutions; thus, a solution to some of the nation's higher education issues was eluded.

NAFEO institutions historically are responsible for educating the vast majority of African Americans. Today, while NAFEO institutions enroll approximately 16 percent of all African American college students, they confer about 30 percent of all the baccalaureate degrees earned by African Americans annually. In some disciplines, such as engineering and teacher education, the number is significantly higher. Moreover, these schools produce the largest number of African American baccalaureate recipients who eventually go on to receive doctorates, especially in the sciences.

During the last two decades, many of the educational achievements African Americans have experienced are directly attributable to NAFEO and its member institutions. However, despite the progress, the increases in college-going rates for African American high school graduates have not kept pace with those of the white population. Ten years ago, African American high school graduates enrolled in college at a rate that was only 5 percentage points below that of white graduates (28.0 percent vs. 33.0 percent). Today, there is a difference of 8 percentage points (34.0 percent vs. 42.0 percent). Much of the responsibility for ensuring greater educational access for African Americans, closing the college entrance gaps and addressing emerging trends at the national level, rests on the shoulders of NAFEO and its member institutions. As a result, additional resources will be required from the federal government and the private sector if achievement gaps are to be closed in African American communities.

I would first like to acknowledge various programs under this subcommittee that have been beneficial to HBCUs in the past. Specifically, NAFEO supports additional funding in the areas identified in the table below, which details our specific requests by relevant department.

Department of Housing & Urban Development	**NAFEO FY01 Requests**	**Final Approps**	**NAFEO FY02 Requests**
HBCU Initiative	20M	10M	20M
National Science Foundation	**NAFEO FY01 Requests**	**FY01 Final Appropriations**	**NAFEO FY02 Requests**
HBCU-UP	20M	15M	20M
Alliances for Graduate Education and the Professorate (formally called Minority Graduate Education)	17.5M	11.5M (including private grants)	17.5M
LSAMP	31M	26M	35M
Major Research Instr./Facilities	138.5M	75M	138.5M
National Aeronautics & Space Administration	**NAFEO FY01 Requests**	**FY01 Final Appropriations**	**NAFEO FY02 Requests**
Minority University Research & Education	60M	55.8M	75M

PROGRAMS OF SPECIAL SIGNIFICANCE: EXPANSION OF UNDERGRADUATE AND GRADUATE RESEARCH & DEVELOPMENT OPPORTUNITIES

The HBCU–UP Program

NAFEO is very concerned about the underrepresentation of African Americans in the science, engineering and mathematics (SEM) fields, which is a serious problem that affects our ability to compete in the nation's scientific and technological workplace. This situation results in the loss of opportunity for a large segment of society. As a result, throughout the U.S., sweeping changes in social policy designed to increase the self-reliance and self-sufficiency of citizens from disadvantaged backgrounds are taking place. In order to ensure access to employment opportunities in the emerging field of high technology and other scientific areas, it is essential that vigorous efforts be undertaken to increase the number of African Americans with degrees in mathematics, the physical sciences and engineering. HBCUs should play a critical role in addressing this problem because of their strong track record in annually producing a disproportionately large number of minority undergraduates with degrees in these fields. In this vein, NAFEO requests $20 million in funding for the Historically Black College and University Undergraduate Program (HBCU–UP), in an effort to address the basic investment deficits that HBCUs face today, particularly: faculty research grants, research experience for undergraduates, and scientific instrumentation.

The HBCU Research University Science and Technology Initiative

This year, NAFEO is supporting the establishment of an initiative that stimulates the competitive research and development (R&D) capacity of HBCUs that provide doctoral degrees in science-related fields. Specifically, we ask that $10 million be provided to support this effort. There are ten HBCUs that provide graduate and doctoral degrees in science-related fields—Alabama A&M University, Clark Atlanta University, Florida A&M University, Hampton University, Jackson State University, Morgan State University, Norfolk State University, North Carolina A&T University, Tennessee State University, and the University of Maryland, Eastern Shore.

The National Science Foundation (NSF) should take the lead in establishing the program, ultimately working to expand the program to involve other relevant agencies. Appropriate funds should be made available to implement the program, with uses including, but not being limited to:

—Start-up funding for new faculty;
—Faculty exchanges and development;
—Academic instruction in disciplines where African Americans are underrepresented;
—Instrumentation, supercomputing and science facility renovations; and
—Supportive services for students in the graduate and doctoral pipeline.

The ultimate objective of the effort would be to stimulate competitive research and systemic change across the HBCU community.

Data assembled and disseminated by the federal government reveal disturbing trends related to the participation of HBCUs in the federal R&D enterprise. Based on data compiled by NSF, for 1999, about $14 billion was awarded by the federal government to all institutions of higher education for R&D. Of this amount, only $164 million was awarded to HBCUs, less than one percent. Even more disturbing is the fact that these funding levels represent a decline in the amounts provided in previous years ($202 million in 1995, and $188 million in 1996), while overall funding in this area has increased (up from $12.8 billion in 1995 to over $14 billion today). Looking specifically at R&D funding awarded by the National Science Foundation, while overall funding to institutions of higher education was $1.9 billion in 1998, only 2.2 percent, or $43 million was awarded to HBCUs. This averages out to less than $400,000 per HBCU institution, while the top 100 institutions average $19 million per institution. Furthermore, data prepared by the White House Initiative on HBCUs, shows the total NSF funding awarded to HBCUs for fiscal year 1999 was just 1 percent of the total awarded to all institutions of higher education.

Forty-two percent of all doctorates for African Americans are in education compared to 19 percent for all U.S. citizens. Conversely, African American representation in the sciences is very low. In 1999, African Americans received the following number of doctorates of all those awarded to U.S. citizens in the following fields: mathematics—10 of 538 (1.8 percent); computer science—16 of 412 (3.8 percent); chemistry—46 of 1,251 (3.7 percent); physics—6 of 651 (0.9 percent); engineering—84 of 2,474 (3.4 percent); and biological sciences 109 of 3,654 (3.0 percent).

Additionally, as noted previously, data reveal that HBCUs are the primary producers of African American undergraduate students who pursue graduate and doctoral degrees in science and technology (S&T) areas. Specifically,

—Forty-two percent of all the PhDs earned each year by African Americans are earned by graduates of HBCUs; 18 of the top 23 producers of African Americans who go on to receive science-related PhDs are HBCUs.
—HBCUs are 4 of the top 10 producers of successful African American medical school applicants. Those four HBCUs produce 20 percent more African American applicants than the other six combined.
—Eight of the top 10 producers of African American engineers are HBCUs.

THE ROLE OF THE FEDERAL GOVERNMENT IN EDUCATIONAL RESEARCH AND DEVELOPMENT

Historically, funding for federally-sponsored R&D activities have been concentrated in a very small number of institutions of higher education and states that were in the best position to take advantage of an explosion in federally-funded academic research following World War II. As A. Hunter Dupree notes in his book, “Science in the Federal Government” (1957), this targeting of resources resulted from a federal science policy that provided resources primarily to a select group of federally-initiated and supported institutions. He also notes in the concluding paragraphs of his treatise that a “democracy that has in fact enjoyed the results of science has been more tolerable, more humane, and more able to fulfill its responsibilities to its people . . . a government without considerable scientific competence could not have governed at all . . . science has not only contributed to the power of the government but to the ability of the people to maintain their freedom.”

In taking a first step across the threshold of the new millennium, industry, academia and policy makers increasingly are using federal R&D resources as a way to strengthen our nation’s global competitiveness and to ensure economic stability. Most recently, they have embraced a complex strategy that involves, in part, (1) doubling funding, over a multi-year period, for the National Institutes of Health (NIH) and NSF; (2) importing workers by expanding usage of H–1B certificates as an anecdote to the difficult challenges presented by the “digital divide” and growing shortage of technologically-skilled workers; and (3) increasing funding for internet development and expansion, and other programs related to telecommunications and information technologies (IT). In this climate, Dupree's supposition that science contributes not only to the power of government, but also to the ability of a people to maintain their freedom, has serious implications not only for the nation, but for African Americans and other underrepresented groups.

However, in order to participate more actively in the federal R&D enterprise, and to support national efforts to increase the number of Americans equipped with advanced science and technology (S&T) skills, a much larger number African Americans and persons from other minority groups will need to receive graduate degrees in S&T fields. In fact, reiterating disturbing trends that have been widely reported for almost two decades, an April 2000 report published by the National Science and Technology Council (NSTC) concludes that:

—Many types of science, technology, and engineering (ST&E) jobs are among the fastest growing in the U.S. workforce, to the point that demand for workers has outstripped supply;
—There is already evidence that worker shortages are limiting economic growth;
—The potential shortage of skilled workers could have devastating consequences for the future. Since it takes many years to train a scientist or engineer, we must invest now to guarantee the availability of a skilled and competent workforce for the 21st century;
—Agencies should expand or add programs that effectively overcome barriers such as the transition from one educational level to the next;
—It is in the national interest to vigorously pursue the development of domestic ST&E workers from all ethnic and gender groups. We should pay special attention to groups that are currently underrepresented in the ST&E workforce, because it is with these groups that much of our nation's growing talent pool resides.

Originally authorized in 1950, explicit in the NSF's mandate was a caveat to refrain from any "undue concentration" of funding for research and development. The legislation states:

"In exercising the authority and discharging the functions referred to in the foregoing subsections, it shall be an objective of the Foundation to strengthen research and education in the sciences and engineering, including independent research by individuals, throughout the United States, and to avoid undue concentration of such research and education." (42 U.S.C. 1862, Sec. 3e)

In light of this legislative guidance and for the reasons stated previously, NAFEO seeks sufficient funding to for programs that will engage more fully HBCUs in mainstream federally-sponsored research and development efforts.

This concludes my testimony. Again, on behalf of the National Association for Equal Opportunity in Higher Education, I want to thank you for the opportunity to appear before you today.

Prepared Statement of the NAHB Research Center

Mr. Chairman, Senator Mikulski and Members of the Subcommittee: I am pleased to appear before you today to request continued funding for the Partnership for Advancing Technology in Housing (PATH) initiative. I commend this Subcommittee for its foresight and leadership in providing funding for the PATH initiative. We believe PATH should not only be maintained but also increased, for if the PATH program is to achieve its 2010 goals it has to have a long term federal commitment, leveraging even greater investment by industry.

As you know, PATH is a voluntary initiative which seeks to accelerate the creation and widespread use of advanced technologies in order to radically improve the quality, durability, environmental performance, disaster resistance, energy efficiency and affordability of our nation's housing by 2010. These are ambitious goals. In fact, the National Academy of Sciences has suggested that they may be too ambitious given the limited funding allocated to the program to date. The industry steering committee agrees with the Academy's finding in this regard and has put together a task force to address redefining the goals in such a way that progress can be measured and the reasonableness of the goals evaluated.

I am pleased to report significant progress over the past year on many of the activities that were presented to the Subcommittee in the PATH Operating Plan. Yet, if America's homes are going to be more affordable, safer to build and to live in, more environmentally sensitive, and more durable, PATH still has a long way to go. In that regard, I would like to emphasize the research and technology activities that are underway as they speak to the long-term success of the program.

Technology roadmapping is the process of organizing research and development activities to help decide which technologies are worth spending time, money, and resources on. A roadmapping effort for PATH takes into consideration those home building technologies with the most potential to impact the PATH goals as well as ways to fund their research, development, dissemination, and use. The roadmapping process has, for the first time, brought together a broad and diverse segment of the home building industry together with government and academia to identify what technological developments are needed for PATH to achieve its goals. There have been hundreds of industry participants in this process working primarily in three areas: information technology to accelerate and streamline home building; advanced panelization systems; and, whole-house and building process redesign.

To illustrate both the complexity and the potential, I will talk specifically about just one area, that of information technology. Advancements in information technology offer exciting opportunities to build better homes at lower cost, but it is a complex undertaking. Process change that takes advantage of the benefits of current and emerging information technologies is critical to the undertaking. For example, if electronic permitting involves just electronic delivery of plans, little time is saved out of what could be a months-long process. However, if the application is checked in parallel by the various code departments and required changes are immediately transmitted to the contractor for initiating corrective actions, much more time can be saved during the process. Just this one example has to involve builders, manufacturers, local government leadership, code departments, software manufacturers, and other players. But, the payoff can be very significant, and potentially a significant contributor to meeting the 2010 goals set for the program.

Industry investment in PATH is considerable. Although there was skepticism at the outset that a government partnership could make a difference, industry participation has been exceptional. Private sector commitments to cooperative research projects with the federal government under PATH now exceed $5 million. In addition, it is estimated that PATH leverages another $50 million in private sector research and development that is directed toward APTH program goals. New Cooperative Research and Development initiatives have been instigated with seed funding from HUD and the PATH Program. A program with the CertainTeed Corporation is aimed at increasing the affordability and quality of homes by finding efficiencies in the basic approach used to build homes, with an emphasis on business and construction processes. Results will provide savings to be shared with subcontractors and their labor crews to build a more stable workforce. Other exciting cooperative efforts include: optimizing the use of steel in production home building, 11 grants to 9 Universities co-funded by PATH and NSF for basic research on new technologies that will support the next generation of U.S. housing, and multiple projects in partnership with NIST and industry leaders from Dow Corning, GE Plastics, Rohm & Haas, and others on nonproprietary research to improve long-term performance of building materials.

Field Evaluations and Demonstrations are underway involving the support of approximately thirty builders and remodelers across the U.S. who are helping the Research Center to evaluate emerging technologies in their housing projects. In addition, there are field evaluations underway with non-profit groups such as Habitat for Humanity and several projects with the American Lung Association to monitor indoor air quality which are coming up with interesting findings. The results of these evaluations and demonstrations will be communicated broadly to the industry through the ToolBase program described below, as well as through the HUD website. Industry commitment to date in these evaluation activities is substantial and will continue to grow as new technologies are developed to address the PATH goals and builders from across the country offer to evaluate their performance, installed cost, installation issues, and consumer acceptance in real world housing projects.

Both industry and government agree that essential to improving the bricks and mortar of our housing and achieving the PATH goals is a strong information dissemination effort.

Communications and Outreach for the PATH program is accomplished through the NAHB Research Center's ToolBase program. Because the building industry is comprised of over 200,000 firms, many innovations do not achieve market acceptance for 15–20 years. The Research Center built a new communications infrastructure for reaching these companies quickly and efficiently to let them know of emerging problems in the field but also to help them find technical solutions that they can immediately put into practice. Through PATH program support this ToolBase program has expanded its technical offerings to builders and contractors and has set up new mechanisms for learning about problems in the field that can be solved through technical research and development. A technical hotline is in place that fields between 8,000 and 10,000 calls each year. Hotline staff help builders understand what resources are available to help them make decisions on the use of new technologies. A technical newsletter is distributed six times per year to over 80,000 companies through their local home builder associations. A wide range of resources is now available on the Internet, including an Ask the Expert page that allows the industry to find solutions on-line and a new E-News monthly technology news service that is distributed for free to subscribers. The ToolBase program reports the results of PATH program results directly to the industry so that we can help them reduce the time that it takes to bring innovative new products to market. ToolBase is another source of industry investment in the PATH program. Over $3 million has been invested by the private sector to date in the development of the ToolBase communications infrastructure.

Outreach to the industry is also accomplished through the specialty trade shows and conferences. In February, PATH co-sponsored TecHOMExpo in Atlanta, Georgia putting on over 20 educational programs and over 100,000 square feet of exhibits. Both PATH and EPA are sponsors and advisors for the National Green Building Conference. This year's conference in Seattle, Washington March 18–20, included participation from the Sierra Club and the American Association for the Advancement of Science (AAAS). PATH is a contributing sponsor for this event, sits on the advisory committee, and led two education sessions for attendees.

While much has been accomplished, there is still much to do. The current PATH budget level of $10 million will not fully support, in a timely manner, the research and development needs identified through the roadmapping process. If the subcommittee's budget allocation permits, we believe an additional $3 million, for a program level of $13 million, could leverage a much higher rate of industry involvement and increased private sector research and development.

Again, members of the subcommittee, we thank you for your leadership in support of the PATH initiative, and please let me know if we can answer any questions.

