JEFFREY JARRETT

From the Director: "Reclaiming the Future"

Jeffrey Jarrett

At the Office of Surface Mining, we are tasked with implementing the Surface Mining Law. In that federal law, Congress gave the Office of Surface Mining and our state and tribal partners a complex mission: to strike a balance between protecting the environment and meeting the Nation's demand for coal as an essential energy source. Through that mission, Congress wanted to ensure that mining is a temporary use of the land and that reclamation after mining results in an equal or better use.

As we look back over the past 28 years, we can't help but recognize the tremendous strides that have been made in coal mining and reclamation. Today, good reclamation is the coal industry standard, and even great reclamation has become commonplace. Over the years, the Office of Surface Mining has publicly recognized operators for taking extra or innovative steps to reclaim land and water and create sustainable environments and long-term benefits for landowners and local communities. Our annual reclamation awards are highly coveted, and competition is fierce.

Now, we have an opportunity to build upon these successes and take reclamation to the next level – an opportunity to change not only how we look at reclamation; but, also the way we look at coal mining.

We, the federal, state and tribal governments, along with coal operators, landowners, and citizens who care about the environment, need to promote a more thoughtful, forward-looking approach to post-mining land use – an approach that ensures that mine reclamation contributes to a sustainable environment, a sound economy, and a healthy society. I call this "Reclaiming the Future."

We need to work with states to ensure that coal mining and reclamation practices result in post-mining land uses that accommodate the wishes of communities and landowners. I'm not talking about eliminating or reducing protections. This is about focusing our programs and regulatory requirements more toward what we want to achieve, keeping in mind that the ultimate decision on post-mining land use is the landowner's.

In June, Jeff Jarrett and his son Tyler joined more than 300 students from schools in the District of Columbia, Maryland, and Virginia to give a boisterous start to the National Fishing and Boating Week at Constitution Gardens on the mall across the street from OSM headquarters. At the event OSM annnounced a partnership with Trout Unlimited would be announced later in 2005.

There's a better way to reclaim the land; we need to think about the desired outcome and then develop plans to accomplish it. This means more than just meeting the legal requirements for reclaiming the land. It means thinking about and planning for what we really want to create for the future.

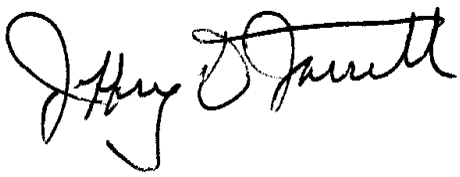
As director of the Office of Surface Mining this past four years, I've spent much of my time and energy working to reauthorize our Abandoned Mine Land fee collection authority – something that must be done if we are to continue the critical job of reclaiming the thousands of abandoned mines that threaten the health and safety of Americans all across this Nation.

I've tried to establish greater regulatory stability in our programs by stressing the need for predictable mining and reclamation requirements. The vast majority of coal operators are willing to reclaim by the rules; but, it's difficult to plan coal operations when the rules keep changing from year-to-year. Regulatory stability is also important so citizens will know what should and should not be happening at coal mines. I hope I've put my stamp on how the industry ideally approaches reclamation by establishing the "Good Neighbor" awards to encourage operators to work with citizens and local communities before, during, and after reclamation.

I've also tried to guide the Office of Surface Mining toward the logical next step in its evolution – to become the agency in the middle that brings everyone to the table. As a regulatory office, the Office of Surface Mining has always been in the middle of the debate about what is allowed and what is not, and that's where we're supposed to be. But, there's much more that can be done than just set limits; the middle is also a place for finding possibilities. It's a perfect place for the Office of Surface Mining to provide the coal industry, states and tribes with research, technical expertise, and training so vital to the continuous improvement of mining and reclamation practices in the United States. The middle is also a place where the Office of Surface Mining can bring states, tribes, federal and local agencies, academics, the industry, citizen groups, and communities together in partnership to make the most of the growing opportunities and increased choices we have in post-mining land use.

Our job is to place more emphasis on the possibilities and to develop a supporting structure and network of expertise. By thinking not only about legal limits; but, also about the reclamation potential at any given mine, we have the opportunity to leave behind something better for the landowner and for the community.

I'm grateful to have had the chance to be a part of the Office of Surface Mining at this pivotal period in its history and to contribute to Office of Surface Mining advances that are empowering all Americans to "Reclaim the Future."



Jeffery D. Jarrett, Director

SUMMARY FOR THE YEAR 2005

THE YEAR IN BRIEF

During 2005 the Office of Surface Mining took meaningful steps in several areas that will serve as foundations on which to build the concept of Reclaiming the Future.

The **Appalachian Regional Reforestation Initiative**, launched last year, made significant progress in 2005 with seven Appalachian states, the National Mining Association, and scores of universities, local governments, mining operators, and conservation groups pledging to work toward restoring hardwood forests on mined lands (see page 39).

On March 15th the Office of Surface Mining **proposed new revegetation rules** to encourage species diversity and remove barriers to reforestation on mined lands. This is an opportunity to make minor regulatory changes that should result in large gains in improved revegetation practices (see page 22).

In June the **first Wildlife Summit was held** in Louisville, Kentucky, that brought together experts from many fields to discuss how to introduce and sustain diverse and viable wildlife habitat on mined lands. The summit included discussions on establishing wetlands in reclamation; the planning role of state wildlife agencies in habitat management at reclaimed coal mines; habitat and forestry reclamation costs; corporate policy considerations; and the importance of thorough planning for habitat-friendly post-mining land uses early in the permit application process.

For the past two years, **reauthorization of Abandoned Mine Land reclamation fee collections** has been the Office of Surface Mining's primary policy objective. Although the issue is not yet resolved, Congress has extended the current fee collection authority until June 30, 2006. The Administration continues to focus on the priorities outlined in the initial reauthorization proposal developed in 2003 – directing more money to the reclamation of high priority health and safety problems and reducing the number of years it will take to address all serious abandoned mine land problems nationwide (see page 6).

In order to operate effective programs and deliver services efficiently, the Office of Surface Mining must have an **increased emphasis on technology transfer**. The President's proposed budget for 2006 included a $2.5 million increase over the 2005 level for funding technical initiatives, including increases in the National Technical Training Program, the Technical Innovation and Professional Services Program, and applied science studies (see pages 34-51).

After nearly two years of direct federal enforcement by the Office of Surface Mining, **the State of Missouri initiated action to resume regulatory authority** over surface coal mining operations. In 2005, Missouri provided the Office of Surface Mining with information that

Secretary of the Interior Gale Norton visited OSM's display at the President's Conference on Cooperative Conservation in St. Louis. Len Meier (left) and Kim Vories of OSM's Mid-Continent Regional Office show the Secretary materials explaining OSM's programs.(DOI Photo by Tammi Heilmann)

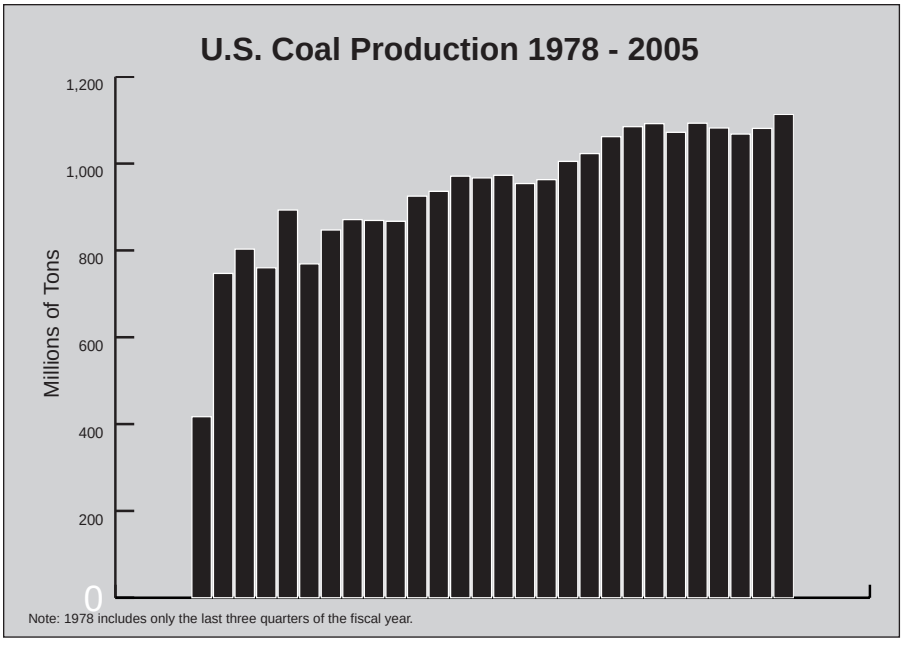
met the initial requirements for the state to resume full regulatory and reclamation responsibilities. If Missouri demonstrates its commitment to funding and hiring personnel to comply with all the requirements of the state program, it may resume full responsibility. On July 1, 2005, the Office of Surface Mining awarded funding for the start-up of both the state's regulatory and abandoned mine land reclamation programs. During the next few months the Office of Surface Mining will be reviewing the state's efforts to determine if Missouri satisfies the full program requirements (see page 22).