PREPARED STATEMENT OF THE SOCIETY FOR NEUROSCIENCE

Mr. Chairman my name is Donald Price. I am the President of the Society for Neuroscience and a Professor of Pathology, Neurology, and Neuroscience at The Johns Hopkins University School of Medicine. I am also Director of the Division of Neuropathology and Director of the Alzheimer's Disease Research Center. I also serve as the Co-Director of the Parkinson's Disease Research Center and Co-Director of the Amyotrophic Lateral Sclerosis Research Center at The Johns Hopkins Hospital and The Johns Hopkins University School of Medicine. I am testifying on behalf of the Society for Neuroscience, the largest scientific organization in the world dedicated to the study of the brain and nervous system. Neuroscience forms the fundamental basis of the medical specialties of psychiatry, neurology, neurosurgery, and an important portion of many other medical specialties including anesthesia, endocrinology, geriatrics, internal medicine, ophthalmology, otolaryngology, pediatrics, and rehabilitation medicine. The Society for Neuroscience numbers among its members more than 28,000 basic and clinical researchers affiliated with universities, hospitals and scientific institutions throughout North America and in other countries.

Chairman Bond, the Society appreciates this opportunity to give testimony, and we thank the members of this Subcommittee and the entire Congress for the priority that was placed on funding biomedical research at the National Science Foundation (NSF) and the Veterans Administration (VA) last year.

The Society for Neuroscience requests increased research funding for the National Science Foundation and for the Department of Veterans Affairs to facilitate the progress of research already being conducted at these institutions, and to aid in the funding of future projects and grants.

NATIONAL SCIENCE FOUNDATION

The NSF is one of our nation's premier scientific agencies and is responsible for extraordinary contributions to a broad range of scientific knowledge cutting across numerous scientific disciplines. The success of the research funded by NSF is evidenced by the over 100 Nobel prizes that have been awarded to researchers supported by NSF grants. The cross-cutting nature of the scientific research supported by NSF grants has allowed investigators from each of the separate scientific disciplines to benefit from the work performed by colleagues in other fields. NSF-supported research embodies a collaborative enterprise and the results have provided immense benefits in our search for knowledge, and in our search for treatments and cures to deadly diseases.

The President's fiscal year 2002 budget for the National Science Foundation requests $4.5 billion, a one percent increase over fiscal year 2001. While additional details regarding the President's budget have not yet been made available, this recommendation is particularly disappointing considering the strong support the Congress demonstrated last year by providing NSF with a nearly 14 percent increase. The Society for Neuroscience strongly recommends substantial increases in funding for the National Science Foundation in line with the increase provided by Congress last year.

NSF-supported neuroscience research has played a major role in improving our understanding of neurological and mental disorders. The quality of this research was once again recognized by the Nobel Assembly with the awarding last year of the Nobel Prize in Physiology or Medicine to Dr. Paul Greengard, an NSF grantee. (This was a joint award to Dr. Greengard and two other scientists). Dr. Greengard's research has resulted in a substantially increased understanding of how the brain and nervous system function at the molecular level. Greengard's work has helped us understand how dopamine and several other chemical transmitters exert their effects in the nerve cell.

In addition to the pioneering research conducted by Dr. Greengard, NSF funds hundreds of studies in the area of basic neuroscience, and these studies have contributed immensely to our knowledge of the brain and central nervous system. The cross-disciplinary approach employed by NSF is particularly beneficial to research on the brain and central nervous system. New engineering advances, for example, have led to new and more powerful imaging technologies, which have greatly aided researchers in their study of the brain.

The Society for Neuroscience strongly supports the National Nanotechnology Initiative announced last year. Nanotechnology—the ability to manipulate individual atoms and molecules—has the potential to change the way in which almost everything is made, including new medicines. The Society urges continued support for this important initiative and recognition of nanotechnology as a high priority area of research.

DEPARTMENT OF VETERANS AFFAIRS

VA-sponsored research is unique among many of the federal research programs in that the majority of its work involves clinical research performed by physician investigators. The nation's medical research enterprise benefits, our nation's veterans benefit, and we all benefit from the VA's ability to integrate clinical and basic research. This integration allows the VA to effectively promote the rapid transfer of new medical knowledge from bench to bedside.

The Society for Neuroscience asks that this Subcommittee provide sustained increases in funding for medical research at the VA that is in line with the nearly 10 percent increase provided last year. We support the recommendations of the Friends of the VA Medical Care and Health Research (FOVA) coalition and the Independent Budget for the Veteran's Administration. Both organizations have recommended an increase of $45 million for the VA's Medical and Prosthetic Research Program, an increase of 12.5 percent over last year's funding level.

Funding for the VA Medical and Prosthetic Research Program has gone through periods of stagnation and sporadic increases over the last several years. This important medical research program was suffering from relatively flat funding levels for several years with the notable exception of fiscal year 1999 and fiscal year 2001 when Congress provided increases of 16 percent and 9 percent respectively. I would also note that the VA has consistently stated that it could do much more if it is provided with additional resources. Last year, for example, the VA requested an increase of $76 million. Unfortunately, this request did not make it past the Office of Management and Budget (OMB), which slashed the agency's request for an increase in research funds to $0. Congress wisely rejected this recommendation.

The VA has identified four major areas in which it would put additional funds to use. The neurosciences are included in all of these major areas. First, are major new treatment studies in Parkinson's disease, Post-Traumatic Stress Disorder (PTSD), diabetes, and other areas. Second is improvement in the VA's quality enhancement research initiative. The VA has stated that this initiative is severely underfunded in vitally important areas including mental health, spinal cord injury, stroke, cerebral vascular disease, and AIDS. The third major area identified by the VA is brain disease, with a focus on nerve regeneration and its application to spinal cord injury. This area of research represents a prime example of the importance of linking basic and clinical research. The fourth and final major area identified by the VA is what the agency refers to as bioscience. The VA noted in its testimony last year that its research efforts in diseases such as schizophrenia are severely underfunded. The agency also noted that it would be reducing its commitment to the VA centers of excellence by half in fiscal year 2000.

Mr. Chairman, the VA medical system serves a critically important role by providing our nation's veterans with access to highly skilled medical care while also providing researchers with an opportunity to conduct large, long-term, pivotal clinical trials benefiting all Americans. Unfortunately, flat funding levels for several years, with sporadic increases, have inhibited the VA's ability to recruit and maintain high-quality researchers.

SUMMARY

The Society for Neuroscience asks that this subcommittee support a $674 million, or 15 percent, increase over fiscal year 2001 for the total NSF budget, bringing it to $5.1 billion. The Society for Neuroscience recommends $395 million for the VA Medical and Prosthetic Research program in fiscal year 2002, an increase of $45 million, or 12.5 percent, over fiscal year 2001. We strongly believe that the research programs we advocate area worthy investment in our country's future, and we urge you to place NSF and VA research among the Subcommittee's highest priorities.

Thank you for the consideration of our request.

PREPARED STATEMENT OF THE COALITION OF EPSCOR STATES

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to submit this testimony on behalf of the Coalition of EPSCoR [1] regarding the National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR). I am the State Program Director for Alabama EPSCoR.

As most of you know, the Experimental Program to Stimulate Competitive Research (EPSCoR) was established at the National Science Foundation about 20 years ago to assist those states, which historically had not participated fully in federal research and development (R&D) funding to become more competitive, especially for NSF funding and later for NIH, DOD and other federal R&D funding. Historically, these states were less competitive than others throughout the nation for a variety of reasons—some tended to be rural and geographically isolated (at least prior to the Internet); others tended to be among the states with large numbers of students who were under-represented minorities or disadvantaged economically; and some were states that traditionally invested more heavily in an agriculture and a natural resource research base than a technological one. For these reasons the EPSCoR states simply did not benefit from the large federal institutional development investments made to universities and colleges in the 1950s and 1960s, as part of a national effort to broaden and strengthen the U.S. public university system and its R&D capability.

Helping these "less research intensive" states grow to be more competitive has become more important in recent years in order to overcome the concentration of federal R&D funding in a few states and institutions and to create a broader research community throughout the nation. Today, all states should be full participants in federal R&D efforts and federal R&D support should be available to qualified students and researchers wherever they are.

The EPSCoR program started with only five states. It grew to its current number of nineteen states and Puerto Rico as more states came to realize the need to raise the research capabilities to new levels in certain states, and the value of a program that emphasized infrastructure and capacity building. Simply funding faculty research proposals was never going to move these states to a level where they could contribute to local, state and national S&T needs and economic competitive goals.

The EPSCoR program remained a very small program for the first half of its life. Its budget was only $8 million federal-wide in 1990 for all the states. It has only been in the last seven to eight years that we have seen real increases in funding and the extension of the program to agencies outside of the NSF. For those of us in the EPSCoR states, these have been welcome advances but we also understand that they have been extremely modest in comparison to the overall increases in total federal R&D funding. We also know that research infrastructures are not developed overnight, especially with these modest investments.

Today, however, I want to emphasize the importance of this program to my state of Alabama and other participating states. Let me give you a few examples from Alabama. The Quantum Research Corporation in its 2000 State-at-a-Glance report

[1] Alabama, Alaska, Arkansas, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, North Dakota, Oklahoma, Puerto Rico, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming.

to NSF indicated that, over the life of the Alabama EPSCoR program, the NSF investment of $13 million in EPSCoR researchers in Alabama through 1996 has resulted in $56.1 million in non-EPSCoR awards to those same researchers from NSF, NASA and NIH; a 4.3 to 1 return. The return would be higher if DOE, EPA and other agencies were included.

How has the EPSCoR program allowed us to achieve such a return on NSF's investment? First and most importantly, the EPSCoR program builds capacity. It does not simply support research by individual faculty, but rather, assists us in securing the equipment, faculty start-up packages, graduate students, professional development opportunities and other things that enable our institutions to compete for other funding. These are the basic infrastructure needs in most institutions seeking to expand their research programs.

The cornerstone of the NSF EPSCoR program is the Research Infrastructure Improvement (RII) awards. It is these awards that have proven to be so highly successful and critically important to the states' efforts to increase and sustain a more focused and competitive academic science and technology base. It is the RII awards that strengthen our ability to compete favorably for mainstream program funds at the NSF, other agencies and for private sector dollars.

In addition to infrastructure, there is a component in the NSF EPSCoR called co-funding. This is designed to help EPSCoR researchers obtain research support from the regular NSF funding streams. The co-funded projects are supported by a combination of funds from the EPSCoR program itself and also from funding in the NSF Research Directorates. NSF plans to continue and expand co-funding, which we also support, but again, we do not want co-funding to divert resources from the critical need for infrastructure development.

To give you a concrete example of an EPSCoR program, I will highlight Alabama's NSF EPSCoR programs. On February 1, 2001, the Alabama EPSCoR was awarded a Research Improvement Infrastructure grant from NSF that will bring $9 million of NSF funds along with $5.9 million of non-federal matching funds over three years. This new RII grant will fund research development activities at eight institutions of higher learning in Alabama: Alabama A&M University (AAMU), the University of Alabama (UA), the University of Alabama at Birmingham (UAB), the University of Alabama at Huntsville (UAH), Tuskegee University (TU), the University of South Alabama (USA), Shelton State Community College and education efforts at K–12 institutions: Alabama School of Math and Science in Mobile and Tuscaloosa County Schools. The project includes thirteen industrial partners from Alabama, Colorado, Kansas, New York, and California and additional partnerships with NASA and Oak Ridge National Laboratory. While the specific R&D areas under development vary across states, Alabama's program is similar to EPSCoR efforts in the other 19 participating states.

Within the EPSCoR programs in every state, efforts continue to identify (1) research areas in which to concentrate limited state resources and (2) the barriers that must be removed to attain nationally competitive science and engineering research and education programs in Alabama. A critical need for EPSCoR states and universities is to overcome a lack of critical mass (i.e. too few faculty in a given area of research) by collaborating inside the state and with outside partners. In Alabama, to build critical mass, increase shared resources, and improve human resource development, the new NSF project supports the development of three Centers of Excellence and an Interconnective high-speed computing networking infrastructure:

—*Alabama Structural Biology Consortium (ASBC)*.—At three universities (UAH, USA, and UAB) researchers are addressing important scientific problems through collaborative use of expensive instrumentation and specialized expertise, while fostering partnerships with our biotech industries;

—*Integrated Micro-Electromechanical Systems (IMEMS)*.—UAH, AU, TU, and UA propose a new IMEMS facility on the University of Alabama at Huntsville campus that will expand existing technology in the State by improving and building on micromachining and nano/microfabrication capabilities for fiber-optics and chip production (a critical need for local industry.

—*Large-Scale Electromechanical Systems (LEMS)*.—Composed of two Alabama universities, one community college, one university from another EPSCoR state, a K–12 institution, 11 industrial partners, and two federal laboratories/agencies, LEMS will expand existing capabilities for economic development in medium-and large-scale mechanical systems used by industry while increasing the pool of researchers and training practitioners/technicians to meet Industry's need for a highly skilled workforce.

—*Internet2 Initiative*.—The NSF recognized Alabama's leadership in the computational sciences by supporting the "Alabama Internet 2" project which has constructed a high performance communications network connecting the Alabama

Supercomputer Center and seven of Alabama's research universities. This network has begun to allow Alabama to become more competitive with other states that already have a high performance network for research and education. Internet 2 has reduced research costs and time. Any faculty member on a given research campus now has direct, and timely, access to resources that are not physically close to the campus. The ability to access data, instrumentation, and collaborate electronically allows both increased interaction and competition equal with the rest of the research community.

I would like to point out that when NSF announced several years ago a vBNS connections program that was to create a second generation Internet for research purposes, the early announcements mentioned connecting up to 100 institutions to the new network. In the first three competitions, of the more than 70 awards granted, only one went to an EPSCoR state. Almost one-third of the country was again being left out of a major program that was likely to impact research competitiveness for many years to come. Furthermore, it was this same one-third of the country—the EPSCoR states and universities (which needed this infrastructure most and which stood to gain more than others because of geographic isolation.

Fortunately, through the excellent efforts of the EPSCoR office at NSF, the program officers in the NSF's Computer Information Science and Engineering (CISE) Directorate, and perhaps a little noise from our states, there is now at least one high-speed connection in every state, including all the EPSCoR states. Furthermore, we have been brought into a number of the associated programs, which are working on a national supercomputing grid, applications and uses of the network, and distance education.

We currently have many of the same concerns that we had over networking—that is, exclusion—from other new initiatives such as nanotechnology, biodiversity, information technology, workforce training and development. These are new initiatives at NSF. They are important initiatives for the economy of our states and the U.S. competitiveness in the global marketplace. They are important to future economic vitality and growth in every state. In a mobile society and a global economy that is highly dependent upon science and technology, no state can afford to be left behind in these important endeavors.

NSF EPSCoR is helping us ensure, through its research infrastructure improvement awards and co-funding, that our states have an opportunity to develop these new fields. This is vitally important to the economy of each of our states and especially to our young people who live therein. Despite increased mobility, the vast majority of students still attend college within 100 miles of home. EPSCoR helps to guarantee that students and residents of all states have the access to high-quality education, front-line research, and the quality of life and jobs that comes with an active and competitive R&D base.

The EPSCoR program solicitation, released in January 2000 allowed states to request up to $3 million a year for three years during the competitions held after July 2000. Consequently, we urge the subcommittee to continue support for EPSCoR by appropriating $90 million in fiscal year 2002 funding for the NSF EPSCoR core program in the NSF Education and Human Resources Directorate. This funding will: (1) allow the NSF EPSCoR program to implement its expanded core program to continue building our infrastructure and expertise in areas of scientific importance to the states and nation; and (2) increase co-funding and assistance to our states so that the number of scientists and engineers in the EPSCoR states and universities that receive competitive federal R&D support continues to grow.

In this regard we are particularly supportive of NSF efforts to increase our participation in large-scale initiatives such as the Integrative Graduate Education and Research Traineeship (IGERT), materials science initiatives, nano-scale initiatives, and the new large-scale centers for learning and teaching. I would like to note that in Alabama, the Talladega Wetland Ecosystem recently won a prestigious NSF-IGERT grant to fund faculty in the departments of biological sciences, geography and geology; allowing research into real-world problem solving via "externships" with federal/state agencies, and a new course curriculum using distance learning technology.

While EPSCoR is very important to us, on behalf of the Coalition of EPSCoR states, I would like to express our support for a strong NSF budget in fiscal year 2002. NSF is the only federal agency whose singular mission is the support of basic research and education across scientific, mathematical, and engineering disciplines. Furthermore, NSF awarded more than two-thirds of the NSF budget to colleges and universities for research and education activities in fiscal year 1999. As Federal Reserve Board Chairman Alan Greenspan said, "If we are to remain preeminent in transforming knowledge into economic value, America's system of higher education must remain the world's leader in generating scientific and technological breakthroughs and in meeting the challenge to educate workers.” NSF’s programs are at the heart of a new knowledge generation across all fields.