Working toward **Regulatory Stability,** on January 26th the Office of Surface Mining proposed revisions to its regulations governing the transfer, assignment, or sale of permit rights. The proposed rule was part of the Office of Surface Mining's implementation of a court settlement of the National Mining Association's litigation over related regulations issued in December of 2000 (see page 43).

The Office of Surface Mining is one of five government agencies involved in preparing a **final Environmental Impact Statement on mountaintop mining and valley fills** within portions of West Virginia, Kentucky, Virginia, and Tennessee. This work is evaluating broad federal actions, such as developing agency policies, guidance, and coordinated agency decision making processes to minimize the adverse environmental effects of mountaintop mining operations on water and fish and wildlife resources. The U.S. Environmental Protection Agency, the Army Corps of Engineers, the Fish and Wildlife Service, and the West Virginia Department of Environmental Protection are working with the Office of Surface Mining in developing the Environmental Impact Statement. On February 10th the Office of Surface Mining **signed a memorandum of understanding with the Army Corps of Engineers, the Environmental Protection Agency, and the Fish and Wildlife Service to improve permit application procedures** for surface coal mining operations that place dredged or fill material in waters of the United States. The Office of Surface Mining also **began the scoping process for an environmental impact study of its proposed excess spoil disposal and stream buffer zone regulations** (see page 28).

In the Southwest, the Office of Surface Mining is the lead federal agency in an **Environmental Impact Study to assess the impact of Peabody Western Coal Company's proposed operation and reclamation** plans for the Kayenta and Black Mesa coal mines and related projects on the Hopi and Navajo Reservations. The Study will help the Office of Surface Mining make a decision about approval of Peabody's application to continue mining operations at the two mines. A draft Statement should be available to the public in Spring 2006 (see page 27).

In 2005, under **the Appalachian Regional Reforestation Initiative** seven Appalachian states, the National Mining Association and scores of universities, local governments, mining operators, and conservation groups pledged to work toward restoring hardwood forests on mined lands (see page 39).

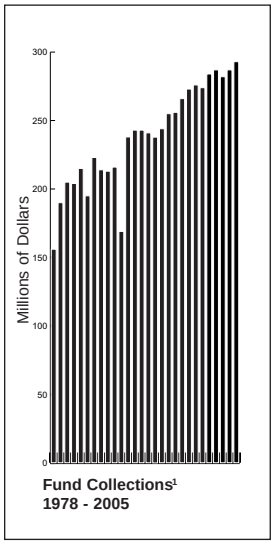


ABANDONED MINE LAND RECLAMATION

ELIMINATING HEALTH AND SAFETY PROBLEMS

Title IV of the Surface Mining Law establishes the Abandoned Mine Land Reclamation Program, which provides for the restoration of lands mined and abandoned or left inadequately restored before August 3, 1977. The program is implemented through an emergency program (for sudden problems presenting a high probability of substantial harm to the health, safety, or general welfare of people before the danger can be abated under the normal program operating procedures) and a non-emergency program. States and tribes with approved programs carry out these responsibilities using grants administered by the Office of Surface Mining

Abandoned Mine Reclamation Fund



Fund Collections[1]
1978 - 2005

The program is funded from the collection of fees from active mining operations. Since 1978, fees have been assessed at the rate of 35 cents per ton of surface mined coal, 15 cents per ton for coal mined underground, and 10 cents per ton for lignite coal. The fees are deposited in the Abandoned Mine Reclamation Fund, which is used to pay the costs of abandoned mine land reclamation projects. From January 30, 1978, when the first fees were paid, through September 30, 2005, the fee collections totaled $7,445,240,695. For the same period, appropriations from the Fund totaled $5,748,548,370.

Reauthorization

Under the provisions of the Surface Mining Law, the authority to collect abandoned mine land fees was limited in time. This authority has been extended by law seven times, including the most recent extension in the Interior Department's 2006 appropriations. As of September 30, 2005, the fee collection authority was slated to expire on June 30, 2006.

Despite remarkable achievements in the past 28 years, the job of remediating abandoned mine land-related hazards and problems is far from complete. Almost $3 billion worth of health and safety coal-related abandoned sites remain in the Office of Surface Mining's inventory of hazardous sites, as well as

At this Kentucky reclaimed mine site the rock-lined drain adjacent to the hollow fill directs surface water off the fill and into the permanent impoundment at the base of the structure.

Table 1
Abandoned Mine Lands Fee Collections and Funding[1]

State/Tribe	AML Collections	State Share Distribution[2]	Federal Share Distribution[2]	Emergency Distribution[2]	Clean Streams Distribution[2]	Total Distribution[2]
Alabama	$5,007,448	$1,208,413	$1,548,031	$400,000	$164,648	$3,321,092
Alaska	601,108	137,600	1,362,400	25,000	0	1,525,000
Arkansas	49,403	646	1,499,354	15,000	0	1,515,000
Colorado	7,858,492	1,734,291	754,431	0	0	2,488,722
Illinois	5,721,417	2,029,335	5,734,908	800,000	339,499	8,903,742
Indiana	8,110,871	2,909,916	1,867,106	320,000	177,973	5,274,995
Iowa	0	2,262	1,497,738	60,000	118,931	1,678,931
Kansas	51,862	27,521	1,472,479	450,000	0	1,950,000
Kentucky	26,216,272	8,690,962	5,620,573	0	334,724	14,646,259
Louisiana	399,420	97,212	0	0	0	97,212
Maryland	1,260,905	246,230	1,253,770	0	115,210	1,615,210
Mississippi	189,265		0	0	0	0
Missouri	364,933	66,116	1,433,884	50,000	0	1,550,000
Montana	11,893,651	3,234,974	0	125,000	0	3,359,974
New Mexico	3,088,877	1,440,891	183,412	0	0	1,624,303
North Dakota	2,940,160	853,044	646,956	100,000	0	1,600,000
Ohio	5,210,048	1,675,751	3,515,573	2,300,000	246,816	7,738,140
Oklahoma	482,213	149,238	1,350,762	105,000	111,038	1,716,038
Pennsylvania	12,690,819	4,038,538	18,538,069	0	874,180	23,450,787
Tennessee	884,351		0	0	0	0
Texas	4,652,947	1,398,654	0	0	0	1,398,654
Utah	3,448,634	1,014,495	502,652	0	0	1,517,147
Virginia	6,007,689	1,882,197	1,725,130	1,850,000	172,044	5,629,371
Washington	1,906,147		0	0	0	0
West Virginia	32,836,697	8,977,678	10,654,214	1,808,355	544,937	21,985,184
Wyoming	139,976,994	29,870,288	0	0	0	29,870,288
Crow Tribe	2,254,198	530,907	0	0	0	530,907
Hopi Tribe	1,682,801	378,846	0	0	0	378,846
Navajo Tribe	7,816,608	2,156,869	0	0	0	2,156,869
Total	**$293,604,230**	**$74,752,874**	**$61,161,442**	**$8,408,355**	**$3,200,000**	**$147,522,671**

1. These statistics are "Cash Basis" refering to the recognition of revenue when it is received. Fee collections are reported using cash basis criteria, and Abandoned mine land revenue in 2005 financial statements may include other amounts.
2. The term "Distribution" is now used instead of "Allocation". Allocation refers to the "pooling" of monies collected for the Fund. State and federal share distribution amounts are based on formulas and parameters provided annually by the Assistant Director, Program Support. The emergency program distribution amounts are based on estimates provided by the states and approved by the Director.

another $3.6 billion worth of identified high priority coal problems affecting the general welfare of individuals in the coalfields and numerous environmental coal-related problems. These are not "ugly landscapes" that need to be made more attractive; they are serious, life-threatening, high priority coal mine hazards that originate from mines abandoned before passage of the Surface Mining Law in 1977. A 2003 study completed by the Office of Surface Mining estimated that 3.5 million Americans live less than one mile from health and safety hazards created by abandoned coal mines. It is clear that fee collections for the purpose of abandoned mine land reclamation must be reauthorized to abate the hazards and eliminate these historic problems from the Nation's coalfields.

The Bush Administration has been working diligently on taking the steps necessary to finish the job Congress gave the Office of Surface Mining in 1977. In his 2004 budget, President Bush called for reauthorization of the Office of Surface Mining's authority to collect the fees that make up the Abandoned Mine Reclamation Fund. As a result, the Office of Surface Mining established a dialogue with many of the people that have an interest in how the abandoned mine land fee is reauthorized. The goal of these discussions was to get stakeholders thinking about what has changed since the program was started more than 28 years ago and how to restructure the program to finish the job.

During a 30-year period, over 1,800 acres were mined and reclaimed at this Colorado site. Native shrubs have been a high priority for the reclamation, and almost 150,000 were planted in the last 10 years. The high survival rate can be attributed to using local seed and very effective planting and management practices.

Through review and analysis of the Abandoned Mine Land Program as well as discussions with government officials, members of Congress, industry representatives, and citizen advocates, the Office of Surface Mining came to the conclusion that, while significant achievements have been made in reclaiming mine sites abandoned prior to the enactment of the Surface Mining Law, various factors have changed considerably since 1977, creating a fundamental imbalance in the way funds for the Abandoned Mine Land Program are allocated. It became clear that the ability of the Abandoned Mine Land Program to meet its primary objective of abating abandoned mine problems on a priority basis is being hindered by a statutory allocation formula that results in a progressive distribution of resources away from the most serious abandoned mine land problems.

The Surface Mining Law allocates abandoned mine land fee revenues into several accounts within the Abandoned Mine Reclamation Fund. Expenditures from these accounts are subject to Congressional appropriation. Fifty percent of the fees collected from current coal production in each state is allocated to an account established for that state. Likewise, 50 percent of the fees collected from current coal production on Indian lands is allocated to an account established for the tribe having jurisdiction over those lands. The funds in these individual "state share" and "tribal share" accounts can only be used to provide abandoned mine land grants to the state or tribe for which the account is established. The state or tribe must generally follow the priorities established by the Surface Mining Law in making spending decisions, concentrating first on abandoned mine land sites that pose a significant risk to human health, safety, or the general welfare, then on environmental problems. Once a state or tribe certifies that it has completed remediation of all coal related sites, it is free to spend its state share money on other authorized projects such as public facilities for areas adversely affected by coal mining practices. Table 1 shows 2005 collections and funding by states.

Twenty percent of the total Abandoned Mine Reclamation Fund income is allocated to the "historical production" account. Funds in this account must be used to provide abandoned mine land grants to the states and tribes. Each eligible state and tribe is entitled to a percentage of the annual outlays from this account in an amount equal to its percentage of the nation's total historical coal production—that is, coal produced prior to 1977. Thus, the proportional entitlement for each state or tribe from this account is fixed. As is the case with state share money, each state or tribe must follow the priorities established in the Surface Mining Law in making spending decisions using money from the historical production account.

However, unlike the allocation of state share money, once the state or tribe certifies that all eligible coal related reclamation has been completed, it is no longer entitled to further allocations from the historical production account. For the most part, the Office of Surface Mining finds a direct correlation between the severity of abandoned mine land problems in a state and the amount of coal that was removed before the enactment of the Surface Mining Law. Thus, by distributing funds according to historical coal production, we are getting more funds to those states that have the most high-priority problems.

Ten percent of the total Abandoned Mine Reclamation Fund income is allocated to an account for use by the Department of Agriculture for administration and operation of its Rural Abandoned Mine Program. The remaining 20 percent of the total Abandoned Mine Land Reclamation Fund income is allocated to cover federal

operations including the federal Emergency Program, the federal High-Priority Program, the Clean Streams Program, the Fee Compliance Program, the Small Operator Assistance Program, and overall program administrative costs.

In the early years of the Abandoned Mine Land Program, fee income was generally aligned with the magnitude of abandoned mine Land problems-75 percent of the income came from the East, where 94 percent of the abandoned mine land problems existed, and 25 percent of the income came from the West, where 6 percent of the abandoned mine land problems existed. Correspondingly, the state share portion of the grants was generally being distributed in amounts roughly proportional to the abandoned mine land problem, much like the historical production portion of the grants. A great deal of abandoned mine land coal reclamation occured during those early years of the program.

Over the past 28 years, coal production and fee collections have shifted away from areas with high historical production and into the areas where there are fewer or no remaining abandoned mine land problems. Because 71 percent of the total grant dollars is based on current production, there has been a corresponding shift of abandoned mine land resources away from the areas with the most significant problems. From the program's inception in 1977 through 1993, about 99 percent of the state grant dollars went to reclaim abandoned coal mine sites. Ninety five percent of that money was used for high-priority abandoned mine land reclamation. From 1994 through 2002, as current production shifted to regions with fewer abandoned mine land problems, only 71 percent of the state grant dollars went to reclaim abandoned coal mine sites, and only 64 percent was used for high-priority abandoned mine land reclamation. This trend will continue as more states complete their high priority abandoned mine land reclamation work and then work on low priority sites and other authorized projects, while some states are still decades away from completing reclamation of the most critical high-priority sites. Not only must the fee be extended if the Office of Surface Mining and the states have any hope of completing the job the allocation formula must be changed if the job is to be completed in an efficient and effective manner.

Thus, through reauthorization, the Office of Surface Mining is attempting to accomplish the following goals:

- Expedite the cleanup of high priority health and safety related abandoned coal mines;
- Provide for the expedited payment of unappropriated balances to certified States and Tribes;
- Accomplish these goals within the President's mandatory and discretionary spending limits.

To honor these principles and finish the job, legislation must strike a balance that addresses both the ongoing problems faced by states with high priority coal-related health and safety issues while not placing at a disadvantage those states and tribes where the majority of fees are currently generated.

In 2004, an administration supported bill was introduced in both the House and Senate that would have provided an effective and cost-efficient solution to the abandoned mine land problem. Several other bills which encompassed the Administration's fundamental goals while differing in the methods to achieve those goals were also introduced. Hearings on the various bills were held in both the House and Senate but none of the bills moved out of their respective committees.

It's easy to question if this farm was ever a coal mine. At this Kentucky site the operator mined and reclaimed this small farm and within a short time it was returned to the preminng land use without any environmental impact. Today, reclamation such as this is becoming common practice -- a distinct difference from the years before the Surface Mining Law was passed.

Table 3
ne Land
Grants

When a final pit was being reclaimed as a pond, engineers designed a 30-acre two-tier flood plain that provides both flood storage and a forested wetland. The upper tier, 18 acres in size, has a slight slope that drains into the pond. Its water source is overland flow from precipitation that drains from adjacent land. The lower tier is 12 acres in size and is flat. It provides storage for the periodic flooding of the pond and is a wetland habitat similar to bottomland found through this part of Texas.

Machine planting of containerized seedlings resulted in a 77 percent survival rate and a dense stand of trees and shrubs. Today, established wetlands oaks, pecan, sweetgum, and water hickory cover the depressions and wet areas. This innovative reclamation practice has resulted in a site that looks as natural as the native wetlands.

Congress extended OSM's fee collection authority as it continued to debate the issues and various proposed solutions, a clear indication of the importance Congress places on the AML program.

In anticipation of legislation that would support the Administration's goals, the Office of Surface Mining requested a record $58 million increase for grants in the 2006 President's budget. OSM did not submit new legislation this year, choosing instead to be an advocate for extension and to work with Congress and within the Administration for fee renewal and reform.

As OSM's leaders the events of 2004, it became clear that there were several issues Congress would need to resolvein order to gain a consensus, including:

- The United Mine Workers of America Combined Benefit Fund and other health care agreements including the 1992 and 1993 agreements between the United Mine Workers and the Coal Industry;
- Mandatory spending;
- Allocation of future collections, particularly allocations to state and tribal shares;
- How to pay for increased costs beyond the scope of the current legislation; and
- Amount of fees

As an advocate for fee renewal and reform, the Office of Surface Mining has tried to broker consensus on these differences. Several bills which reflect much of the reform policy that has been sought have been introduced in 2005, and the differences may be coming together.

Senator Rockefeller introduced S 961 and Senator Thomas introduced S 1701, and Representative Peterson introduced HR2721, and Representatives Cubin and Rahall introduced HR 1600. On September 27, 2005, the Committee on Energy and Natural Resources held a hearing on the Rockefeller and Thomas bills; however none of the bills made it out of committee as of September 30, 2005.