On behalf of the Coalition of EPSCoR states, I am here to tell you that the relatively modest NSF investment in EPSCoR is playing a unique role in developing a truly nationwide science and technology capability. A strong EPSCoR is a sound investment for our nation’s future. A strong budget for NSF however, is critical to increased inclusion of talented scientists and students in science and technology.

The activities sponsored by the Alabama EPSCoR affect the lives of Alabama citizens in numerous ways. Our activities have increased economic development, health care, technology, education, research and communication in Alabama.

We appreciate the strong support you have given us in the past. We have used the EPSCoR funding wisely to benefit our states and the nation, and we hope that you will continue to work with us on this issue in the coming year.

As you also know, Congress has appropriated $10 million for the NASA EPSCoR program in each of the last three fiscal years. Currently, there are twenty states that are eligible for NASA EPSCoR, but only half have ever received a NASA EPSCoR implementation award. We ask for a $12 million appropriation in fiscal year 2002 to increase state participation in NASA EPSCoR. In the fall of 2000, following a planning process in each state, NASA issued a new solicitation for EPSCoR proposals in the states. Each state has now submitted proposals and new awards will be made shortly. The $12 million requested would provide continued support for 10 states currently in the program and new research infrastructure awards to more states. Also, a small amount, less than $1 million would be available, for outreach and technical assistance to the states. EPSCoR is a small program at NASA but it is very important for the 20 states that participate in it. Its high technology focus truly allows these states to become research partners in activities that would otherwise likely be closed to them.

Thank you for your consideration of this request.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Prepared Statement of the Association of American Universities

The Space Science Working Group (SSWG) of the Association of American Universities includes several hundred space scientists at approximately fifty universities nationwide. SSWG scientists work in all three NASA science areas (Office of Space Sciences, OSS; Earth Science Enterprise, ESE; Office of Biological and Physical Research, OBPR), building instruments for NASA missions, carrying out experimental and theoretical investigations, and bringing hands-on experience of exciting NASA science to graduate and undergraduate students. Areas of interest and concern to us this year include:

—International Traffic in Arms Regulations (ITAR),
—International Space Station (ISS) descoping,
—Research & Analysis and Data Analysis funding, and
—Cancellation of the UnESS program in the Office of Earth Science.

GENERAL ISSUES

International Traffic in Arms Regulations (ITAR)

Last year, this Subcommittee included language in both the House and conference reports that directed the Office of Science and Technology Policy (OSTP) to work jointly with the National Security Council, NASA Administrator, and the Secretary of State to expeditiously issue clarification of ITAR in order to relieve pressure on university collaborations and personnel exchanges. The review was to be completed within 120 days of enactment.

Over the last year, increasingly strict interpretations of the ITAR regulations have continued to frustrate university scientists. Clarification has yet to be issued, although we understand that negotiations are continuing between NASA, OSTP, and the State Department. We appreciate the attention that OSTP and the NASA Administrator’s office have given to this issue. The State Department’s Science Advisor has also been very supportive. Nevertheless, given the change in administrations and the resultant loss of knowledgeable personnel, we are concerned that if clarification is not issued within the next few weeks, we may find ourselves back at the starting point once again.

Science is an international activity, and space science in particular has long thrived through collaboration with foreign-born colleagues. We continue to believe that ITAR restrictions on scientists carrying out unclassified research on civilian spacecraft do not serve any national security purpose. Carrying out spaceflight missions is a difficult task for researchers in and of itself; carrying out this activity in a thicket of legal restrictions with threats of huge personal fines is impossible. It will shut off collaboration with our foreign colleagues, causing U.S. researchers to "go it alone" in space research, to everyone's loss. Some universities have already declined to participate in certain NASA projects given the legal uncertainties.

While recognizing that ITAR is not a budget issue, we nevertheless ask for your continued support in clarifying that these ITAR restrictions are not applicable to civilian, unclassified, fundamental space science research. We note that an existing directive, National Security Decision Directive 189, competently addresses the issue we are facing and that, by simply affirming its viability and its applicability to U.S. universities' aeronautics programs and space-based research, the need for a complicated fix can be avoided. We recognize that other Congressional committees have jurisdiction over this matter as well, and we will also work with them to resolve this matter.

Possible Impacts on Science of the International Space Station (ISS) Decsoping

The SSWG is aware of the potential $4 billion cost overrun of the International Space Station (ISS) over the next five years. We are greatly concerned, however, that the resultant descoping will jeopardize the science programs and urge that steps be taken to protect research capabilities. The quality of the research facilities is a crucial factor in determining the value of the ISS scientific program. Experience accumulated over the last fifteen years has taught us how to design experimental instrumentation that will maximize the productivity of on-orbit research. This includes the availability of versatile and reconfigurable scientific capabilities that will be "permanently" available on the ISS and hardware that mimics Earth-based instruments. Such basic infrastructure is required to minimize the amount of traffic to and from low-Earth orbit. The availability of the currently scheduled major science facilities must be protected from any budget cutback. Productivity on the ISS will be shown to be a major improvement over the old Shuttle-Spacelab-Mir era through the use of dedicated research facilities.

There is already a queue of over one hundred flight investigations waiting their turn for access to these on-orbit facilities. These investigations encompass five disciplines in the physical sciences in addition to biological and biomedical research. Although NASA emphasizes the biomedical research associated with crew health maintenance and preservation, a large number of investigations address cutting-edge scientific problems of fundamental importance, but also with direct application to Earth-based technological, industrial, and health issues. Advances in the scientific understanding of these issues can be significantly advanced through low-gravity experiments.

The astrophysics community is also concerned about possible large scale descoping. One highly rated near-term mission concept, the Advanced Cosmic Ray Composition Experiment for the Space Station (ACCESS), is critically dependent on an ISS berth. This mission will measure the composition of high-energy cosmic rays, the origin of which is problematical. This information will be used to directly test the idea that these relativistic particles originate in supernova explosions. The astronomical community is committed to development of ACCESS, and the mission is an important part of the Office of Space Science Strategic plan, a consensus document crafted with strong participation by academic scientists. The mission is featured prominently in the priority lists of the recently issued National Research Council report on "Astronomy and Astrophysics in the New Millenium", the McKee-Taylor Decade report. This massive mission would be vastly more expensive as a free-flyer, and the SSWG wishes to underscore the importance of a berth for it on the ISS. The same P3 berth on the truss will be used later for the X-Ray Imaging Survey Telescope (EXIST) which will survey the universe for black holes.

OFFICE OF SPACE SCIENCE (OSS)

Current and Future Initiatives

The launch and successful deployment of Chandra, the third of four in the Great Observatories series, has marked our country's leadership in X-ray astronomy, and has already resulted in important and fascinating discoveries. The observatory has identified the distant galaxies that account for the diffuse X-ray background, and has worked with the Hubble Space Telescope to provide a new understanding of supermassive black holes in the centers of galaxies like our own. Galileo and Mars Surveyor have uncovered evidence of large quantities of water on Mars and two moons of Jupiter. The touchdown of the NEAR spacecraft on the asteroid Eros was an event that, in particular, captured public enthusiasm. All of these missions have strong academic components, and much of the key science has come out of the university environment. Moreover, their success augurs well for future achievements by the Mars and Discovery programs.

The budget blueprint refers to funding for development of critical technology to support future decisions on high-energy astrophysics missions. The SSWG enthusiastically supports such funding, and points out that such funds have been virtually non-existent for several years. With the successful development of the Chandra Observatory, our community looks ahead to top priority projects like Constellation-X and LISA. While these mission concepts are well understood and have goals that are clearly achievable, the economy with which they are developed and realization of their full capabilities will benefit from a strategic investment of resources in, for example, detector technology and formation flying. As part of the Supporting Research and Technology (SR&T) line, these funds will be actively competed for by academia.

Strategic Planning

The SSWG notes that the triennial strategic planning exercise for NASA is now complete, with responsibly prioritized missions. The OSS strategic plan is entirely consistent with the community needs for astrophysics that have been expressed in the McKee-Taylor Decade Report. Hard choices have been made, and our community is ready to move forward.

Research and Analysis (R&A) and Data Analysis (DA)

The SSWG would like to thank the committee for its interest in and support for the Research and Analysis program line in the last fiscal year. This program line is built on the recognition that creative ideas for future missions can come out of basic, non-mission-specific research. Such research includes laboratory studies, theoretical studies, and development and validation of new instrument concepts. The SSWG would like to underscore the importance of this funding line to academic institutions around the country. Distributed mostly in the form of small grants, the line provides for on-the-job training for the next generation of space scientists, and engages them in far-term thinking about strategic needs. The SSWG applauds the triennial Senior Review of this funding. Such reviews allow NASA to allocate the limited funding in a way that is best suited to meeting the long-range goals of the strategic plans of the agency.

The SSWG also notes that many of the R&A needs of astronomy programs supported by the National Science Foundation parallel those supported by NASA. Flexible resources for research are a critical element of a healthy national science policy, and are, in fact, a major part of the mission of the NSF. The ongoing lean budgets for R&A at NASA and for the astronomy grants program at NSF are, therefore, major weaknesses in U.S. astronomical research efforts.

Problems continue to exist in Supporting Research and Technology line, however. For example, in the solar system exploration area, funds for mission operations and data analysis continue to be tight, meaning that important scientific research is not being supported. Slow processing of research grants that have been selected for funding has exacerbated the problem.

OFFICE OF BIOLOGICAL AND PHYSICAL RESEARCH (BPR)

The life and microgravity science communities were generally encouraged last year by the creation of a new Enterprise for biological and physical research. Establishing the new Office of Biological and Physical Research (OBPR) underscored the growing importance of these disciplines within NASA. However, recent events have led to extreme concerns regarding the future of these disciplines and their communities. Rather than demonstrating the expected significant growth of a new Enterprise, the complete loss of one, or more, of these disciplines is a real possibility.

The fiscal year 2002 proposal for the OBPR shows no significant increase over fiscal year 2001, except for modest gains in the level of support to the National Space Biomedical Research Institute. This was not unexpected considering the recent creation of the Enterprise. However, the recent budget outline announced by the Administration projects only slightly increased funding for NASA, concurrent with significant cost overruns in the International Space Station (ISS) Program. To internally absorb these deficits, as noted earlier, NASA has identified significant reductions in ISS infrastructure (deferral of habitation and propulsion modules, deletion of the crew return vehicle, and reduction of solar array power capacity). As these measures will be insufficient to meet the deficit requirement, additional ISS assets (i.e., the centrifuge accommodation module (CAM) and its research equipment complement—all items of international barter agreements), discipline ground research programs, and recently-added Shuttle research missions are also threatened with cancellation. As NASA has removed all other alternatives to flying existing hardware (Spacelab and free-flyers), these disciplines have only one access mechanism to the microgravity environment—ISS. Thus, for example, a fifty percent reduction in ISS crew size, coupled with a loss of the CAM, glovebox, habitats and habitat holding racks is tantamount to elimination of the Fundamental Biology Program within NASA.

A significant multi-disciplinary microgravity research community also has evolved over the years. All the supported research is nationally competed and rigorously peer-reviewed. One part of the research program (fundamental physics) includes seven Nobel laureates who are still active investigators. There is a very strong ground-based component of the program in addition to the flight investigations portion. Like the biology program, this discipline would be severely impacted by significant descoping.

The SSWG recognizes and appreciates the Congressional support these disciplines have received in the past. We are requesting continued Congressional support in urging NASA to protect the biological and physical research communities. This requires strengthening and protecting the ground-based research programs, including expansion of the investigator-initiated research initiatives. We would also request that NASA, in collaboration with these communities, be urged to undertake a review of options for a free-flyer program to provide an alternate mechanism of access to the microgravity environment for these communities.

EARTH SCIENCE ENTERPRISE (ESE)

The SSWG was pleased to see in the budget blueprint recognition that the outyear plan for the second generation of Earth Observing System (EOS) satellites has been underfunded in recent years, and that the fiscal year 2002 request will include a five-percent increase for a science-driven EOS Follow-On program. We hope that such a program will be fully supported by Congress.

As is the case in the Office of Space Science, funding of the R&A components of the Earth Science program continue to be of concern. We urge that the ESE R&A program be strengthened and shielded from budgetary raids.

We were perplexed by the cancellation of the University Class Earth System Science (UnESS) program in NASA's fiscal year 2002 request. The UnESS program provides an ideal framework for the education and training of students for future roles in the United States space industry, and for leadership by faculty and universities in the Earth Science Enterprise (ESE). Dr. Ghassem Asrar, Associate Administrator for Earth Sciences, has described UnESS as a key program for educating the next generation of Earth system scientists, engineers, and managers. This connection between education and training is vital to the continued technical excellence of academic programs in the space sciences throughout the country. The size and scope of the UnESS missions are specifically limited to enable a university-led team to conceptualize, design, develop, test, launch, and operate a useful scientific mission in a relatively short time frame. Because of its education role, UnESS is a critical element for maintaining U.S. leadership in the space science of Planet Earth during a period when a major fraction of our nation's technical workforce is nearing retirement.

In developing UnESS, NASA aims to remove the most significant obstacle to the productive use of ESE science and technology in the public and private sector by ensuring that end-users of mission products are a part of the mission team from development to applications. We believe that the UnESS program is of tremendous value to both the scientific and educational missions of NASA and would urge its continuation.

OTHER ISSUES

Space Grant Colleges

The SSWG has often pointed out the important outreach role that space research plays. A glance at news media, educational television, or the crowds at the Air and Space Museum makes it clear that the high technology "Aerospace Adventure" engages young and old alike. Probably more than any other area of modern research, space science has the capacity to interest young people in the hard questions of research, and to focus their interests onto pursuing technical studies in school that prepare them for the workplace of tomorrow. The Space Grant College system continues to play an important and successful role in workforce development through its university programs and its outreach to elementary and secondary school students. Its matching funds result in a highly leveraged program. We hope that the Subcommittee will fund the Space Grant effort at its authorized level of $28 million for the coming year.

Thank you for your attention to these matters.

PREPARED STATEMENT OF THE AMERICAN MUSEUM OF NATURAL HISTORY

Good afternoon, Mr. Chairman and Members of the Subcommittee. My name is Darrel Frost, and I am Associate Dean of Science for Collections at the American Museum of Natural History. I very much appreciate the opportunity to submit testimony in support of the National Aeronautics and Space Administration [NASA] and the National Science Foundation [NSF], and to summarize both our accomplishments during the past year and our planned initiatives and objectives for fiscal year 2002. Most of all, I want to thank this Subcommittee for all the contributions it has made to scientific research and education in this nation and at the American Museum.

This Subcommittee, with a scope that includes the NSF and NASA, plays a pivotal role in our nation's science and education enterprises. The future of our research and development; our science, math, engineering, and technology education; and our 21st century workforce in many respects rests here.

The National Science Foundation, under distinguished leadership, is pursuing key initiatives that include research on information technology, mathematics, biocomplexity, and the nation's workforce. These initiatives, as well as the core research and education programs, require funding at significantly increased levels for real growth.

NASA, under its skilled leadership, captures the nation's spirit and invigorates the thirst for exploration into the unknown. Every day at the Museum we see evidence that NASA powers the public's imagination. To continue to expand understanding of our planet, our solar system, and the universe, investment in NASA must be strong. We ask the Subcommittee to fund NASA at the increased levels necessary to advance its goals in cutting-edge R&D, breakthrough technologies, educational excellence, and collaborations and partnerships. As this testimony will demonstrate, such funding is vital for NASA to maintain the national science education leadership it has asserted through its successful partnerships with the American Museum and others in the informal science education community.

Let me now review for you the American Museum's accomplishments and plans.

ABOUT THE AMERICAN MUSEUM OF NATURAL HISTORY

The American Museum of Natural History is one of the nation's preeminent institutions for scientific research and public education. Since its founding in 1869, the Museum has pursued its mission to "discover, interpret, and disseminate—through scientific research and education—knowledge about human cultures, the natural world, and the universe." It is renowned for its exhibitions and collections of more than 32 million specimens and cultural artifacts. Its audience of nearly five million annual visitors—approximately half of them children—is one of the largest, fastest growing, and most diverse of any museum in the country. More than 200 Museum scientists conduct groundbreaking research, in fields ranging from systematic biology and comparative genomics to earth sciences and astrophysics. Their work forms the basis for all the Museum's activities that seek to explain complex issues, dispel misconceptions, and help people to understand the events and processes that created and continue to shape the Earth, life and civilization on this planet, and the universe beyond.