United Mine Workers of America Combined Benefit Fund

Beginning in 1996, under a requirement of the Energy Policy Act of 1992 (Public Law 102-486), the Office of Surface Mining began an annual transfer in an amount equal to the interest earned on the Abandoned Mine Reclamation Fund to the United Mine Workers of America Combined Benefit Fund. This cash transfer is used to defray anticipated health care costs for eligible union coal

Table 2
Abandoned Mine Land Reclamation Fund Status

	2005	2004
Balance, Start of Year	$2,043,080,117	$1,927,410,405
Fees, debts, and interest collected	293,604,230	287,023,400
Interest earned on investments	75,016,987	45,694,566
Total Earnings	368,621,217	$332,717,966
Disbursements	211,198,604	202,081,325
Transfers to the United Mine Workers	66,533,254	14,966,929
Total Disbursements and Transfers	277,731,858	217,048,254
Balance, End of the Year	**$2,133,969,476**	**$2,043,080,117**

Table 3
Abandoned Mine Land Grants[1]

State/Tribe	Subsidence Insurance	10% Program Set-Aside	Administration[3]	Project Costs[4]	Emergency[5]	2005 Total	2004 Total	Program Staff[6]
Alabama	$0	$0	$620,897	$2,483,907	$400,000	$3,504,804	$3,615,616	18.15
Alaska	0	0	351,324	1,149,295	25,000	1,525,619	1,525,000	5.67
Arkansas	0	0	412,632	1,118,703	15,000	1,546,335	1,515,000	6.90
Colorado	0	0	630,000	1,785,000	0	2,415,000	2,731,777	14.00
Illinois	0	808,463	1,350,508	6,265,153	800,000	9,224,124	9,796,401	26.00
Indiana	0	488,572	1,235,480	3,480,485	320,000	5,524,537	5,745,506	21.00
Iowa	0	0	218,283	1,442,665	60,000	1,720,949	1,760,749	4.10
Kansas	0	0	293,019	1,298,332	610,000	2,201,351	2,134,328	9.95
Kentucky	0	0	1,916,109	13,057,910	0	14,974,019	16,625,563	83.00
Louisiana	0	0	97,400	0	0	97,400	148,905	0.60
Maryland[2]	0	258,000	445,920	715,210	0	1,419,130	2,398,052	3.45
Missouri	0	0	560,006	59,022	50,000	669,028	688,162	6.10
Montana	0	0	533,641	2,854,357	125,000	3,512,998	3,681,449	8.85
New Mexico	0	163,742	908,821	920,826	0	1,993,389	4,694,246	8.50
North Dakota	0		191,931	1,328,225	100,000	1,620,156	1,629,220	4.88
Ohio[2]	0	553,380	1,198,099	4,432,828	2,841,000	9,025,307	9,647,670	33.31
Oklahoma	0	0	298,435	1,318,180	340,000	1,956,615	1,752,613	9.00
Pennsylvania[2]	0	2,360,697	3,128,076	39,780,590	0	45,269,363	43,731,703	111.00
Texas	0	0	131,015	1,270,466	0	1,401,481	3,006,445	8.00
Utah	0	0	435,383	1,532,662	0	1,968,045	2,226,781	11.00
Virginia	0	332,725	570,091	3,078,528	1,850,000	5,831,344	6,322,496	15.00
West Virginia[2]	0	500,000	4,710,873	15,958,863	5,000,000	26,169,736	33,340,900	59.60
Wyoming	31,131	2,992,630	1,236,375	33,804,519	0	38,064,655	37,371,461	14.90
Crow Tribe	0	0	91,703	483,706	0	575,409	571,124	3.55
Hopi Tribe	0	0	603,577	51,860	0	655,437	200,000	4.40
Navajo Tribe	0	0	887,732	2,225,017	0	3,112,749	4,044,524	22.50
Total	**$31,131**	**$8,458,209**	**$23,057,331**	**$141,896,309**	**$12,536,000**	**$185,978,980**	**$200,905,691**	**517.41**

1. Funding for these grants is derived from the 2005 distribution and funds recovered or carried over from previous years. Downward adjustments of prior-year awards are not included in the totals.
2. These 10 percent set-aside amounts are for acid mine drainage set-aside funding rather than future set-aside funding.
3. Included in this category are costs for program support (personnel, budgeting, procurement, etc.), abandoned mine land inventory management, and program policy development. Indirect costs associated with the administration of the program may also be included.
4. The term "Project Costs" is now used instead of construction. Abandoned mine land simplified grants do not contain specific construction cost breakouts, but rather list all costs associated with a construction project as a project cost. This category contains non-water supply, water supply, and non-coal project costs, and includes $3,200,000 in funding for Appalachian Clean Streams Program.
5. This category contains emergency project, administrative, and indirect costs.
6. Number of state abandoned mine reclamation program staff on June 30, 2005.

mine workers who retired on or before July 20, 1992, and their dependents. The Energy Policy Act authorizes a transfer of up to $70 million per year oin an amount equal to the interest earned on the AML fund not to exceed $70 million to the Combined Benefit Fund to defray the costs related to health care for unassigned beneficiaries. Unassigned beneficiaries are those miners for whom no operating coal company is responsible. If, after a typical two-year cycle, the amount of the transfer was greater or less than the actual health benefits, an adjustment is made to the next transfer. The 2005 annual payment was $69 million for 16,502 beneficiaries. Prior year adjustments reduced this payment by $2.5 million. The total payment in 2005 was just under $66.5 million. Since 1992, when the Office of Surface Mining began investing Abandoned Mine Land funds, the cumulative investment earnings have been $850.5 million. Cumulative transfers to the United Mine Workers of America Combined Benefit Fund, including 2005, have been $75 million, leaving an interest balance of $6 million. Table 2 summarizes the Fund account for the past two years.

Fee Collection

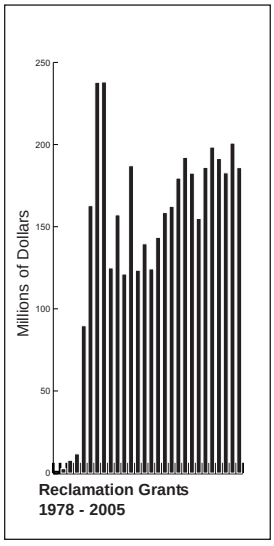
The Office of Surface Mining collects fees from coal mine operators through voluntary reporting, audit, and debt collection. In 2005, the rate of those reporting tonnage and paying the fees

that were due was 99.9 percent, resulting in total collections of $293,604,230 for the Fund. To achieve that compliance rate, the Office of Surface Mining's integrated collection and audit functions focus on providing coal operators the information and assistance needed to comply. Experience has shown that a proactive, cooperative approach with industry reduces the time and costs required for all parties involved. Specific steps taken include: providing preprinted forms to all active coal mining companies on the e-filing website or by mail; contacting all new operators to offer compliance assistance; and providing guidance by mail, phone, and during audits.

Because of factors beyond the Office of Surface Mining's control, such as company financial difficulties and errors, some nonpayment and non-reporting will probably always be present. When such instances of noncompliance are found, auditors and collection staff examine each issue and determine how similar occurrences can be avoided in the future. The high compliance rate can be attributed to this proactive cooperative approach, and the overall efficiency of the collection and audit activities.

Grants to States and Tribes

Starting with Texas in 1980, the Office of Surface Mining began approving state reclamation programs. Currently, 23 states have approved abandoned mine land reclamation programs: Alabama, Alaska, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Missouri, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Virginia, West Virginia, and Wyoming. In addition, the Crow, Hopi, and Navajo Indian tribes have approved programs. In 2005, the states and tribes received grants totaling $185,978,980 to carry out the emergency and non-emergency Abandoned Mine Land programs.



Reclamation Grants
1978 - 2005

Since 1979, when the states began receiving abandoned mine land grants for their reclamation programs, $3,728,784,966 has been distributed from the Fund. Grant obligations (the amount used by the states) for 2005 are shown in Table 3[5].

Minimum Program

The minimum-level program was established by Congress in 1988 to ensure funding of existing high priority projects in states where the annual grant distribution is too small for the state to administer a program.

During 2005, Alaska, Arkansas, Iowa, Kansas, Maryland, Missouri, North Dakota, and Oklahoma were eligible for minimum-level program funding and received such grants during the year. Minimum-level program funding remained at $1,500,000 for 2005. The eight eligible programs received a total of $7,866,744 in 2005.

This funding supplements the formula-based grant and brings those eight states to the minimum-program level. Once minimum-program states or tribes complete their high priority projects listed in the National Abandoned Mine Land Inventory System, their annual grants are limited to state-share funds.

State Set-Aside

States are authorized to set aside up to 10 percent of the state-share and historic coal funds received annually into either of two special trust funds. Set-aside funds are deposited into a trust account and may be used, along with interest earned, for specific purposes. Beginning in 1987, Public Law 100-34 authorized states to deposit set-aside money into future trust funds which may be used to reclaim future abandoned mine land problems. In 1990, Public Law 101-508 created an acid mine drainage set-aside program. Funds from an acid mine drainage trust fund may be expended to implement an approved acid mine drainage abatement and treatment plan. In 2005, nine states set aside $8,458,209. The Office of Surface Mining has granted a total of $82,685,182 through 2005 to 16 states and three tribes for their set aside trust funds.

Subsidence Insurance

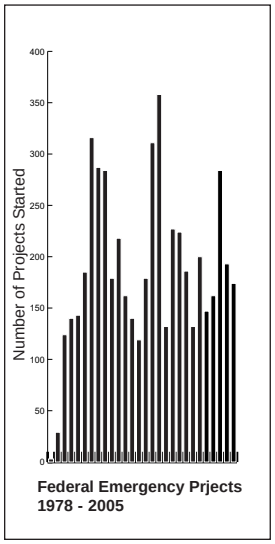
Public Law 98-473 authorized states and tribes with approved reclamation programs to use abandoned mine land funds to establish self-sustaining, individually administered programs to insure private property against damage caused by land subsidence resulting from abandoned underground coal mines. States receive a subsidence insurance grant of up to $3,000,000, awarded from the state's share of the Abandoned Mine Land Fund.

In 2005, one subsidence insurance grant was issued to the state of Wyoming, for $31,131. Through 2005, the Office of Surface Mining has granted a total of $11,917,137 to Colorado, Indiana, Kentucky, Ohio, West Virginia, and Wyoming for this purpose.

Emergency Program

5. Differences between the total obligation (shown in Table 3) and the total distribution (shown in Table 1), result from previous year carry over or funding from past years distribution that were not used until 2005.

Emergency reclamation projects are those involving abandoned mine land problems that present a danger to public health, safety, or general welfare and that require immediate action to eliminate the problem.



Federal Emergency Prjects 1978 - 2005

Following passage of the Surface Mining Law, the Office of Surface Mining performed all emergency reclamation; however, as programs were approved, many states took over administration of emergency programs. In 2005, the following states had emergency programs: Alabama, Alaska, Arkansas, Illinois, Indiana, Iowa, Kansas, Missouri, Montana, North Dakota, Ohio, Oklahoma, Virginia, and West Virginia. The Office of Surface Mining provides federal share funds to the states with state emergency programs to complete their emergency projects. The Office of Surface Mining is responsible for emergency projects in California, Colorado, Georgia, Kentucky, Louisiana, Maryland, Michigan, Mississippi, New Mexico, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Washington, and Wyoming, as well as on all tribal lands.

Investigations of potential emergency problems (called "complaint" investigations) are undertaken by state reclamation agencies or by the Office of Surface Mining. Potential emergency problems are referred to the states or the Office of Surface Mining from affected citizens, municipalities, emergency response agencies, and other state agencies. Information on how to report emergency problems can be found at www.osmre.gov/amlemerg.htm. Following identification of a potential emergency problem, a technical investigation is performed, usually within 48 hours, and a determination made whether the site is eligible for emergency reclamation. Of the 1,452 potential emergencies referred to the states and Office of Surface Mining in 2005, 328 were determined to be emergencies, 1,002 were determined not to be of an emergency nature or not related to coal mining, and 30 were still under investigation on September 30, 2005. Problems which are not emergencies but are otherwise eligible for reclamation are considered for funding as high priority projects.

During 2005, states obligated $12.5 Million (see Table 3) and the Office of Surface Mining obligated $8.0 million (see Table 5) for emergency reclamation projects. In 2005, the states and the Office of Surface Mining started 333 abandoned mine land emergency projects in 18 states

Table 4
Reclamation Projects Started

	Emergency					Non-Emergency	
	2005		1978-2005			2005	
	Federal[1]	State[2]	Federal[1]	State[2]	Total[3]	Federal[1]	State[2]
Alabama	0	10	10	125	135	0	7
Alaska	0	0		1	1	0	2
Arkansas	0	2	1	22	23	0	3
California	0	0	5	0	5	0	0
Colorado	1	0	107	0	107	0	13
Crow	0	0	0	0	0	0	7
Georgia	0	0	0	0	0	0	0
Hopi	0	0	0	0	0	0	0
Illinois	0	15	51	278	329	0	12
Indiana	0	5	94	158	252	0	37
Iowa	0	2	22	3	25	0	4
Kansas	0	28	270	686	956	0	2
Kentucky	33	0	1,133	0	1,133	0	47
Louisiana	0	0	0	0	0	0	0
Maryland	0	0	0	0	0	0	0
Michigan	0	0	0	0	0	2	0
Mississippi	0	0	0	0	0	0	0
Missouri	0	1	6	6	12	0	5
Montana	0	0	7	14	21	0	3
Navajo	0	0	6	0	6	0	1
New Mexico	0	0	16	0	16	0	3
North Dakota	0	1	15	15	30	0	5
Northern Cheyenne	0	0	2	0	2	0	0
Ohio	0	38	190	327	517	0	32
Oklahoma	0	4	47	29	76	0	4
Pennsylvania	136	0	2,637	0	2,637	0	68
Rhode Island	1	0	4	0	4	0	0
Tennessee	1	1	20	1	21	2	2
Texas	0	0	6	0	6	0	1
Utah	0	0	0	0	0	0	3
Ute Reservation	0	0	1	0	1	0	0
Virginia	0	14	30	174	204	0	29
Washington	2	0	59	0	59	2	0
West Virginia	0	38	179	800	979	0	14
Wyoming	0	0	38	0	38	0	23
Total	**174**	**159**	**5,246**	**2,638**	**7,595**	**6**	**329**

1. Projects started in 2005 (October 1, 2004 - September 30, 2005).
2. Projects started during the period July 1, 2004 - June 30, 2005.
3. Includes projects started during both time periods.

Table 5
Federal Reclamation Projects (Obligations)

State or Tribe	Emergency	High Priority	Total 1978-2005[1]
Alabama	$0	$0	$13,934,015
Alaka	0	0	$194,638
Arkansas	0	0	$84,904
California	0	0	$2,626,403
Colorado	0	0	$2,185,202
Georgia	0	978	$4,129,364
Illinois	0	0	$5,376,749
Indiana	0	0	$4,032,023
Iowa	0	0	$1,438,442
Kansas	0	0	$5,094,172
Kentucky	5,044,318	0	$123,593,105
Maryland	27,185	0	$3,132,966
Michigan	0	4,000	$3,652,382
Missouri	0	0	$8,015,909
Montana	0	0	$729,058
New Mexico	0	0	$2,366,041
North Carolina	0	0	$205,407
North Dakota	0	0	$1,723,933
Ohio	0	0	$18,295,299
Oklahoma	0	0	$1,232,159
Oregon	0	42,500	$109,775
Pennsylvania	2,614,551	0	$116,192,497
Rhode Island	13,248	0	$569,477
South Dakota	0	14,296	$196,892
Tennessee	143,828	1,000,000	$26,760,441
Texas	0	0	$289,849
Utah	0	0	$123,791
Virginia	0	0	$10,139,469
Washington	156,921	209,778	$8,623,885
West Virginia	0	0	$29,023,226
Wyoming	0	0	$1,067,101
Cheyenne Rive Sioux Tribe	0	0	$2,803,165
Crow Tribe	0	0	$1,097,895
Fort Berthold Tribe	0	0	$69,972
Fort Peck Tribe	0	0	$147,991
Hopi Tribe	0	0	$1,263,409
Jacarillo Apache Tribe	0	0	$59,998
Navajo Tribe	0	0	$2,222,792
Northern Cheyenee Tribe	0	10,000	$595,044
Southern Ute Tribe	0	0	$94,206
Rocky Boy Tribe	0	0	$60,188
Uintah/Ouray Tribe	0	0	$138,738
Ute Mountain Tribe	0	0	$14,300
White Mountain Apache Tribe	0	0	$1,838
Wind River Tribe	0	0	$73,267
Zuni Tribe	0	0	$125,009
Undistributed	0	0	$580
Total	**$8,000,050**	**$1,281,552**	**$403,906,966**

1. Includes prior year contract deobligations and upward adjustments.

(see Table 4). As in previous years, Pennsylvania and Kentucky had the most emergencies.