NASA PARTNERSHIP

In 1997, under the leadership of Congress, the American Museum joined in a close educational and scientific partnership with NASA to advance the shared goal of fostering scientific literacy nationwide. This partnership has been extraordinarily productive and has helped to build a unique national education resource created with private funding catalyzed by the federal contribution. Together the American Museum and NASA have been exploring the frontiers of science and reaching millions of Americans with joint science education efforts. We have established the National Center for Science Literacy, Education, and Technology [NSCLET] and partnered in life and microgravity, space, and earth sciences research. Together we have asserted critical national leadership in science education, conveying the excitement and awe of research and exploration for a rapidly expanding audience of many millions of visitors onsite and online.

Rose Center for Earth and Space

In the past year, a dramatic and exciting one, we have deepened and enhanced our NASA partnership, as the overwhelming response to the Museum's new Rose Center for Earth and Space demonstrates. February 2001 marked the Rose Center's first anniversary. Greeted with critical and popular acclaim and record-setting attendance surpassing all projections, the Rose Center includes a rebuilt Hayden

Planetarium, Cullman Hall of the Universe, and Gottesman Hall of Planet Earth. Throughout this dramatic facility, innovative exhibits and up-to-the-minute science displays attest to the ongoing success of our collaborations with NASA. The Digital Galaxy Mapping Project, for example, has come to spectacular fruition in the Planetarium's Space Show. In this joint effort, the AMNH scientific and technical team, working in concert with NASA scientists and engineers, have brought together diverse datasets to create a scientifically accurate three-dimensional map of the galaxy that has enthralled and educated the more than one million new visitors who have visited since the Rose Center opened.

Concurrent with the Rose Center, the Museum also launched an ambitious and thriving astrophysics research program that now includes eight scientists. The Planetarium's Space Theatre provides an assemblage of the most powerful and sophisticated scientific visualization tools ever designed and full-dome, three-dimensional views of massive datasets. Museum astrophysicists use these unparalleled tools for three-dimensional data "mining" and display their observational, theoretical, and computational research programs. These tools are, in fact, a resource to the international scientific community and were showcased at a spring 2000 Museum conference, "Stellar Collisions, Mergers, and Their Consequences."

National Center Science Bulletins and Families of Products

The Museum's National Center for Science Literacy, Education, and Technology has developed high quality, technology intensive education materials and programs that bring cutting-edge science to students and teachers, to families and community settings. Since its inception the National Center has created more than 70 different websites; CD–ROMS; books; magazines for students, teachers, parents, and families; exhibition guides, and more. Fueled by our NASA collaborations, we have been able to forge partnerships with Time For Kids, Discovery, Classroom Connect, and others for disseminating these standards-based educational materials to a large national audience. And to help meet the need for well trained K–12 science teachers, NSCLET has introduced an innovative series of online science courses for teachers, taught by Museum scientists.

In the past year the National Center has also expanded the complexity and reach of its three interrelated Science Bulletins—the BioBulletin, EarthBulletin and AstroBulletin—in the Halls of Biodiversity, Planet Earth, and the Universe, respectively. These video reports, developed by AMNH teams in active collaboration with NASA facilities such as Goddard Space Flight Center, Goddard Institute for Space Studies, Langley Research Center, and the Jet Propulsion Lab, feature breaking global and space news in high definition wall displays. The BioBulletin presents stories on global biodiversity, using data accessible through remote sensing, Geographical Information Systems, and other technologies. The EarthBulletin broadcasts news on earth events such as earthquakes, floods, and atmospheric conditions. The dramatic 13.5-foot-long AstroBulletin showcases NASA news and data, displaying up-to-date images and events in space, including a log of current NASA missions. The public first saw the TRACE satellite's dramatic pictures of surging solar gases when NASA released them for public display in the AstroBulletin.

Near the Bulletins in each hall are touch screen computer kiosks that enable visitors to delve more deeply into the stories, and the Bulletins are also accessible to visitors everywhere on the Museum's website. The National Center has, as well, developed a coordinated distribution plan for sharing the Bulletins broadly in varied formats at science centers, museums, and informal learning venues around the country.

FISCAL YEAR 2002 AGENDA

The Rose Center's thrilling exhibitry, scientific visualization, the Digital Galaxy and Space Show, the National Center's technology intensive science education products, the popular Science Bulletins—these are some of our partnership's many benefits in promoting science education while delivering NASA education and research resources to a vast national and international audience.

To leverage the Museum's and NASA's investment in improving science education and literacy and to further our work together, the American Museum now seeks to institutionalize our partnership, building on our joint accomplishments while drawing fully on the Rose Center's reach and resources. We therefore request $4 million to establish at the Museum a NASA Program for Immersive and High Definition Education Display. Our proposed joint activities will include:

—*Scientific visualization.*—The Museum now has the vast technological and scientific capacity to produce digital programs to display the phenomena of the astrophysical universe. Drawing on the Digital Dome's unique visualization capacity, we propose ongoing advancement of the Digital Galaxy database and images to support new Hayden Planetarium space show components, coupled with dissemination of those components in varied formats suitable for partners in diverse venues.

—*Science Bulletins*.—The Museum proposes the Science Bulletins' advanced development, production, and systematic distribution to multiple audiences and sites. In the BioBulletin, EarthBulletin and Earth Event Wall, and AstroBulletin and Universe Wall, established under prior NASA agreements, we will continually enhance science content and coverage; expand capability for exploiting Geographical Information Systems [GIS], remote sensing, and other emerging technologies; and improve data structure to present breaking science news and NASA data to the public. We plan to distribute the Bulletins widely at sites of varied size and capacity throughout the country.

—*Networks*.—Access to ultra high speed communications networks is critical to the planned Museum-NASA activities. From computational astrophysics and scientific visualization to exhibition multimedia displays and distribution, the ongoing partnership requires access to state-of-the-art high-speed networks and advanced research and education applications.

As we seek to institutionalize the Museum's successful NASA partnership, let me stress the full power and reach of the platform we bring to our collaboration. Since the Rose Center opened, the American Museum's annual onsite audience has increased 45 percent, to nearly five million annual visitors. The number of visiting school groups has increased 28 percent. In addition to these onsite visitors, the Museum's website enjoys an average of more than 16,000 unique online visitors each day. The shared NASA and Museum efforts therefore are positioned in the years ahead to reach a combined onsite and online audience that could reasonably approach 10 million children, adults, families, teachers, and communities. This is a national and international museum audience without equal.

It is also important to point out that this partnership has succeeded on many levels, including the leveraging of the federal investment with nonfederal support, and the Museum plans to carry out all proposed programs with funds from nonfederal as well as federal sources. The federal participation to date has fueled our successful fundraising efforts, enabling the Museum to more than match the federal investment with contributions from private donors, foundations, and corporations. We are confident that with continued congressional leadership, we will be able to continue to leverage federal investment so very favorably.

In closing, the AMNH–NASA partnership has brought together two entities with unique resources and a shared commitment to improving science education and science literacy. Institutionalizing this partnership will help to assure that this productive and far-reaching relationship will endure and will grow. Through a rich program of science education pursuits and displays based on immersive and high definition technologies, the Museum and NASA will continue to advance the nation's knowledge, understanding, and appreciation of the scientific enterprise.

Prepared Statement of Florida State University

Mr. Chairman, I would like to thank you and the Members of the Subcommittee for the opportunity to present testimony before this Committee. I would like to take a moment to briefly acquaint you with Florida State University (FSU).

Located in Tallahassee, Florida's capitol, FSU is a comprehensive Research I university with a rapidly growing research base. The University serves as a center for advanced graduate and professional studies, exemplary research and top quality undergraduate programs. Faculty members at FSU maintain a strong commitment to quality in teaching, to performance of research and creative activities and have a strong commitment to public service. Among the faculty are numerous recipients of national and international honors, including Nobel laureates, Pulitzer Prize winners as well as several members of the National Academy of Sciences. Our scientists and engineers do excellent research, have strong interdisciplinary interests, and often work closely with industrial partners in the commercialization of the results of their research. Having been designated as a Carnegie Research I University several years ago, Florida State University currently is approaching $125 million per year in research awards.

FSU will soon initiate a new medical school, the first in the U.S. in over two decades. Our emphasis will be on training students to become primary care physicians, with a particular focus on geriatric medicine—consistent with the demographics of our state.

Florida State attracts students from every county in Florida, every state in the nation, and more than 100 foreign countries. The University is committed to high admission standards that ensure quality in its student body, which currently includes some 192 National Merit and National Achievement scholars, as well as students with superior creative talent. We consistently rank in the top 20 among U. S. colleges and universities in attracting National Merit Scholars to our campus.

At Florida State University, we are very proud of our successes as well as our emerging reputation as one of the nation's top public universities.

Mr. Chairman, before I discuss the project we are pursuing with NASA, let me first mention the recent renewal of funding for the National High Magnetic Field Laboratory (NHMFL) by the National Science Foundation. Citing outstanding progress in enabling researchers to address critical problems in science ranging from materials research to chemical and biological sciences, the National Science Foundation has awarded the National High Magnetic Field Laboratory $117.5 million for the next five years. This is a 30 percent increase over previous allocations and is a clear indication that the NSF views the research and development being done at the NHMFL as a top priority investment and one that is critical to our nation. Thanks to the work being done at this facility, and the recognition of you and your colleagues to the importance of this work, the U.S. is on the forefront of magnetic research and technology.

Next, let me tell you about a project we are pursuing this year, which is a collaborative endeavor involving natural hazards research.

SOUTHEASTERN VIRTUAL CONSORTIUM FOR EXTREME EVENTS (SEVEER) PROJECT ON NATURAL HAZARDS R&D USING REMOTE SENSING

This is a joint initiative with several academic institutions: Florida State University, University of Alabama, Georgia Tech, Louisiana State University, Texas A&M, and Mississippi State University. This initiative will allow these universities to work together to share resources, technology and expertise to conduct research as well as provide professional and public education to citizens, state governments and Federal agencies crucial information on prediction and mitigation related to all kinds of natural hazards. SEVEER recognizes the impact of the information technology revolution on the United States and creates a virtual center to study the prediction and mitigation of all types of natural disasters including hurricanes, tornadoes, forest fires, floods, droughts, and other unexpected natural disturbances. This particular project will uniquely utilize remotely-sensed data from the $50B public/private space and ground-based observing system developed during the last decade to provide the time-sensitive data necessary in predicting these extreme events. Specifically, this project will advance the timeliness and accuracy of severe environmental event detection and warning capabilities in the SE United States using operational and research remote sensing systems and advanced land/ocean/atmospheric predictive models. Expertise and assets from universities in every Gulf Coast state and across the Nation, in cooperation with state and federal agencies, will be integrated to address the impacts of natural hazards on the coastal ocean, land hydrology, and atmosphere. Extensive use of FSU's supercomputing resources will be made so that the new extreme event prediction system can be developed and tested in an operational environment.

We are requesting $3 million from the National Aeronautics and Space Administration, on behalf of our consortium of universities, to develop and implement this initiative.

Mr. Chairman, this project is just one of the many exciting activities going on at Florida State University and in the southeast that will make important contributions to solving some key problems and concerns our Nation faces today. Your support would be appreciated, and, again, thank you for an opportunity to present these views for your consideration.

PREPARED STATEMENT OF THE MARS SOCIETY

Mr. Chairman and Members of the Subcommittee: My name is Dr. Robert Zubrin, President of The Mars Society. I would like to thank you for this opportunity to offer comments regarding the fiscal year 2002 budget for the National Aeronautics and Space Administration ("NASA"). As detailed below, we strongly believe that NASA's budget should include a program funded at a level of at least $140 million per year (about 1 percent of NASA's current budget) within the NASA Human Exploration and Development of Space ("HEDS") organization to develop the technologies necessary to lay the groundwork for future human Mars exploration missions.

I. The Mars Society

The Mars Society is an international grassroots organization created to further the goal of the exploration of the planet Mars. Our efforts to further this goal have involved broad public outreach to instill the vision of pioneering Mars, support of ever more aggressive government funded Mars exploration programs around the world, and conducting Mars related research on a private basis. Our first major project was building the Flashline Mars Arctic Research Station in the Canadian Arctic last year to serve as a test-bed for technologies and practices that will be needed for human Mars exploration. We recently secured funding for, and are in the process of building, a second research station, which will be located in the American Southwest.

I am the author of The Case for Mars and Entering Space, as well as dozens of technical papers and articles. In the early 1990s, I developed a plan ("Mars Direct") that showed how a robust mission to Mars could be achieved for $20–$30 billion and in 10 years or less, by maximizing the use of existing technologies and resources found on Mars.

II. Need for Technology Development Funding

We believe there is no question that eventually this Nation's scientific curiosity and pioneering spirit will lead to a decision to send people to Mars—a world of spectacular mountains three times as tall as Mount Everest, canyons three times as deep and five times as long as the Grand Canyon, vast ice fields, and thousands of kilometers of mysterious dry riverbeds. The planet's unexplored surface may hold unimagined riches and resources for future humanity, as well as answers to some of the deepest philosophical questions that thinking men and women have pondered for millennia. The discovery last year of surface features that may have been produced by the recent flow of liquid water further supports the idea that Mars once had (and may still have) conditions conducive to life. To find evidence life, though, will likely take more than robotic eyes and remote control. In fact, all that Mars holds will remain beyond our grasp until men and women—agile, autonomous, intuitive beings—walk upon its surface.

Whether the decision to send people to Mars is made tomorrow or in 10 years, there are many technologies that need to be developed in order to conduct such a mission in a safe and cost-effective manner. By investing a modest amount of money now to develop these technologies, both the ultimate cost and the time needed to assemble such a mission could be significantly reduced. In addition, such a program would provide the core of the talent and expertise that will be required to achieve such an ambitious goal.

Until a few months ago, a very modest amount of NASA funds (primarily agency discretionary funds) were used to fund such a program. However, after the recent disclosure of Space Station cost overruns, an order was issued to stop or eliminate all technology development projects supporting eventual human Mars exploration. While The Mars Society is in full agreement that many hard choices have to be made to remedy the cost overruns relating to the Space Station, we believe that this technology development program is too important to this Nation's future in space to be sacrificed to feed Space Station overruns. In our opinion, Space Station overruns must be dealt with within the Space Station's own budget.

Rather than shut down the tiny amount of human Mars technology development work that was underway, such funding should be significantly expanded. A program should be funded at a level of at least $140 million per year (about 1 percent of NASA's current budget) within the NASA HEDS organization, to develop the technologies necessary for human Mars exploration missions. When our Nation is ready to make a commitment to send humans to Mars, this modest program will have already laid a portion of the technological groundwork for the mission, saving both time and money.

Below are some of the technologies that should be investigated in such a program.

1. *In-Situ Resource Utilization.*—Cost effectiveness is a necessity for future human space exploration. Mars provides us with a tremendous opportunity to lower the cost of exploration by "living off the land." The atmosphere of Mars, composed largely of carbon dioxide, is the resource that makes this possible. Using a century-old technology, it should be possible to use the Martian atmosphere, as well as a relatively small amount of hydrogen brought from Earth, to create oxygen, water, and all of the fuel (methane) for the return trip. This would dramatically reduce the mission mass and save billions of dollars in mission costs. The cost-cutting potential of this technology certainly justifies further investigation and development.

2. *Propulsion.*—Using current chemical rocket technology, it would take at least six months for a crew to reach Mars and at least another six months for them to return after their stay on the surface. With improved propulsion systems, transit

times could be reduced, which would increase the safety and reduce the cost of human missions to Mars. In addition to improved chemical propulsion systems, we should look at new propulsion ideas, such as plasma technology, ion drives, nuclear rockets, and many other possibilities that have the potential to take months off the voyage. Creating a technology research program would allow us to examine the best way to approach this technological problem.

3. *Life support*.—Without proper life support systems, any future Mars explorers could not survive. We should build on the systems already developed for the Space Station to achieve systems that can more fully recycle wastes and withstand the rigors of a long-duration mission where re-supply from earth is not feasible.

4. *EVA suits*.—We currently do not have space suits that would be useful on Mars. Our current EVA suits are designed for zero gravity conditions. They would be far too heavy and unwieldy on the surface of Mars. A Mars EVA suit must be light, durable, and allow it's occupant to move around freely and perform such simple tasks as bending over and getting back up without difficulty. Without a new EVA suit design, the astronauts would not be able to leave their habitat.

5. *Human habitats for interplanetary transit and surface use*.—As noted above, The Mars Society is currently using private funds to investigate various aspects of this technology. Although we hope to make significant contributions to habitat design, our projects will not address many of the technological requirements for these habitats. In addition, The Mars Society does not have the means to examine the needs for a habitat during interplanetary transit. A technology program would be able to focus on these critical issues.

6. *Human surface mobility systems (manned rovers)*.—While the first humans on Mars would be able to make innumerable discoveries on foot, their range would be limited. Because of this, it would be prudent to study various options for a pressurized rover, which would give the astronauts a vastly larger exploration range, allowing them to explore tens or even hundreds of kilometers from their habitat module.

7. *Heavy lift vehicles*.—Such a mission would be much more expensive without heavy lift capabilities. Our Nation has not had a heavy lift vehicle capable of launching such a mission since the Saturn 5 rocket. In addition to a Mars mission, such a vehicle would be useful in numerous civilian and military space-related endeavors. Such a vehicle could be designed to make use of existing Space Shuttle facilities and hardware.

8. *Advanced power systems, both nuclear and non-nuclear*.—We need to determine the best source of power during Mars surface habitation. This is more challenging than any power issue we have had to deal with in the history of the space program. We will be on the surface of Mars for at least a year, so a reliable power supply is a critical technology that will need to be developed.

III. Some Reasons to Support Human Mars Exploration

1. *Economic/Social/Technology*.—Some will say that we need to solve problems at home before we invest in space exploration. In reality, it is just the opposite. Dollar for dollar, the space program has provided more benefits to our Nation and the world than any program in United States history; the largest number of benefits coming as a result of the Apollo program. A Mars exploration program will likely accelerate economic and social benefits as Apollo did. By investing in space, we benefit Earth.

2. *Education*.—Apollo inspired children around the country to pursue science and math careers. They saw that they could participate in events larger than themselves. A human mission to Mars will certainly have the same impact. Inspiring our children to learn is the best education program.

3. *Science*.—The scientific ramifications of a human mission to Mars are enormous. The study of Martian geology and atmospheric conditions will not only teach us much about the future habitability of Mars but also about our own planet. By sending humans to Mars, we will be much more likely to answer the question of whether there was ever life on Mars. In the search for signs of fossilized life on Mars, a human crew could likely achieve in their first few days more than what could be accomplished in many years by any series of robotic probes.

4. *Exploration*.—Without a great history of exploration the United States would not exist. We need to continue our great heritage of exploring the unknown so that we can guarantee that our society will remain vital and will not fall into stagnation. Mars is not just a scientific curiosity; it is a world with a surface area equal to all the continents of Earth combined, possessing all the elements that are needed to support not only life, but technological society. With the International Space Station operational, it is time to lay the groundwork for the next logical step—the human exploration of Mars.

5. *National Optimism*.—We need to rekindle the national optimism that made the United States the greatest country on Earth. A human mission to Mars is the natural vehicle for this revitalization. A strong sense of national optimism is the best vehicle for continued prosperity.

6. *Public Support*.—A recent Roper poll shows that about two-thirds of the American public support sending a human mission to Mars. The American public has had an enormous appetite for Mars for years. This appetite has fueled countless science fiction accounts of Mars and unprecedented interest in NASA exploration missions to Mars. When Mars Pathfinder landed in 1997, there were over 100 million hits on the Pathfinder website in the first day. There have been well over half a billion hits since. All together, NASA's Mars related websites have received over 1.2 billion hits since 1997.

7. *Self Definition*.—A humans to Mars program would be a forceful reaffirmation of the fundamental nature of America as a nation of pioneers. We Americans owe everything we have today to our predecessors who were willing to go to a wilderness and build where no one had built before, to take on challenges that had never been faced, and to do what had never been done. Were we to abandon that tradition, we would become something less. That is a form of decline that we cannot afford and cannot accept. Ultimately the issue of whether we embrace the challenge of Mars is one of who we are.

IV. A New Direction

Our space program has been literally and figuratively going around in circles since the end of the Apollo Program. Few people under the age of 40 have any direct recollection of our Nation's greatest technological and exploration achievement; landing humans on the Moon. In addition, more people are even beginning to deny that the Moon landing ever took place. While this opinion used to be limited to fringe elements of our society, it has now become main stream. Earlier this year, the Fox Network aired a program that claimed that the Moon landing was a hoax. An estimated 20 million people watched this program. It was so popular that the network aired it for a second time, several weeks later. Since then, teachers around the country have been forced to do damage control, responding to many of their students who now believe that the Moon landing was a hoax.

Should we be surprised by this phenomenon? Absolutely not! In the late 1960s and early 1970s, the possibilities in space exploration looked limitless. What should have been "one giant leap for mankind," the Moon landings have turned out to be just a few "small steps." After launching the Nation, and the world, into what looked like our greatest age of exploration and learning, we retreated and have never returned. We now need to engage in a new and great age of exploration and discovery—an age that will again inspire our Nation and the world.

CONCLUSION

As the past few years have demonstrated, Mars is an extraordinary planet that yields her mysteries only grudgingly. If we are ever to gain a complete understanding of its complexities, we will need to send human explorers to that world to fill in the enormous gaps in knowledge left by our robotic probes. We urge Congress to establish a modest program (at least $140 million per year) to develop the technologies necessary to lay the groundwork for what will certainly be the next great Age of Discovery.

Once again, I would like to thank you for the opportunity to present this testimony.

DEPARTMENT OF VETERANS AFFAIRS

Prepared Statement of the American Heart Association

MEDICAL AND PROSTHETIC RESEARCH PROGRAM

It is highly likely that heart attack or stroke will cause your death or disability or that of a loved one. Heart attack, stroke and other cardiovascular diseases remain America's leading cause of death and a main cause of disability. Cardiovascular diseases account for nearly 1 of every 3 deaths in the U.S.

The American Heart Association, along with 22 million volunteers and supporters, works to reduce death and disability from heart attack, stroke and other cardiovascular diseases. We commend this Committee's support of the Department of Veterans Affairs' Medical and Prosthetic Research program.

STILL NUMBER ONE

Heart attack, stroke and other cardiovascular diseases have been America's No. 1 killer since 1919. Nearly 61 million Americans of all ages suffer from cardiovascular diseases. Americans of all ages! Hundreds of millions of Americans have major risk factors for cardiovascular diseases—about 50 million have high blood pressure, 41 million adults have high blood cholesterol (240 mg/dL), 49 million smoke, 107 million adults are obese or overweight and 10 million have physician-diagnosed diabetes. As the baby boomers age, the number of Americans afflicted by these lethal and disabling diseases will increase substantially. Cardiovascular diseases cost Americans more than any other disease—an estimated $300 billion in medical expenses and lost productivity.

While heart disease and stroke occur at all ages, they are most common in Americans over age 65—an age group that is about 13 percent of the U.S. population and will be 16.5 percent by year 2020. By the year 2020, the percentage of veterans over 65 years of age will be about three times that of the general population. The VA's planning models recognize that its aging patient population demands more care. More than 4.49 million or 16.4 percent of the veteran population reported suffering from "heart trouble" in the 1993 National Survey of Veterans. More than 998,000 or 3.6 percent of the veteran population are stroke survivors. As the veteran population ages, the number of veterans afflicted by heart disease and stroke will increase substantially.

HOW YOU CAN MAKE A DIFFERENCE

We recommend an fiscal year 2002 appropriation of $395 million for the VA Medical and Prosthetic Research program. Our recommendation, consistent with that of the Friends of VA Medical Care and Health Research and the Independent Budget, a detailed analysis of VA funding needs developed by four of the major veterans service organizations and endorsed by more than 60 other organizations. An appropriation of $395 million would allow maintenance of fiscal year 2001 initiatives and implementation of new initiatives for fiscal year 2002, allowing an increase in investigator-initiated research, expanded training programs to attract the next young generation of clinician-scientists and accommodate medical research inflation. We challenge our government to significantly increase funds for heart and stroke research through the VA Medical and Prosthetic Research program. We strongly urge the VA to establish heart and stroke research centers to advance the battle against heart attack, stroke and other cardiovascular diseases—America's No. 1 killer and a leading cause of disability. Our government's response to this challenge will help define the health and well being of citizens in this new century.

INSUFFICIENT VA RESOURCES DEVOTED TO HEART AND STROKE RESEARCH

The VA Medical and Prosthetic Research program plays an important role in heart and stroke research and deserves the strong support of Congress. In fiscal year 1999, VA support for research on heart disease was $23.7 million (a 13 percent increase from fiscal year 1998), accounting for 7.4 percent of the fiscal year 1999 VA's Medical and Prosthetic Research budget. In fiscal year 1999, VA-supported stroke research represented $4.2 million or 1.3 percent of the VA's Medical and Prosthetic Research budget. We are concerned that insufficient money is being devoted to America's No. 1 killer—heart disease—and our No. 3 killer—stroke. Both are major causes of permanent disability. Besides its own program, VA investigators spent another $40.5 million on heart research and $7.8 million on stroke research from outside sources.

VA HEART AND STROKE RESEARCH BENEFITS ALL AMERICANS

The mission of the VA Medical and Prosthetic Research program is to "discover knowledge and create innovations to advance the health and care of veterans and the nation." While the primary purpose of the VA health care system is the provision of quality health care to eligible veterans, VA-supported research contributes to the quality of care by bringing talented and dedicated physicians into the VA system. Discoveries from VA-supported research benefit veterans, science and the world's health. VA cardiovascular research is an integral part of the scientific effort in this field. VA researchers include nationally recognized, distinguished scientists and several Nobel Laureates. The VA had supported Ferid Murad, M.D., 1998 Nobel Prize winner for research demonstrating the role of nitric oxide in regulating blood pressure. Several VA investigators have been acclaimed for their work in cardiovascular research. For example, American Heart Association volunteer Gerald F.

DiBona, M.D. was awarded the prestigious VA Middleton Award in 1995 for internationally recognized research on kidney and cardiovascular diseases.

The Medical Research component of the VA Medical and Prosthetic Research program supports basic and clinical research, mainly investigator-initiated peer reviewed studies. It provides funds for support of VA-based faculty members (M.D.s or Ph.D.s) at various stages in their careers, multicenter cooperative studies—a large portion of which are cardiovascular studies—and research equipment. Also, VA investigators provide core faculty support at major medical schools affiliated with VA institutions. The presence of a VA research program aids the VA. This small but internationally recognized, highly competitive research program in fiscal year 2000 supports 2,157 investigators at 132 VA-supported facilities.

VA cardiovascular research is largely clinical. The VA is a major contributor to clinical research, playing a unique role because of its ability to immediately translate research findings into practice.

VA-supported research has produced landmark results and revolutionized treatment in the cardiovascular area. You and your family have benefited directly from VA heart and stroke research. Several cutting-edge examples follow.

—*Heart Attack Treatment*.—VA's Quality Enhancement Initiative Ischemic Heart Disease Study found that VA medical facilities provide equivalent or superior treatment for heart attack patients when compared with the private sector. Quality measures for these veterans surpass those in the private sector in the use of aspirin, beta blockers, ACE inhibitors and in the evasion of calcium channel blockers. Similar findings were found for angioplasty patients.

—*Heart Bypass Surgery*.—In 1998, an estimated 553,000 heart bypass surgery procedures were performed on 336,000 patients in this nation at an average cost of $44,820 per procedure in 1995. Generally, one year after surgery, 10 to 15 percent of the vein grafts used in these procedures become blocked. VA research has found that reducing the temperature of the solution used to harvest the vein grafts may stop heart arteries from becoming narrowed with atherosclerosis. The study also found that while a daily aspirin stops artery vein blockage for a year after surgery, long-term survival depends on the extent of underlying disease before the procedure and the length of time of the procedure. In a landmark study, VA researchers found that heart medication works just as effectively as heart artery bypass surgery for certain groups of patients with narrowed arteries. In 2000, VA surgeons were the first to perform this surgery on patients without anesthesia.

—*Gene Therapy And Heart Failure*.—About 4.7 million Americans suffer from congestive heart failure, a major cause of hospitalization for Americans age 65 and older. VA researchers have found in animal studies that inserting a gene in heart cells affected by heart failure started an active increase in the chemical that triggers the cells to beat more strongly. Additional research in this area could provide a new lease on life for millions of Americans. Also, VA scientists, using gene therapy in animals, increased the number of blood vessels that transport oxygen to the heart.

—*Stroke Risk Reduction*.—About 9 percent of older Americans suffer from the most common type of an irregular heart beat, atrial fibrillation, a stroke risk factor. Research has shown that low doses of the blood thinner warfarin can lower stroke risk by about 80 percent in sufferers of atrial fibrillation.

—*Stroke Survivor Improvements*.—Stroke is a leading cause of permanent disability in this country and the No. 3 killer. VA studies have produced therapies to enhance quality of life for survivors. VA researchers have created a software program to assess and treat the stroke-related speech disorder aphasia. Also, they have shown that strenuous exercise can benefit stroke survivors who are paralyzed on one side of their body, and have developed a rehabilitation procedure to restore arm movement. Researchers have identified seven pathways associated with motor recovery from stroke, allowing more precise predictions about functional recovery of stroke survivors.

—*Aspirin and Angina*.—About 6.4 million Americans suffer from angina (chest pain) due to insufficient blood supply to the heart. In another landmark study, VA research found that aspirin cuts deaths and heart attacks by 50 percent in patients suffering from unstable angina.

—*Angioplasty Benefits*.—In 1998, an estimated 926,000 angioplasty procedures were performed in this nation to restore blood flow to the heart by widening narrowed arteries. VA research was the first to evaluate angioplasty. Results showed that after undergoing angioplasty, patients suffered less pain and can exercise longer than those taking only medication. Another study found clot-busting drugs had similar results to angioplasty for heart attack survivors at savings of $3,000 per patient. Annually more than 150,000 people are candidates for clot-busting drugs, according to VA.

—*Heart Failure*.—The growing number of sufferers from heart failure has earned this disease the title of "the new epidemic." A major VA study, in conjunction with the National Heart, Lung, and Blood Institute and Intercardia Corporation, showed unexpectedly that the beta blocker bucindolol did not reduce death from heart failure. This was the first study to include large numbers of African Americans and patients with advanced heart failure.

—*Heart Failure Drugs*.—An estimated 4.7 million Americans suffer from congestive heart failure, the often-disabling inability of the heart to pump sufficient blood throughout the body. A VA study showed that heart medications can enhance the heart's pumping ability and keep sufferers of congestive heart failure alive. These study results have revolutionized heart failure treatment.

—*High Blood Pressure*.—An estimated 50 million Americans have high blood pressure, the leading stroke risk factor and a major cause of heart attack. VA research found that like private sector statistics, physicians increase anti-hypertensive medicine in only 25 percent of patients with higher blood pressure and that the patients who had their blood pressure monitored were poorly controlled. More aggressive management of these patients will reduce the number of heart attacks and strokes, America's No.1 and No. 3 killers, respectively. An inexpensive computerized reminder system helps doctors manage patients and cut costs by reducing use of calcium channel blockers.

—*Cholesterol*.—An estimated 11 million veterans are at increased risk of heart disease due to high cholesterol levels, according to the VA. A groundbreaking VA-supported clinical trial found that daily use of the drug gemfibrozil, raises HDL by 6 percent, reduces coronary heart disease risk by 22 percent with reductions in heart attack, stroke, transient ischemic attack and carotid endarterectomy for heart disease sufferers with low levels of both "good" and "bad" cholesterol. Results could mean cost savings because gemfibrozil is cheaper than statin drugs. This is the first study to show significant reduction in risk of major cardiovascular diseases by raising HDL, the "good" cholesterol, lowering triglycerides and not changing LDL, the "bad" cholesterol. VA research showed the effectiveness of cholesterol screening, when broken down into HDL and LDL for adults—even those older than age 65. Another study found that the addition of soy protein to a low-fat diet substantially lowers cholesterol in those with moderately high cholesterol levels.