Non-Emergency Program

Under Sections 402 and 407 of the Surface Mining Law, the Secretary of the Interior is authorized to expend Abandoned Mine Reclamation Fund monies for non-emergency reclamation of high priority problems that present an extreme danger or that affect the public health, safety and welfare. A non-emergency is defined as an abandoned mine land reclamation problem that meets one of the priorities of Section 403(a) or 411(c) or (f) in the Surface Mining Law. Until 1980, the Office of Surface Mining administered all non-emergency reclamation, but as the state and tribal reclamation programs were approved they took over responsibility for correcting abandoned mine land problems. States and tribes currently use 99 percent of non-emergency reclamation funds. The states and tribes initiated 329 non-emergency reclamation projects. The Office of Surface Mining, which continues to do projects in the states of California, Georgia, Michigan, Oregon, South Dakota, Tennessee, and Washington, initiated six non-emergency projects.

The Abandoned Mine Reclamation Fund also is used to reclaim problems created by non-coal mines. To be eligible for funding, a non-coal project must be a Priority 1 (threat to health and safety), or the state or Indian tribe must certify it has addressed all known coal-related problems. Table 6 summarizes both emergency and non-emergency abandoned coal and non-coal mine reclamation project accomplishments through 2005.

Post-Surface Mining Law Reclamation

As authorized by the 2005 Appropriations Act, Federal Civil Penalties collected under Section 518 of the Surface Mining Law were used to reclaim lands mined and abandoned after August 3, 1977. In 2005, the Office of Surface Mining funded two civil penalty projects in Alabama and Virginia costing a total of $98,610.75. An additional $71,568.87 in unobligated funds will be carried over for use in 2006 reclamation projects.

Clean Streams Program

The Clean Streams Program began as the Appalachian Clean Streams Initiative in the fall of 1994. The Program supports local efforts to eliminate environmental and economic impacts of acid mine drainage from abandoned coal mines. The mission is to facilitate the efforts of citizen groups; university researchers; the coal industry; corporations; the environmental community; and local, state, and federal government agencies in cleaning streams polluted by acid mine drainage. The program is carried out by state abandoned mine reclamation programs and nonprofit organizations.

Supplemental State Grants

Eligible state programs are funded by the Office of Surface Mining to address acid mine drainage problems. These grants act as "seed money" to encourage other organizations to contribute funding for the projects. During 2005, the Office of Surface Mining provided 11 states with $3.2 million. Since 1994 when the supplemental state grants began, the Office of Surface Mining has provided $47 million for 158 projects, 119 have been completed (see Figure 1), and outside funding grew to over $23 million on the projects

A recent successful Clean Streams Program project is the Keystone State Park Acid Mine Drainage Abatement Project located in Keystone, Pennsylvania. The project was completed Dec. 9, 2004, at a cost of $237,465. Phase 1, work completed in 2002, dewatered a mine pool, removed a mine seal, and replaced a mine drainage collection system that had frequently plugged and threatened to damage recreational facilities at the state park. Phase 2 involved the construction of a passive treatment system to eliminate the polluted water discharge. The treatment system consists of an innovative limestone-upflow unit with an automatic siphon to backflush the unit and remove metal precipitates. The treatment system is in operation and is restoring water quality to 1.2 miles of McCune Run, a tributary of Loyalhanna Creek. The water treatment system is located on Keystone State Park property and is being incorporated into the park's environmental education program.

Watershed Cooperative Agreements

In 1999, the Office of Surface Mining began the Watershed Cooperative Agreement Program as part of the Clean Streams Program. The purpose was to assist local not-for-profit organizations, especially small local watershed groups, through cooperative agreements as the funding mechanism for acid mine drainage remediation. One of the criteria to qualify as an Office of Surface Mining recipient for funding is for the watershed organizations to have other partners contributing either funding or in-kind services.

Since the program began in 1999, the Office of Surface Mining has awarded 141 cooperative agreements and amendments at a cost of $12,468,665, and 59 projects have been completed. During 2005, 23 cooperative agreements and two amendments

Figure 1
Clean Streams Program Projects

	Supplemental State Grants		Watershed Agreements	
	Started in 2005	Completed Since 1994	Started in 2005	Completed Since 1999
Alabama	0	8	0	1
Illinois	1	4	0	0
Indiana	1	22	0	2
Iowa	7	6	0	0
Kentucky	2	12	0	0
Maryland	1	11	1	9
Missouri	0	0	4	0
Ohio	19	17	13	8
Oklahoma	1	1	3	0
Pennsylvania	4	25	5	28
Virginia	0	2	0	2
West Virginia	3	11	4	9
Total	**39**	**119**	**30**	**59**

Figure 2
Watershed Cooperative Agreements

Project/Organization	Grant Amount
Illinois	
Carterville High School Shawnee Resource Conservation and Development	38,603.80
Kansas	
Slurry Containment Project See-Kan Resource Conservation and Development	100,000.00
Maryland	
Brophytown AMD Remediation Project Georges Creek Watershed Association	51,760.00
Shallmar Doser Project Western Maryland R C & D	100,000.00
Getson Steel Slag Leach Bed Project Georges Creek Watershed Association	25,360.00
Kempton Doser Enhancement Project Western Maryland RC&D	100,000.00
Ohio	
Flint Run East Raccoon Creek Improvement Committee/Ohio Valley RC&D	150,000.00
Mineral/Zoar AMD Project Crossroads Conservation Resource & Development Council	112,035.00
Fern Hill Pits Huff Run Watershed Restoration Partnership	74,544.00
Lake Milton AML Project Ohio Valley Resource Conservation & Development	100,000.00
Pennsylvania	25,000.00
Wells Creek Moore #7 Project [1] Southern Alleghenies Conservancy	
Reevesdale South Dip Tunnel Project Schuylkill Headwaters Association	100,000.00
Pine Forest Project Schuylkill Headwaters Association	125,000.00
Audenreid Tunnel Discharge Eastern Penna. Coalition for Abandoned Mine Reclamation	150,000.00
Bear Creek Project Eastern Penna.Coalition for Abandoned Mine Reclamation	69,614.00
Minersville AMD Remediation Southern Alleghenies Conservancy	48,000.00
Tennessee	
Thompson Creek Project Number 1 of Big Creek Cumberland Mountain Resource Conservation & Development	125,000.00
West Virginia	
Sovern Run - Clark Property AMD Project Friends of the Cheat	77,014.00
Titchenell Property on Sovern Run Friends of the Cheat	76,694.36
Lambert Run - Muzzle Loader Club AMD Project Guardians of the West Fork	78,489.00
Long Branch AMD Project Lower Paint Creek Association, Inc.	117,796.90
Lower Mudlick AMD Remediation Project Buckhannon River Watershed Organization, Inc.	99,386.00
Opossum Hollow AMD Remediation Project [1] Morris Creek Watershed Association	900.00
Nixon Run AMD Remediation Project (Phase II) Lower West Fork Watershed Association	99,602.00
Valley Point #12 AMD Remediation Project Friends of Deckers Creek	93,804.74
Total	**$2,138,603.80**

1. Amendments to existing cooperative agreements.

Table 6
1978-2005 Abandoned Mine Land Reclamation Accomplishments
Priority 1 and 2 (Protection of Public Health, Safety and General Welfare) and Emergency Projects[7]