—*Irregular Heart Beat Treatment*.—An estimated 1 million Americans suffer from atrial fibrillation, the most common irregular heartbeat, which causes more than 75,000 strokes a year. VA researchers found that the drug digoxin was not effective in controlling heart rate. But, they discovered when digoxin was combined with a beta-blocker, patients achieved almost perfect heart rate. These results will enhance treatment for atrial fibrillation and reduce stroke risk.

—*Wheelchair Aerobic Fitness Trainer*.—This trainer is an alternative to drug-induced stress testing for cardiorespiratory fitness and coronary artery disease in people with lower limb disabilities.

—*Psychoeducational Program for Stroke Family Caregivers*.—Most stroke survivors are helped in the recovery process by a family caregiver, usually the spouse. A pilot study testing a program to reduce physical and psychological demands on family caregivers found this intervention reduced depression and caregiver burden and better prepared them for their role. Preliminary results found that a telephone intervention may be as helpful as the in-home program. Execution of this program could have vital results for family caregivers of 4.5 million American stroke survivors.

—*Non-Q-Wave Heart Attack*.—Of the estimated 1.1 million Americans who will suffer a heart attack this year, about 600,000 will experience non-Q-wave—EKG classification—version. VA research showed that noninvasive treatment of non-Q-wave heart attack patients saves money, an estimated $20 billion a year, and is just as effective or in some cases better than invasive procedures such as heart bypass surgery or angioplasty. Higher death rates were associated with invasive procedures. Results could change treatment for sufferers of this type of mild heart attack. An economic study is examining cost-effectiveness on initial stay and follow-up care and estimating impact of adoption of these recommendations on American health care costs and pioneer VA cost determination methods.

—*Heart Attack Treatment*.—VA researchers found aspirin is as effective as aspirin and the blood thinner, Coumadin, for heart attack victims. Aspirin is cheaper and does not need dose regulation.

HEART AND STROKE RESEARCH CHALLENGES AND OPPORTUNITIES FOR VA

Research advances outlined above and other progress have been made possible by congressional support of the VA Medical and Prosthetic Research program. Thanks to research, more of our patients, our families and our friends survive their heart attack or stroke and with a better quality of life. However, while more Americans are surviving, heart attack and stroke are still are No. 1 and No. 3 killers, respectively, and can cause permanent disability, requiring costly medical care and loss of productivity and quality of life. Clearly more work is needed if we are to win the fight against heart disease and stroke. Challenges and research opportunities to advance the battle against heart disease and stroke abound. Examples of on going VA research are highlighted below.

—*Heart Failure Studies*.—A VA study is comparing effects of three anti-clotting therapies (aspirin, warfarin or clopidogrel) in heart failure patients. Another study is creating a large DNA bank of sufferers to examine genetic basis of heart failure. A third study, the first large scale, international, randomized clinical trial, is evaluating effects of digitalis, a 200-year old treatment in preventing heart failure deaths. Heart failure is a major cause of hospitalization of Americans age 65 and older. Another study is determining if sleep apena oxygen treatment will improve survival and quality of life of veterans with heart failure and reduce hospitalizations. It will identify sleep apnea risk factors in those with stable heart failure. A blood test developed by VA researchers may help emergency department doctors diagnose congestive heart failure. This test may offer an alternative to physical exams, x-rays, stress tests and echocardiography for diagnosing heart failure. Heart failure represented more than 22,000 VA hospitalizations in 1990 at a cost of about $100 million. Results will improve treatment of heart failure that affects 4.7 million Americans.

—*Inflamed Arteries*.—Many heart attacks and strokes are the end result of atherosclerosis, the disease process that causes obstructed blood vessels. VA-supported research has shown that inflammation may cause atherosclerosis or hardening of the arteries. Scientists have identified large numbers of a certain receptor on inflammatory cells in heart blood vessels. If researchers can create a way to block that receptor, progression of atherosclerosis might be prevented.

—*Heart Attack Research*.—An estimated 1.1 million Americans suffer a heart attack each year. VA research is assessing cost-effective ways to diagnose and treat suspected heart attack without costly invasive procedures, including a computer analysis of the heart's electrical signals during exercise and a new scoring system in treadmill tests. Scientists are examining long-term outcome and risk factors for heart attack sufferers, for those who have heart attack during surgery and for those who have heart bypass surgery. Researchers have identified a molecular marker that may help predict heart attack or insufficient blood supply to the heart. They are studying whether such attacks can be prevented by increasing levels of a protein that stimulates blood vessel growth and helps repair damaged tissue. Findings could save money, improve health care and reduce surgery.

—*Warfarin and Aspirin Study*.—Heart attack is America's single largest killer. A VA-sponsored study is analyzing effects of the blood thinner warfarin plus aspirin versus aspirin alone in reducing deaths from heart attacks. If results confirm the hypothesis, VA estimates that 20,000 lives could be saved.

—*Angioplasty*.—Heart disease, the No. 1 killer in the United States, affects about 20 million Americans. In the first of its kind study, COURAGE, VA is comparing the effectiveness of angioplasty with medical therapy versus aggressive medical therapy alone in patients with heart disease. The results of this study could revolutionize treatment of heart disease. In 1998 an estimated 926,000 angioplasty procedures were performed to restore blood flow to the heart by widening narrowed arteries. The average cost of angioplasty in 1995 was $20,370.

—*Atherosclerosis and Iron Research*.—Atherosclerosis is a major heart attack and stroke risk factor. VA research is evaluating the concept that too much iron in the blood stream contributes to atherosclerosis. Research results could revolutionize the treatment of heart attack and stroke.

—*Stroke Research*.—Stroke strikes about 600,000 Americans each year; many survivors are permanently disabled. Researchers found restricting use of limbs unaffected by stroke can help patients recover use of limbs affected by stroke more quickly and fully. Progress in deciphering language of the brain's motor cortex, the section that helps control muscle movement, could lead to new technology that may reconnect damaged areas or communication pathways of the brain and may restore lost function after a stroke. Scientists implanted electrodes in leg muscles of stroke patients and used sophisticated software to electronically stimulate muscles. VA researchers were the first to demonstrate that robot-assisted therapy is more effective than conventional treatment in restoring upper limb movement following stroke. Researchers are studying genetic susceptibility to carotid atherosclerosis, a major cause of stroke. Scientists are examining quality of care at VA hospitals, because of findings that blacks suffer more severe strokes than whites and that blacks are less likely to receive imaging tests or carotid endarterectomy, surgery to remove buildup of atherosclerotic plaque in the main artery to the brain, located in neck, to prevent stroke.

The number of VA research applications has grown slightly over the last five years, but funding cuts and/or inflationary increases severely restrict support for approved applications. For the programs, which were reviewed for fiscal year 1999 funding, more than 30 percent of approved applications were funded. Ten years ago, 40 to 50 percent of the approved applications were funded.

Through fiscal year 2000, total dollars appropriated for the Department of Veterans Affairs Medical and Prosthetic Research program have increased $128 million since 1985 at an approximate annual rate of about 3 percent. But, there has been a decrease in terms of constant "1985 dollars" of $14.7 million. The Medical Research programs highlighted below are of interest to the American Heart Association.

—*Investigator-Initiated Studies*.—During fiscal year 2000 this program constituted an estimated 71 percent of the Medical and Prosthetic Research appropriated budget. These investigators comprise the core of all VA research and provide the preceptorship for career development awardees.

—*Cooperative Studies*.—In fiscal year 2000 this program supported an estimated 38 clinical trials. The VA offers a unique opportunity for cooperative studies due to close linkage among hospitals. These studies provide a mechanism by which research on the effectiveness of diagnostic or therapeutic techniques can achieve statistically significant results by pooling data on patients from a number of VA hospitals. The Cooperative Studies Evaluation Committee evaluates proposals developed by teams of clinicians and biostatisticians. The VA has supported landmark clinical trials in the cardiovascular field (e.g. high blood pressure treatment and coronary artery bypass surgery).

—*Career Development Awards*.—Applications for these awards are reviewed both locally and by the VA Central Office. This program experienced a decrease in the number of awards by 58 percent from a high in 1991 of 212 awards to a low of 88 awards in fiscal year 1997. In response to the Research Realignment Advisory Committee's suggestion to rejuvenate this program, a renewed emphasis began in fiscal year 1997 for the VA's Medical Research Service, Health Services Research and Development Service and, for the first time, Rehabilitation Research and Development Service. This will result in an anticipated 176 Career Development Awards in fiscal year 2000.

ACTION NEEDED

Today's investment in medical research will lead to future returns. Returns include continued decreases in death rates from heart attack, stroke and other cardiovascular diseases, reduced federal outlays for hospital and long-term care, a well-trained cadre of medical researchers and a healthier society.

Consistent with the Friends of VA Medical Care and Health Research and the Independent Budget, we recommend an fiscal year 2002 appropriation of $395 million for the VA Medical and Prosthetic Research program. This appropriation will allow maintenance of fiscal year 2001 initiatives and implementation of new initiatives, including continuation of research momentum in heart disease and stroke and maintenance of VA's vital role in this field. We urge VA to establish heart and stroke centers to fight cardiovascular diseases—America's No. 1 killer and a major cause of disability.

PREPARED STATEMENT OF THE LAC DU FLAMBEAU BAND OF LAKE SUPERIOR CHIPPEWA INDIANS

My name is Henry St. Germaine, Sr. and I am the Tribal Chairman for the Lac du Flambeau Band of Lake Superior Chippewa Indians. The Lac du Flambeau Reservation is in the "North Woods Area" of Wisconsin and our homeland is called Waswagoning. The Lac du Flambeau tribal members always want us to remind Congress about the special and unique relationship the Federal government has with Indian tribes. The Federal government is obligated by Treaty and Executive Order to provide for critically needed social, education, health and governmental services to the Band and its members in exchange for the land, water, natural resources and peace our forefathers provided. As Congress and the President begin work on the fiscal year 2002 Budget, the obligations and commitments to provide for these services must not be forgotten and should be given the highest priority. The Lac du Flambeau Band submits the following issues and concerns to the Subcommittee concerning veterans affairs, housing and the environment.

VETERANS' ADMINISTRATION

I would first like to address how the system is failing our American Indian veterans with regard to accessing veterans' benefits. American Indians across the country have the highest record of military service per capita when compared with other ethnic groups. These men and women have put their lives at risk to ensure the survival of future generations, yet they consistently have problems accessing basic benefits and services. I share in their frustration as they attempt to get to the local county veterans service office ("CVSO") located almost 50 miles away. Many of our tribal members lack any form of transportation. Our winters are severe and travel is difficult even if you have reliable transportation. Many tribal members do not have telephones, contributing to further decreased access to the local CVSOs. Additionally, many veterans are intimidated by the myriad of paperwork and the various eligibility criteria for different veterans benefits.

According to a resolution prepared by the Great Lakes Inter Tribal Council in Lac du Flambeau, there are approximately 40,000 American Indian veterans in Wisconsin. It is estimated that only 5 percent of these veterans are aware of the benefits programs for veterans. Lac du Flambeau has recently started collecting information regarding tribal members who are veterans. Currently, 130 veterans have registered and we expect this statistic to double since we are in the early stages of gathering this information and the numbers do not include family members. This list also does not include veterans who are non-enrolled descendants and other American Indians living on the reservation.

We come before you to urge the Committee to establish a tribal veterans service office ("TVSO") on the Lac du Flambeau Reservation to render services to American Indian veterans and their families. Currently, the Band is not a recipient for Federal or State grants in regards to securing tribal veterans' benefits. By Congress appropriating $150,000 as a proposed budget, we can finance and secure office space for a TVSO at Lac du Flambeau. We ask that this TVSO have autonomy and the same benefits and opportunities as the CVSO. We respectfully request that Congress honor our warriors and ensure that these American Indian veterans can access veterans' benefits with fewer barriers by placing a TVSO on the Lac du Flambeau Reservation.

HOUSING

There is a shortage of housing on the Lac du Flambeau Reservation and the housing that is in place is substandard. This problem is exacerbated by the barriers to lending and the population growth in the area. In March 2000, the Bureau of Indian Affairs released a Labor Force Survey that shows the Lac du Flambeau enrolled membership population is 3,056 with a projected population growth of 4 percent by the year 2005. The tribal housing authority's NAHASDA Block Grant is $1,513,632. The Band's housing stock is 191 rental units and 112 Mutual Help units—a total of 303 units and over half the units are considered to have overcrowded living conditions. The rental units are 15 to 36 years old and are in substandard condition, most of which require major rehabilitation and modernization. There are currently 300 Lac du Flambeau members on the waiting list for housing. Band members continue to move back to the reservation only to find overcrowded living conditions and no housing.

The Band faces a housing shortage and inadequate funds exist to rehabilitate existing units. The NAHASDA Block Grant level of funding is below inadequate and often it is a balancing act to leverage funds for new housing development or to rehabilitate the current housing stock. We must address rehabilitation and modernization needs simultaneously. Unfortunately, the lack of funds is an obstacle to moving forward to provide affordable housing for our members. The urgent need for rehabilitation is equal to the need for additional housing and the costs are equally substantial.

President Bush's fiscal year 2002 budget proposal for HUD is 30.4 billion, a 7 percent increase over last year. However, most of the increase is required to cover existing contracts for rental assistance. For NAHASDA, the Administration has requested funding at last year's level of $650 million. I strongly urge the Committee to increase the NAHASDA appropriations to a level that is responsive to the growing housing needs on the reservation. The current level of funding is simply not enough to provide safe and healthy homes for our families and children.

ENVIRONMENT

The Lac du Flambeau Reservation is rich with lakes and forests and nearly 50 percent of the reservation is saturated with water. The total resource areas are as follows: Wetlands—24,000 acres (27.7 percent), Lakes & Rivers—17,897 (20.7 percent), Forested Uplands—41,733 (48.2 percent), and Other—3,000 (3.5 percent). Approximately 25 percent of the reservation area is owned by non-Band members and is considered fee land. The Band was blessed with a very diverse ecosystem and a huge responsibility to protect, enhance, and conserve the natural resources for present and future generations.

Under the Clean Water Act, the Band has the responsibility and the authority to manage the water resources of the Lac du Flambeau Indian Reservation. The Band has adopted water quality standards which, once approved by EPA, will be applicable to all who reside within the exterior boundaries of the reservation. To effectively manage the water resources of the reservation, this authority must remain with the Band. It would be impossible to manage water resources under any other authority than that provided by the Lac du Flambeau themselves. The notion that the State's level of protection is adequate is not a responsible one. Lac du Flambeau, and other subsistence-based Tribes, require more stringent water quality standards to support their culture and lifestyle. Of particular concern is the fact that Tribal members, on the whole, have a larger portion of fish in their diet than the non-Indian population of Wisconsin. Some fish on the Lac du Flambeau Reservation are inedible even by State of Wisconsin standards that were developed using consumption levels below those of the Band. States do not incorporate subsistence lifestyles into their water quality standards. Presently, toxic pollutants, such as mercury, have entered reservation waters and caused a tribal ban on all fish consumption of walleye from one of the best fisheries and most beautiful lakes on the Reservation. These toxic pollutants have entered Lac du Flambeau waters under current State of Wisconsin standards, which are in place until the Band's water quality standards are recognized.

This is not the only environmental problem facing the Band. Shoreline development is an ever-increasing problem on the reservation. The greatest source of this non-point source pollution is shoreline development, both tribal and non-tribal. Natural shoreline areas provide important terrestrial and aquatic habitats. Natural shoreline areas also contain important native plant species that filter out contaminants and protect reservation waters from pollution. Lake riparians often remove the native vegetation and attempt to replace it with a bluegrass lawn they brought with them from urban areas. These lawns often require the use of chemicals and fertilizers that wash into reservation waters causing excessive growth of algae and pollution of the lake (or stream) ecosystems. Moreover, in Lac du Flambeau, it is cost prohibitive to establish and maintain a traditional bluegrass lawn due to topsoil and fertilizer requirements. Therefore, sparsely vegetated or bare ground areas often result. These areas quickly erode and negatively impact the Band's water quality and may disturb archeologically significant areas.

The Lac du Flambeau Reservation has unique characteristics and a shoreline restoration project needs to be encouraged among lake residents. Education and outreach are essential in changing attitudes about shoreline buffer areas. Current EPA funding programs do not allow the Band to adequately address non-point source pollution, which is the major source of water quality degradation on the Reservation.