	Clogged Stream[1]	Clogged Stream Land[2]	Dangerous Highwalls[3]	Dangerous Impoundment[4]	Dangerous Pile & Embankment[2]	Dangerous Slide[2]	Dangerous Gas[4]	Hazardous Equipment & Facilities[4]	Hazardous Water Body[4]	Industrial/Residential Waste[2]	Portal[4]	Polluted Water: Agricultural & Industrial[4]	Polluted Water: Human Consumtion[4]	Subsidence[2]	Surface Burning[2]	Underground Mine Fire[2]	Vertical Opening[4]
Alaska	0	0	11,190	4	6	0	0	1,472	2	4	30	0	0	0	21	0	38
Alabama	1	198	265,662	1	1,461	20	0	470	82	25	1,037	8	14	36	68	0	390
Arkansas	1	0	64,431	1	753	0	0	2	78	30	28	0	0	13	4	0	112
California	0	0	0	0	0	0	0	0	0	0	34	0	0	1	0	0	42
CERT Tribes*	0	0	7,052	0	472	0	0	6	30	9	74	0	0	35	0	0	18
Colorado	0	0	51,992	0	41	0	0	14	0	10	2,820	3	0	51	30	183	3,732
Crow Tribe	0	1	2,267	1	58	23	0	32	1	0	15	3	0	16	0	0	5
Georgia	0	0	11,450	2	3	0	0	0	0	0	112	0	1	0	0	0	11
Hopi Tribe	0	0	11,662	0	0	0	0	8	0	0	9	0	0	0	0	0	2
Iowa	8	659	60,390	3	829	0	0	5	24	13	1	12	2	3	0	0	20
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	21	1,290	54,886	7	308	3	22	352	9	72	193	11	1	94	115	0	1,205
Indiana	14	176	123,772	6	623	7	3	98	7	32	68	15	7	192	15	1	348
Kansas	1	9	142,945	1	111	3	0	2	1	28	0	3	0	23	9	0	1,116
Kentucky	45	8,825	27,288	115	448	2,074	0	220	42	27	1,918	6	9,568	50	225	58	144
Maryland	5	68	43,130	3	224	68	0	25	20	35	41	85	44	15	1	2	5
Michigan	0	0	950	0	0	0	0	7	2	0	0	0	1	0	8	0	50
Missouri	11	1,514	73,702	6	572	0	0	28	11	71	35	34	15	6	19	7	180
Montana	20	94	25,560	3	174	1	1	244	1	401	1,098	17	12	494	302	69	622
Navajo Nation	0	1	109,586	4	665	7	0	5	0	6	871	19	0	12	3	0	381
North Carolina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
North Dakota	0	0	78,099	4	317	35	0	14	18	2	13	6	0	1,410	17	0	108
New Mexico	0	2	280	0	10	0	0	17	0	0	478	4	1	35	35	32	900
Ohio	38	5,532	66,204	7	96	417	4	53	11	34	358	53	241	128	97	3	243
Oklahoma	15	1	240,103	0	0	0	0	15	199	7	172	6	3	13	0	0	111
Oregon	0	0	0	0	0	0	0	3	0	0	12	0	0	0	0	0	3
Pennsylvania	103	220	853,950	667	582	63	0	333	123	40	289	27	211	2,458	123	1,024	535
Rhode Island	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
South Dakota	0	0	135	0	0	0	0	4	0	0	5	0	0	1	0	0	1
Tennessee	2	147	49,970	3	533	68	0	31	60	14	192	7	14	6	28	0	11
Texas	0	0	52,665	0	1,461	0	0	0	17	0	66	0	0	17	0	0	358
Utah	14	9	3,925	1	390	3	19	221	2	0	3,060	3	0	184	43	29	1,162
Virginia	75	858	28,050	47	260	304	0	221	2	2	996	0	1,778	13	51	0	105
Washington	0	0	0	0	3	0	0	7	0	0	30	0	0	12	15	0	85
West Virginia	51	167	198,122	643	4,664	549	5	588	7	37	2,354	65	11,082	373	470	28	149
Wyoming	114	1,634	516,096	138	2,051	25	0	181	371	29	518	3	0	1,150	12	41	568
Total	**539**	**21,404**	**3,175,514**	**1,667**	**17,111**	**3,668**	**54**	**4,678**	**1,119**	**927**	**16,927**	**390**	**22,995**	**6,846**	**1,708**	**1,477**	**12,765**

Table 6 Continued
1978-2005 Abandoned Mine Land Reclamation Accomplishments
Priority 3 (Environmental Restoration)[7]

	Bench[2]	Industrial/Residential Waste[2]	Equipment/Facility[4]	Gob[2]	Highwalls[3]	Haul Road[2]	Mine Opening[4]	Pit[2]	Spoil Area[2]	Subsidence[2]	Slump[2]	Water Problem[5]
Alaska	0	0	0	7	0	0	0	0	47	0	9	0
Alabama	23	16	8	216	32,435	2	50	0	9,646	5	11	379
Arkansas	0	0	0	0	0	0	0	0	86	0	0	0
CERT Tribes*	0	0	2	4	1,500	0	1	7	80	0	0	0
California	0	0	0	2	0	0	0	0	0	0	0	50
Colorado	3	6	7	162	2,028	0	18	131	832	0	0	1
Crow	6	0	0	35	2,245	12	2	32	27	0	4	0
Georgia	3	0	0	3	400	0	0	3	7	0	0	0
Hopi Tribe	0	0	0	25	51	15	0	10	10	0	0	0
Iowa	0	2	0	1	2,900	5	1	21	440	0	0	0
Illinois	1	6	160	2,553	10,880	210	67	623	1,875	1,112	1	2,896
Indiana	0	108	183	1,447	14,951	227	27	388	1,981	1,053	3	5,105,418
Kansas	0	0	1	89	3,200	0	0	23	316	10	0	0
Kentucky	580	0	61	227	2,240	0	69	4	832	66	5	60
Maryland	10	1	2	46	5,335	2	8	22	263	0	1	208
Michigan	0	0	1	27	0	1	0	1	10	0	11	0
Missouri	0	5	5	148	20,324	1	0	96	1,378	69	0	86
Montana	1	89	58	147	1,170	1	230	34	870	0	19	2,741
Navajo Nation	41	1	2	141	890	203	79	163	265	0	0	3
North Dakota	0	0	0	0	0	0	0	0	0	0	0	0
New Mexico	3	0	29	75	0	10	29	2	332	2	0	0
Ohio	0	0	3	182	9,620	0	19	18	418	0	0	100
Oklahoma	0	0	0	0	0	0	0	0	0	0	0	0
Oregon	0	0	0	0	0	0	1	0	0	0	0	0
Pennsylvania	0	0	25	54	7,658	0	22	73	2,500	1	26	94,465
Tennessee	76	1	15	67	2,230	8	3	105	553	0	4	360
Texas	0	0	0	8	0	0	0	0	552	0	0	0
Utah	4	7	64	268	550	3	0	8	55	1	16	20
Virginia	0	1	25	21	13,000	1	52	0	12	0	0	120
West Virginia	0	0	3	75	33,141	0	4	5	217	2	0	622
Wyoming	0	0	0	39	0	91	0	7,137	8,116	199	0	0
Total	**750**	**243**	**654**	**6,069**	**166,748**	**791**	**682**	**8,905**	**31,719**	**2,520**	**109**	**5,207,529**

1. Miles
2. Acres
3. Feet
4. Count (Number of occurrences)
5. Gallons/minute.
6. CERT is the Council of Energy Resources Tribes which includes: Blackfeet; Cheyenne River Sioux; Fort Berthold (Mandan, Hidatsa, and Arikara); Fort Peck (Assiniboin and Sioux); Northern Cheyenne; Jicarilla Apache, Laguna Pueblo; Rocky Boys (Chippewa and Cree); San Carlos Apache; Southern Ute, Ute Mountain Ute; White Mountain Apache; and Wind River (Arapaho and Shoshone).
7. These statistics do not include Office of Surface Mining emergency project accomplishments.

Tree planting efforts at this reclaimed western Kentucky mine operation began voluntarily in 1948, before there were reclamation requirements, and have continued to the present day. Company foresters and soil scientists recognized the long-term environmental and economic benefits of forest lands and began planting trees on the reclaimed mine land. After years of growth the forests reestablished on reclaimed land are difficult to distinguish from native forests on nearby unmined land.

to existing agreements were awarded for a total of $2,138,603 (see Figure 2). Agreements are normally limited to a maximum of $100,000 and are used primarily for the construction phase of the projects; however, administrative costs associated with completion of a project are also allowable.

Significant on-the-ground improvement has been made by these watershed projects. For example, On June 20, 2005, the Mountain Watershed Association, partners and friends dedicated the Permapress Mine Drainage Treatment Facility. This site is located in the Indian Creek Watershed of Fayette County, Pennsylvania. Here, a 35gpm discharge of water from an abandoned underground mine is being treated through the use of a limestone flushing bed complete with a large automatic siphon, which drains the bed every 36 hours. The water then flows through a settling pond where the aluminum precipitate is collected. About 1 mile of Indian Creek is cleaned up by this project. The mine water is very low in dissolved iron, but has 23mg/l of dissolved aluminum. The primary financial partner in this $230,000 project is the Agriculture Department's, Natural Resources Conservation Service, which contributed funds from its Public Law 566 Watershed Restoration Program. The Office of Surface Mining also contributed $8,000 from the Watershed Cooperative Agreement Program to assist Mountain Watershed Association with contract oversight. The Western Pennsylvania Watershed Program was also a financial partner. This is the third mine drainage treatment project in the Indian Creek Watershed and the Office of Surface Mining has contributed Watershed Cooperative Agreement funds to all projects. There are several other discharges identified for future construction, and the 566 watershed plan developed by the Natural Resources Conservation Service identified ten acid mine drainage sites that have a significant impact on Indian Creek. Treatment of these sites will remove 95 percent of the mine drainage pollutants entering Indian Creek, and will restore the recreational and fishery benefits of the watershed. The Pennsylvania Department of Environmental Protection's Bureau of Abandoned Mine Reclamation is also providing significant technical and financial assistance to acid mine drainage projects in the watershed.