In 1998, the Band completed a Unified Watershed Assessment. At the initial meetings introducing these Assessments, EPA Administrator Carol Browner indicated that EPA would be requesting the bulk of new water quality management dollars under the 319 Program. She suggested that, while other programs, such as 314, may be drastically under-funded, the resources would be available within the 319 Program to address these concerns. While this may be reassuring to States, Tribes are left out in the cold. Unless Congress removes the Tribal 319 cap, Tribal governments will be unable to compete for 99.66 percent of total EPA 319 allocation. In fiscal year 2001, this congressionally imposed cap was lifted for one year only. A separate tribal set aside for the 319 Program, similar to the successful 106 Water Pollution Control Program, may be necessary if Tribes are to adequately manage non-point source pollution on reservations.

Over the past decade, EPA funding has played a vital role in environmental management on the Lac du Flambeau Reservation by assisting the Band in water quality monitoring. The purpose of these activities was to gain valuable baseline water quality data and to utilize it while writing Water Quality Standards for the reservation's surface waters. Currently, the standards have been submitted to EPA and the Band has applied for regulatory authority to operate a water quality standards program.

Clean Water Act Programs, such as the 106 Water Pollution Control Program, are essential to water quality protection on the Reservation. The Band is grateful that recent increases have been achieved under this important program. Proposed funding levels show the Administration's commitment to resource preservation in Indian country. The future of this funding must continue to be strong in order for the Tribes to carry out the vast array of Federal programs. States have been receiving funding for nearly thirty years and have used this money to build an environmental infrastructure. Indian Tribes must be afforded time and money to bring environmental programs on par to those of the States. The Band requests that Congress, at a minimum, maintain 106 funding at the levels proposed in the President's Budget. In the upcoming years, the Band must continue to protect and manage water resources on the reservation. We will accomplish this through a variety of water quality projects and the assumption of additional Federal regulatory programs. The Band is requesting $130,000 106 Program dollars in fiscal year 2002 to accomplish the following: implementation of a drinking water protection plan, non-point source management, public education for lakefront property owners, water quality standards' revisions, and interactive kiosk sites for zoning and environmental protection information.

Besides surface water resources, EPA has also helped the Band in developing underground storage tank, radon, and solid waste programs on the reservation. These programs have succeeded largely due to the General Assistance Program ("GAP"). GAP has been used to increase environmental awareness and compliance on the reservation. Continued support of GAP will allow the Band to build on past accomplishments and ensure proper compliance with various environmental regulations and mandates. Although GAP was originally created as a four-year program, these monies need to be set aside annually if tribal governments expect to make continued progress in environmental management. The Band receives approximately $110,000 annually through GAP. The monies received since 1992 have allowed the Band to make significant progress, however $110,000 is not adequate to support the implementation of these government mandated programs. Indian Tribes are required to comply with many environmental mandates. We need an increase to at least $135,000 for fiscal year 2002 to support additional staff which are needed to assist the Band in protecting and conserving our natural resources. There are more than 200 underground storage tanks on the reservation, most on non-Indian fee land, that need to be investigated or removed in order to protect the Band's groundwater supply. The solid waste management program also needs to be continued and expanded to comply with Federal, State, and Tribal solid waste regulations. This is a monumental task for one individual. Therefore, we urge the Committee to increase the appropriations for GAP so that we may hire additional staff to help us comply with these environmental mandates.

In addition, the recently enacted Tribal Cooperative Agreement Authority, which allows the EPA to award cooperative agreements to Tribes to assist in implementing Federal environmental programs, should be renewed for additional years. A specific tribal set aside for this new program would also be helpful to the Band in achieving necessary environmental goals. Currently this Cooperative Agreement Authority does not carry any additional funding allocation for Tribes. Tribes are precluded from obtaining any State dollars allocated for similar EPA/State Cooperative Agreement Authority.

Wetland resources are a valuable commodity in today's environmental landscape and are being lost at an alarming rate nationwide. Current set asides for the State/Tribal Wetland (104) Programs are inadequate. Tribal funding levels for this program are often less than those of the 106 Program and GAP. Fierce competition between Tribes and States often results in Tribes gaining little overall funding. The Lac du Flambeau Reservation is 27.7 percent wetlands and the Band has applied for 104 dollars. To date, the Band has only received money from the fiscal year 1996 grant funding cycle. As development pressures increase on the reservation, greater demands will be placed upon the wetlands of the reservation. Additional monies must be budgeted for the 104 Program to meet these demands.

We request the Committee's strong support to enable us to preserve and expand our environmental programs.

PREPARED STATEMENT OF THE ASSINIBOINE AND SIOUX TRIBES

The Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, in Montana. appreciate the opportunity to present this testimony.

VETERANS AFFAIRS

The Tribes would like to bring to the attention of the Subcommittee the significant needs of Native American veterans. As the Subcommittee no doubt knows, in proportion to Indian representation in the Nation's population, Native American men and women have served in this country's armed forces in far greater numbers than any other group in our society. In Vietnam alone, more than 42,000 Indians served. More than 90 percent of these individuals volunteered. One study has shown that one in every twelve eligible white American man served in Vietnam, but for Indians it was one in four. This same study showed that most Indians who served in combat in Vietnam were assigned to front-line combat assignments. Thus, at least in Vietnam, not only did Indian men serve in disproportionate numbers, Indian men were in the most dangerous line of fire in a higher number, as well.

The Veterans Administration has begun to understand that it needs to do a better job of meeting the needs of native veterans. The Tribes were very pleased by the recent statements of Secretary Anthony Principi at the National Congress of American Indians and the commitments that he has made to improve the quality of service that native veterans receive. We urge the Subcommittee to support his efforts.

Some of the VA's recent efforts include a sharing agreement with the Oneida Tribe Community Health Center, which enables treatment for veterans on or near the Oneida Reservation. In the Black Hills, the VA has established six community-based healthcare clinics throughout South Dakota close to reservations. On the Hopi Reservation in Arizona, the VA established the first Vet Center to be located on a Reservation. We understand that there is now also one on the Navajo Reservation in Chinle, Arizona and others planned. These types of initiatives should be expanded to better meet the needs of Native Veterans.

In particular, the Fort Peck Tribes are very concerned that except for a community health initiative with the Fort Harrison VA, there are no programs in the State of Montana to ensure that the VA is meeting its obligations to the native veterans in Montana. At Fort Peck alone, there are more than two-hundred veterans residing on the Reservation. The majority of these veterans are Korean war and Vietnam war veterans. Thus, the average age of our veterans is well over fifty. Because of the advancing age of our veterans, the medical and other VA needs of our veterans are significant. Unfortunately, in order to receive any type of medical service, these veterans must travel long distances to either Miles City or Glasgow, Montana. The VA offers no transport services to our veterans. Some of our veterans are disabled and cannot drive and some of the veterans lack the financial resources to make the trip. Moreover, there is no place on the Reservation for veterans to learn about the services and benefits of the VA, including burial services, the new medical benefits for Medicare eligible veterans, and educational opportunities for the younger veterans.

Thus, the Tribes urge the Subcommittee to dedicate funds for a Vet Center on the Fort Peck Reservation to provide services not only to native veterans but all veterans of Northeast, Montana. This Vet Center could serve as a resource center on VA services, provide counseling and referral services, and provide transportation services to and from the health facilities for veterans in the area.

Of great concern in all Indian communities is the impact of diabetes on our people. Even more alarming is the Air Force's recent study confirming the link between the use of Agent Orange and adult-onset diabetes. As a result of this study, the VA now treats diabetes as a war time disability. Thus, we urge the Subcommittee to continue to support the treatment and prevention of diabetes among veterans.

HOUSING

Severe housing deficiencies continue to plague Indian communities. The tragedy of homelessness and substandard housing is only too familiar to Indian tribes within this country.

The last census documented that 16 percent of all Indian homes had no electricity, 21 percent had no piped water and over half had no central heating and 43 percent of Indian households were below the poverty line. Today, there are about 160,000 units of Indian public housing in existence. But approximately 16,700 need replacement and 53,000 need substantial rehabilitation. The Department of Housing and Urban Development estimates that there is a need for about 87,000 new housing units for Indian families. On the Fort Peck Reservation, there is a waiting list of 600 people. The Tribes annual grant from the Department is $5.5 million. However, because of O&M obligations to existing stock, the Tribes are only able to build 20 new units every other year. The federal government's trust responsibility demands that this Indian housing crisis be addressed. Funding for Indian housing programs, we want the Subcommittee to know that the needs are significant and that increasing the funding over last year's funding level of $650 million is critical.

I would like to thank the Committee for the opportunity to testify before you today.

PREPARED STATEMENT OF THE GREAT LAKES INDIAN FISH & WILDLIFE COMMISSION

GLIFWC'S FISCAL YEAR 2002 APPROPRIATIONS PRIORITIES

$318,000 to maintain its (1) Crandon Mine assessment project, and (2) Lake Superior environmental protection programs that currently are funded by EPA's Coastal Environment Management (CEM), Great Lakes National Program Office (GLNPO), and Environmental Justice programs.

1. *Ceded Territory Mining Assessment*.—$168,000 to continue technical and scientific work relating to a proposed zinc and copper mine near Crandon, Wisconsin. The mine will impact ceded territory natural resources that are subject to the tribes' treaty reserved rights to hunt, fish and gather.

2. *Lake Superior Programs and Projects*.—$150,000 to continue (a) participation in the BiNational Program to Restore and Protect Lake Superior, including the Lake Superior Lakewide Management Plan (LaMP), and (b) research projects related to the Lake Superior basin and the LaMP. Historically, GLIFWC has received this amount through a combination of funding from EPA's CEM, GLNPO, and Environmental Justice programs.

TREATY RIGHTS AND GLIFWC'S ENVIRONMENTAL PROTECTION ROLE

Eleven Minnesota, Michigan, and Wisconsin Chippewa tribal governments established GLIFWC to assist them in:

—implementing treaty guaranteed rights to hunt, fish, and gather in treaty ceded territories;

—protecting Lake Superior fishing rights; and

—cooperatively managing and protecting ceded territory natural resources and their habitats.

Tribal members rely upon fish, wildlife, and plants for religious, cultural, medicinal, subsistence, and economic purposes. A number of state and federal court rulings have affirmed the rights of GLIFWC's member tribes to hunt, fish, and gather from the lands and waters ceded by these treaties. However, these rights mean little if contaminated natural resources threaten the health, safety, and economy of Chippewa people, or if the habitats supporting these resources are degraded.

GLIFWC PROGRAMS FUNDED BY EPA

GLIFWC currently administers EPA funding for:

1. *Study of Proposed Crandon Mine in Wisconsin*.—GLIFWC's work includes hydrological modeling, contaminant transport analysis, and baseline biomonitoring studies.

2. *Participation in the Lake Superior Bi-National Program*.—Since fiscal year 1996, EPA has provided CEM funds for a 1 FTE equivalent to facilitate GLIFWC's participation in the BiNational Program to Restore and Protect Lake Superior, including preparation of the Lake Superior LaMP and participation in various International Joint Commission (IJC) and State of the Lake Ecosystem Conference (SOLEC) forums.

3. *Research and Special Projects*.—Since fiscal year 1997, EPA has provided a combination of CEM, GLNPO, and Environmental Justice funds for GLIFWC to conduct scientific research to produce data relevant to the Bi-National Program/Lake Superior LaMP and to human health.

SPECIFIC FISCAL YEAR 2002 FUNDING NEEDS

GLIFWC would use fiscal year 2002 funds to:

1. *Work on the Proposed Crandon Mine*.—$168,000 for GLIFWC's review, analysis and GIS mapping related to the mine, particularly as to groundwater modeling and contaminant transport issues, analysis of the proposed reflooded mine management plan, and continuation of ongoing baseline biomonitoring projects.

Rationale.—Both the state and federal permit processes are moving toward draft Environmental Impact Statements. GLIFWC has been an active player in reviewing the state mining and federal 404 permit applications since 1994, particularly regarding hydrological issues. It has established a groundwater modeling component to its program that has contributed to greater precision and accuracy of computer modeling programs used by both state and federal agencies. It is working to establish similar capabilities regarding contaminant transport issues.

In December 2000, the mining company modified its reflooded mine management plan. The modified plan predicts violations of Wisconsin's groundwater quality standards. This plan must be analyzed, in particular regarding its proposed contaminant control technologies and the computer models underlying its contaminant predictions.

In addition, GLIFWC has established a biomonitoring program designed to gather baseline data for contaminants found in certain plants and animals near the proposed mine site. For many of the species involved, GLIFWC has obtained only one year of funding for a three-year project. Data must be collected over a three-year period to provide an adequate number of samples for statistically determining changes in the environment. Fiscal year 2002 would be the second year of this project.

2. *Participate in the Lake Superior Bi-National Program*.—$80,000 for continued funding of GLIFWC staff (1 FTE equivalent) who will participate in the BiNational Program, in the preparation and implementation of the Lake Superior LaMP, and in IJC and SOLEC forums.

Rationale.—GLIFWC has been actively involved in the BiNational Program and preparation of the Lake Superior LaMP since 1993. It currently serves on the BiNational Program's Task Force and Workgroup, and on the Workgroup's chemical and habitat committees. It is participating in the preparation of the LaMP 2002. It also helps to liaison with other relevant Great Lakes institutions, such as the Great Lakes Fishery Commission, on issues of mutual concern between environmental and natural resource managers.

As for IJC forums, GLIFWC staff regularly attend the biennial IJC meetings and provide periodic comments when issues arise in the interim, such as on the matter of Great Lakes water diversions. As for SOLEC, GLIFWC staff addressed the 2000 plenary session on the topic of wild rice and organized a breakout session on wild rice.

3. *Continue Research and Special Projects*.—$70,000 for Lake Superior habitat and human health research projects.

Rationale.—GLIFWC has undertaken a number of studies related to the Lake Superior ecosystem. For example, with GLNPO and CEM funds, GLIFWC is preparing a report on the threat of wetland and terrestrial exotic plants to Lake Superior, is studying sturgeon in the Lake Superior basin, and is GIS-mapping fish spawning and nursery locations for both native and exotic species. In addition, as part of its ongoing natural resource contaminant/human health research, GLIFWC used Environmental Justice grants to update its fish consumption advisory database and to undertake wild rice contaminant research for heavy metals.

For fiscal year 2002, GLIFWC would explore EPA funding for three projects:

—Inventory zebra mussels in Chequamegon Bay and establish an interagency workgroup to inventory, monitor, and develop strategies to minimize the spread of zebra mussels in Lake Superior and inland waters.

—Assess impacts from mining waste (stamp sands) dumped into Lake Superior during the late 1800s, map an important whitefish and lake trout spawning reef in Keweenaw Bay, and determine the distribution of stamp sands in relation to the spawning reef.

—Assess chemical contaminants in archived and newly collected samples of whitefish and lake trout, focusing on dioxins, PCBs, and polybrominated dyphenyl ethers (PBDEs).

BENEFITS OF GLIFWC'S EPA-FUNDED PROGRAMS

Securing GLIFWC's EPA funding base provides the benefits of:

1. *A Constructive, Stabilizing Tribal Natural Resource Management Institution*.—Over the years, GLIFWC has become a recognized and valued partner in natural resource management and in providing accurate information to the public. Because of its institutional experience and staff expertise, GLIFWC provides continuity and stability in interagency relationships and among its member tribes, and contributes to social stability in the ceded territory in the context of treaty rights issues.

2. *Cooperative, Cost-effective Partnerships*.—Since its inception in 1985, GLIFWC has built many partnerships with other government agencies, schools and univer-

sities, and nongovernmental community groups and conservation organizations. This is particularly true regarding Lake Superior and its ecosystem. These partnerships have: (a) identified mutual natural resource concerns, and implemented conservation and enhancement projects; (b) maximized each partner's financial resources and avoided duplication of effort and costs; (c) achieved public benefits that no one partner could have achieved alone; and (d) engendered cooperation rather than competition.

3. *Sound Science and Research, and Better Integration and Consolidation of Data*.—GLIFWC recognizes that rational policy decisions are based upon sound science and accurate information. That is why, with funds provided by EPA, GLIFWC has undertaken a number of projects intended to promote good decisions based upon facts and proven scientific data.

ADEQUATE FUNDING FOR TRIBAL PARTICIPATION IN LAKE SUPERIOR INITIATIVES

GLIFWC asks Congress to provide adequate, long-term funding for CEM, GLNPO and Environmental Justice programs that are essential for continued tribal participation in both the policy and technical aspects of these initiatives. Specific programmatic and general assistance program funding designed for the exercise of tribal environmental protection authority does not meet all of GLIFWC member tribes' needs relating to their ceded territory treaty rights, particularly regarding Lake Superior. That is why EPA's CEM, GLNPO and Environmental Justice programs have been so important in helping tribes, and their duly authorized agencies like GLIFWC, to participate in Lake Superior initiatives.

GLIFWC and its member tribes are working hard to do their share in protecting the Lake Superior ecosystem. They want to remain active partners in ensuring that it continues to provide for the well being of all those—tribal members and their neighbors—who rely upon this vital resource to meet so many needs.

PREPARED STATEMENT OF THE JOSLIN DIABETES CENTER

INTRODUCTION

Mr. Chairman, thank you for this opportunity to provide a status report on the Diabetes Project conducted jointly by the Joslin Diabetes Center in Boston, MA and the Department of Veterans Affairs, for which you provided $5 million in the fiscal year 2001 Appropriations Act. Our request for fiscal year 2002 to continue and expand this project with the VA is $6 million, of which the VA's costs represent approximately 50 percent. I am Dr. Sven Bursell, Principal Investigator of the project and Associate Professor of Medicine at the Harvard Medical School.

BACKGROUND

Joslin Diabetes Center has been involved with the Department of Defense and the Department of Veterans Affairs in a pilot demonstration project for the advanced detection, prevention, and care of diabetes. The Joslin Vision Network (JVN) has been deployed in VA sites in VISN 21 in Hawaii (Honolulu, Hilo and Maui), VISN 1 in New England (Boston, Brockton and Togus Maine) and VISN 19/20 (Seattle and Tricities in Washington, Anchorage in Alaska and Billings in Montana). The JVN employs telemedicine technology to image the retina of patients with diabetes, through an undilated pupil, and produces a digital video image that is readable in multiple formats.

This project was funded initially through the Department of Defense Appropriations Act. The Department of Veterans Affairs medical staff was eager to expedite the deployment of this advanced diabetes technology beyond the limited resources available through participation in the DOD funded project. We petitioned this Subcommittee for additional resources to be made available to the VA for discretionary diabetes detection and care.

This Committee provided $2 million in fiscal year 2000 and $5 million in fiscal year 2001 for expansion of this project within the VA. The VA is eager to continue expansion, citing the JVN as the model of the future telemedicine in a recent conference of the Association of Military Surgeons-General of the US (AMSUS). We are seeking $6 million to continue this expansion, and are supported by the VA medical policy staff.

The leadership shown by this Subcommittee has enabled the VA to provide its patient population the best diabetes care, prevention, and detection in the world. We extend our sincere appreciation to you for your response to that request.

FISCAL YEAR 2001 ACTIVITIES

The policy and program officials of the VA have established the appropriate contracts and statements of work that resulted in consensus with respect to deployment of the Joslin Vision Network (JVN) technology to three sites: Anchorage, Alaska, TriCities, Washington, and Billings, Montana. A Reading Center will be created and utilized in Seattle, Washington. In addition, the refinement of JVN technology, both hardware and software, will move toward developing a scalable system that is capable of widespread deployment agency-wide. This system will be completed by March 31, 2001 and it is anticipated that this next generation of the system will be completely integrated into the VA's VISTA Medical Records System and the VA communications infrastructure.

Results from our various demonstration installations have shown that appropriate clinical resources can be efficiently allocated with respect to appropriate ophthalmology referral. For example, the installation in Togus Maine where there is no ophthalmology resources on site has shown that the use of the JVN system can effectively prioritize patients that need to be seen by the opthalmologist at the time when the ophthalmologist plans to visit that clinic. This site is imaging approximately 10 patients per day and they find the JVN program extremely resource efficient in providing the appropriate eye care to their patients. The same experience was noted from the VA clinics in Hilo and Maui where the Optometrist from the Honolulu VA visits these island clinics once a month and was able to effectively focus his time on the patients that really needed his expertise for managing their diabetes eye complications. Technologically, we will be providing an application that automatically detects retinal pathology from the JVN images. Using this first step approach it is anticipated that we can reduce the load on the reading center by as much as 50 percent. This is achieved through the use of a computer application that scans the images and detects any abnormalities that may be associated with the development of diabetic retinopathy. In those cases where the computer detects pathology a reader will be notified to perform the appropriate reading for retinopathy assessment. In the case where the computer does not detect any pathology the patient can be assigned to a low risk priority where the computer findings can be rapidly confirmed by the reader and the patient asked to return for repeat JVN imaging in a year. This application will be clinically validated using the existing JVN data base of patients in April and May of 2001 and if the sensitivity and specificity of the algorithm meet clinical standards then it is anticipated that this will be deployed to existing reading centers over the latter half of 2001.

FISCAL YEAR 2002 REQUEST

For fiscal year 2002, we request that in the VA Medical Account $6 million be allocated to continue and expand this project. The positive response within the VA system indicates that with sufficient resources, the JVN technology would be deployed in a number of sites with the ultimate goal of incorporating the JVN technology throughout the VA Medical Care system. I understand that with the funding that this request for fiscal year 2002, and perhaps one additional year, we will no longer need to request explicit funds through this route. That is, the VA Budget Request by the fiscal year 2004 cycle will include provisions for full deployment for the JVN throughout the VA Medical Care system. As the technology, systems and production of equipment are standardized to off the shelf specifications, the expense per site will decrease. The request of $6 million includes $1.5 million to complete the proof-of-concept business model to the point where the system operation and clinical programs are autonomous within any particular VA environment and that the VA, and any other medical system, can utilize the this advanced detection tool and reading center technology to cost effectively augment their clinical programs.

With the other $4.5 million, the VA and Joslin would determine the sites with the most need for portable advanced detection and begin to train personnel and equip additional VA facilities to utilize the JVN technology.

The specific goals for fiscal year 2002 include the following:

—Establish specific medical codes that will allow the VA to track performance with respect to these JVN examinations and to ensure that it conforms with VA performance criteria in multiple remote VA outpatient settings;
—Improve adherence to scientifically proven standards of diabetes eye care and diabetes care;
—Improve/promote access to diabetes eye care;
—Increase number/percentage of patients with Diabetes Mellitus obtaining eye care;
—Provide education patients and providers in the clinical setting.

The use of the JVN equipment and expansion of screening opportunities are a continuing major focus for fiscal year 2002 activities. The actual number of sites deployed to will be determined on the locales with the greatest need for diabetes care in conjunction with the telecommunications infrastructure at the identified sites and the ease and costs associated with interfacing the JVN technology into the existing infrastructure.

An equally important concentration of resources in fiscal year 2001 was focused on refining the technical core using outcomes based medical and case management scenarios to develop a diabetes healthcare model that is modular, customizable and that can be seamlessly integrated into the existing VA telemedicine systems. This is the stated goal of the medical leadership in the VA, DOD and HIS health care systems. The overarching vision for the VA/JVN project is a web-based comprehensive diabetes health care system that can be interactively used by both patients and providers, that incorporates diagnosis specific education and training modules for patients and providers and that incorporates software applications that allow outcome measures to be statistically assessed and individual treatment programs to be interactively adjusted based on these outcome measures. The JVN Eye Health care system exists as a component of a comprehensive diabetes management system, incorporating other clinical disciplines such as endocrinology, vascular surgery and internal medicine.

In order to make the above vision a reality we have expended considerable effort in migrating the JVN demonstration technology platform into an application that is totally compliant with existing medical informatics infrastructures and the existing VISTA infrastructure of the VA system. This will encompass the integration of hardware and software in close collaboration with available resources from the VA VISTA program that will allow a highly scaleable transparent integration of the JVN Diabetes Eye Health Care system into the existing health informatics infrastructures of the VA system. The proposed development effort for fiscal year 2002 will result in the development of modular applications associated with different aspects of total diabetes disease management such as clinical risk assessment, outcomes assessments, behavior modification in an interactive electronic environment, and education programs. These applications will be designed in collaboration with participating VA sites to provide an ultimate product that appropriately assesses the clinical diabetes risk and provides treatment plans and behavior modifications that are tailored to any particular patients needs. The programs will also be designed so that they can realize a significant cost and resource efficiency with respect to support and maintenance of the JVN component and the diabetes management programs that will facilitate an accelerated deployment in the future.

For the fiscal year 2002 project phase, we have established the following tasks, targets, and activities:

—Deployment of a viable, sustainable, and refined operating JVN Diabetes Eye Health Care model and Comprehensive Diabetes Management program.

—Develop a modularized medical outcomes based telemedicine diabetes management program in continued collaboration with the VA with outcome measures incorporated into software based on clinical results and research experiences of the fiscal year 2001 efforts.

—Develop curriculum based patient and provider educational modules.

—Integrate internet based portals that are accessed by patients for reporting of glucose values and receiving feedback with respect to goals for self management of their diabetes and adjustments of their treatment plans based on these goals. These portals will also provide regular education modules for the patients that are customized to their particular needs and clinical diabetes risk assessment.

CONCLUSION

Continuation and maintenance of this Committee's policy of support for the improvement of the diabetes care in the VA medical system through funding of this $6 million request, the benefits by the close of fiscal year 2002 will include:

—Deployment of JVN detection and care at 5 different VA centers where each center will provide services for 6 different remote sites for a total 35 sites;

—JVN accessibility to increase VA patient compliance to eye examinations to at least 95 percent of the diabetic patient population in any area being serviced. From an estimate of the VA diabetic patient population we would estimate that the JVN would be accessing an estimated patient population of 196,000, or an estimated 11 percent of the total VA diabetic population after completing anticipated 2002 deployments.

—The model for VA's deployment of the JVN as a diabetes detection and disease management platform for expansion to availability for the entire VA patient population.

Thank you for this opportunity to present this request for $6 million for fiscal year 2002 and status report for fiscal year 2001 on a medical technology breakthrough for the patients and health care system within the Department of Veterans Affairs.

PREPARED STATEMENT OF THE AMERICAN ASSOCIATION OF NURSE ANESTHETISTS AND THE ASSOCIATION OF VA NURSE ANESTHETISTS

The American Association of Nurse Anesthetists (AANA) is the professional association that represents 29,000 certified registered nurse anesthetists (CRNAs) across the United States. The Association of Veterans Affairs Nurse Anesthetists (AVANA) represents over 500 certified registered nurse anesthetists across the United States and Puerto Rico. We appreciate the opportunity to present our testimony to the subcommittee and to offer recommendations on ways to cut costs without sacrificing quality of care for our nation's veterans.

BACKGROUND INFORMATION ABOUT CRNAS

In the administration of anesthesia, CRNAs perform virtually the same functions as physician anesthetists (anesthesiologists) and work in every setting in which anesthesia is delivered including hospital surgical suites and obstetrical delivery rooms, ambulatory surgical centers, health maintenance organizations, and the offices of dentists, podiatrists, ophthalmologists, and plastic surgeons. Today CRNAs administer approximately 65 percent of the anesthetics given to patients each year in the United States. CRNAs are the sole anesthesia provider in at least 70 percent of rural hospitals, which translates into anesthesia services for millions of rural Americans. CRNAs are also the sole anesthesia providers in numerous VA facilities.

CRNAs have been a part of every type of surgical team since the advent of anesthesia in the 1800s. Until the 1920s, anesthesia was almost exclusively administered by nurses. In addition, nurse anesthetists have been the principal anesthesia providers in combat areas in every war the United States has been engaged in since World War I. Data gathered from the U.S. Armed Forces anesthesia communities' reveal that CRNAs have often been the sole anesthesia providers, both at home and while forward deployed. For decades CRNAs have staffed ships, isolated U.S. Bases, forward deployed Combat Hospitals (Kosovo . . .), and Forward Surgical Teams without physician anesthesia support. The US Army Joint Special Operations Command Medical Team and all Army Forward Surgical Teams are staffed solely by CRNAs. Military CRNAs have a long proud history of providing independent support and quality anesthesia care to military men and women, their families and to people from many nations who have found themselves in harms way. CRNAs also provide anesthesia services in the medical facilities of the Department of Defense, the Public Health Service, the Indian Health Service, the Department of Veterans Affairs, and countless other public and private entities.

The most substantial difference between CRNAs and anesthesiologists is that prior to anesthesia education, anesthesiologists receive medical education while CRNAs receive a nursing education. However, the anesthesia part of the education is very similar for both providers, and both professionals are educated to perform the same clinical anesthesia services. CRNAs and anesthesiologists are both educated to use the same anesthesia processes and techniques in the provision of anesthesia and related services.

The practice of anesthesia is a recognized specialty within both nursing and the medical professions. Both CRNAs and anesthesiologists administer anesthesia for all types of surgical procedures; from the simplest to the most complex, either as single providers or in a "care team setting".

NURSING SHORTAGE PREDICTED: HOW THIS COMMITTEE CAN HELP

While both types of health professionals can provide the same or similar services, it costs the Department of Veterans Affairs (DVA) significantly less to retain CRNAs because they draw a significantly lower salary than their physician counterparts. Therefore, it is in the best interest of the DVA, and this Committee, to implement policies and to support initiatives that assist in the effort to maintain adequate numbers of CRNA employees in the DVA.

The current employment scenario for CRNAs and the DVA is complicated by the predicted national nursing shortage that has been well publicized in the press and professional journals. Enrollments in nursing education programs continue to decline and the nursing workforce continues to age and retire. The number of nursing students enrolled in education programs has decreased 5 percent per year over the last 5 years. Recent articles stated the average age of the CRNA in the VA was 50 years old. Recruitment of nurse anesthetists for the DVA becomes increasingly difficult when the civilian sector faces such critical shortages. According to a recent survey by the AANA Administrative Management Committee, as many as 59 percent of the civilian institutions in the country are also actively recruiting CRNAs.

Data gathered by Loretta Wasse, Past Deputy Director, Anesthesia Headquarters, indicated that 10–12 percent of the CRNAs in the DVA retired in 2000. In real numbers this means the DVA lost over 50 CRNAs. These retirement numbers combined with nursing shortages, means that the DVA must work harder at recruiting and retaining nurse anesthetists. This Committee can greatly assist in the effort to attract and maintain essential numbers of nurse anesthetists in the DVA by their support of competitive salaries.

One thing that consistently attracts and maintains good employees is an attractive salary. Competitive salaries could assist the DVA with retention of cost-effective CRNAs to provide anesthesia services for our nation's veterans. But providing competitive salaries for employees can be an ongoing battle, especially in the face of restricted budgets. This is where this Committee can help, by providing adequate funding for personnel.

If salaries cannot stay competitive in the face of a national nursing shortage, then the DVA will surely face a shortage of CRNAs. Historically, the cost to correct such a problem has been steep. The DVA faced a severe shortage of CRNAs once before in the early 1990s, which was moderately corrected with the implementation of a locality pay system in 1991. In 1992, Congress expanded the authority of the local medical directors and allowed them to survey an expanded area to determine more competitive average salaries for CRNAs, which boosted pay and morale. Implementation of this expanded authority assisted the DVA in making great leaps in retention and recruitment of CRNAs at that time.

In addition, new graduates in various cities are offered starting salaries equal to or exceeding the VA ceiling. Also, the new pain initiative, "Pain as the 5th Vital Sign," will increase anesthesia workload and needs for education. Anesthesia Continuing Education funds are already insufficient for CRNAs employed by the VA.

Ken Wetjen, CRNA, past president of AVANA, conducted a survey of education funding for CRNAs. He found many private hospitals are providing tuition assistance from $1,000–$1,500 a year. Many VA's have little or no funding to send staff to education programs.

The current Veterans' Equitable Resource Allocation (VERA) reimbursement payment system funding lags data collection by two years. VAs are not receiving adequate funding to provide competitive wages and education to recruit CRNAs. History has shown the CRNA to be a quality, cost-effective health care provider. The Veterans Benefits and Health Care Improvement Act of 2000 is a step in the right direction. AVANA would like to thank the Committee for their support in getting the legislation passed last year. The legislation insured the VA nurse anesthetist the minimum COLA raises received by GS employees.

We strongly encourage this Committee to take a role in facing this nursing shortage head on, by providing adequate funding for personnel. With the current shortage of anesthetists, we must insure competitive salaries and education funding to retain and recruit high quality, cost-effective anesthesia providers. We look forward to working with this committee to ensure that veterans have access to quality health care at the VA always.

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