Watershed Internship Program

The Office of Surface Mining and the Environmental Protection Agency initiated the Summer Watershed Internship program in 1999, and in 2005, funded 22 interns in eight states. Since the program began, 168 interns have been placed in ten states (see Figure 3) all of them working directly for watershed groups on acid mine drainage issues.

The internship program enables undergraduate college students to bring technical expertise and youthful energy to volunteer watershed organizations. Each intern spends a semester working in a watershed. In 2005, Office of Surface Mining funding provided a $2,000 stipend and $500 for project

Figure 3
Number of Watershed Interns

State	2005	2004	2003	2002	2001	2000	1999
Alabama	1	1	1	1	0	3	0
Kentucky	0	0	0	0	1	2	0
Maryland	2	2	1	2	2	1	0
Ohio	2	1	5	4	3	2	1
Pennsylvania	5	7	9	8	12	5	3
Tennessee	4	3	1	3	1	3	1
Virginia	1	1	3	3	2	1	0
West Virginia	6	8	6	9	11	6	4
Indiana	0	0	0	1	1	0	1
Oklahoma	1	0	0	0	0	0	0
Total	**22**	**23**	**26**	**31**	**33**	**23**	**10**

Grazing is one of the most important land uses in the West, and at this reclaimed Montana mine site the land has been returned to its pre-mining grazing land use. Native plants were used to reestablish this vegetation, and monitoring shows the levels of cover and production to be equal to or better than native vegetation adjacent to the reclaimed site.

expenses to each intern. In every case, the interns strengthened the capacity of the sponsoring watershed group, adding to their monitoring data, developing watershed plans, and building public awareness.

Office of Surface Mining/VISTA Initiative

The Office of Surface Mining and AmeriCorps/VISTA are working together to place full-time VISTA staff in coal-impacted watersheds across coal country. These VISTA positions are funded by the national VISTA program and include a three-year commitment to the sponsoring watershed group. The Office of Surface Mining provides a cooperative agreement of $5,000 for administrative support during the first year a program is in operation and coordinates the activities.

In 2005, the Office of Surface Mining/ VISTA watershed development team is 26 watersheds strong, serving volunteer groups in eight states from Pennsylvania to Alabama. These full-time positions (and the dedicated individuals that fill those positions) are building critical capacity in the volunteer group they serve -- bringing new awareness and expertise to address acid mine drainage; building strong partnerships with state agencies, other federal agencies, and nonprofit foundations; creating a base of community volunteer support within their watersheds for environmental improvement; and raising the money needed to support this work. In the last 18 months, the team enlisted over 3,000 volunteers who worked more than 50,000 hours. During the same period, these volunteers built collaborative partnerships that created over four million dollars in documented in-kind donations and raised more than one million dollars in cash grants. The watershed development team is creating a solid base of environmental stewardship in watersheds across the states that are part of the Office of Surface Mining Clean Streams Program, thus building a future for environmental conservation and improvement across the region.

Inventory of Abandoned Mine Land Problems

The Surface Mining Law, as amended by the Abandoned Mine Reclamation Act of 1990 (Public Law 101-508), requires the Office of Surface Mining to maintain an inventory of eligible abandoned coal mine lands that meet the public health, safety, and general welfare criteria of Section 403(a)(1) and (2). This inventory is maintained and updated to reflect reclamation accomplishments as required by Section 403(c).

The Office of Surface Mining maintains its inventory on a computer system, which is accessible from the web at www.osmre.gov/aml/inven/zintroin.htm. The system creates reports on abandoned mine land accomplishments and problems that still require reclamation. This was the 11th year the states and Indian tribes managed their own data, entering it electronically into the Office of Surface Mining's inventory

Figure 4
Inventory Costs[1]

Completed	$2.3 billion	20.5 percent
Funded	0.2 billion	2.2 percent
Unreclaimed	8.7 billion	77.7 percent
Total	**$11.2 billion**	**100.0 percent**

1. Includes priority 1, 2, and 3 coal and non-coal costs

system. In 2005, this process resulted in 1,152 records added, 4,883 modified, and 730 deleted.

As of September 30, 2005, the system contained information for 18,732 problem areas, mostly related to abandoned coal mines. (A problem area is a geographic area that contains one or more abandoned mine problems. Problem area boundaries are determined by the extent of the effect of the abandoned mine problem on surrounding land and water, not just the abandoned mine sites.)

The Abandoned Mine Land Reclamation Program is one of the Nation's most successful environmental restoration programs, with over $1.7 billion worth of coal-related high priority problems reclaimed. However, many projects have yet to be funded. The inventory of unfunded coal-related problems is reduced each year by state, Indian tribe, and federal reclamation projects. Unfortunately, new problems continued to arise as development expands into old coal mining areas and as subsidence and mine fires occur. As of September 30, 2005, the inventory system shows $8.7 billion of unreclaimed problems (see Figure 4).

Reclamation Awards

Since 1977, abandoned mine land reclamation funded under the Surface Mining Law has eliminated thousands of dangerous health and safety problems resulting from abandoned mines throughout the country. Yet, despite the country's significant progress in eliminating abandoned mine land problems, there is little public awareness that this reclamation has taken place. When there are highly visible scars at an unreclaimed landscape, most people recognize the legacy of past coal mining. But, after abandoned mine problems are eliminated and reclamation is complete, it is nearly impossible for any observer to see that health and safety problems once existed on the site. Ironically, the better the reclamation, the less apparent it is. Thus, the best reclamation is virtually invisible.

To give well-earned public recognition to those responsible for the nation's most outstanding achievements in abandoned mine land reclamation, the Office of Surface Mining began the annual Abandoned Mine Land Reclamation Awards Program in 1992. The Program publicly recognizes outstanding abandoned mine land reclamation and publicizes exemplary reclamation techniques.

The process used to select the winners includes judging by those most closely involved with reclamation projects - state and federal reclamation program staff. Each state/tribal Abandoned Mine Land Program selects the best project within its state/tribal boundary. Nominations are posted on the Internet and using an electronic ballot, each director from state/tribal Abandoned Mine Land Programs and Office of Surface Mining Field Offices selected the winning reclamation by ranking the nominations. Four award winners are selected using this process - three regional and one national. The nominations receiving the best score in each of the three coal regions are selected as "Regional Winners." The regional winner with the best score is selected the "National Winner." In addition, the public selects one project they think is best and the project receiving the most votes becomes the winner of the People's Choice Award. In 2005 the awards were presented at the annual meeting of the National Association of Abandoned Mine Land Programs. Winners of the 2005 awards were:

Appalachian Regional, National, and People's Choice Awards

Kentucky Division of Abandoned Mine Lands
Spewing Camp Branch Refuse AML Project
Floyd County, Kentucky
From 1952 to 1973, the Island Creek Coal company deposited more than 7 million tons of refuse from its preparation facility into a hollow known as Spewing Camp Branch. The refuse pile was almost a half mile long, 1,000 feet across, and up to 165 feet deep. The site was abandoned in 1981, and there were overwhelming erosion problems. In addition there was frequent downstream flooding and streams were polluted with acid mine drainage.

Reclamation began in October 2002. Cover material from adjacent areas and two nearby projects was spread to a depth of two feet. Benches were cut into the fill at 30-foot vertical intervals, and side drains were constructed. After almost two years and $3.5 million, the aesthetic blight and safety hazards have been eliminated.

Mid-Continent Regional Award

Indiana Division of Reclamation
AML Site 380, Sugar Ridge Fish and Wildlife Area
Winslow, Indiana
The Sugar Ridge Fish and Wildlife Area includes over 8,000 acres of mostly reclaimed surface mine land. Reclamation involved consolidating and burying the coal refuse. The drainage was redirected through constructed channels, and pit bottoms were covered. Passive treatment and wildlife wetlands were built, and all disturbed areas were revegatated. An abandoned mine land area has been restored. The land is once again productive, the water quality improved, and a useful public area has been created.

Western Regional Award

Colorado Inactive Mine Reclamation Program
Mesa State College/Environmental Restoration Education Project
Grand Junction, Colorado

This Colorado project was carried out in cooperation with Mesa State College. It provided educational outreach, and reclamation design and implementation, and was accomplished for a substantially reduced cost. Five students completed a real-world project--from site inventory through final closure of the abandoned mine openings. Four hazardous uranium mine openings were sealed, three of them with bat gates while maintaining the historical character of the sites.

Not only have dangerous mine openings been closed; but, five college students are now experienced with real-world abandoned mine land reclamation.

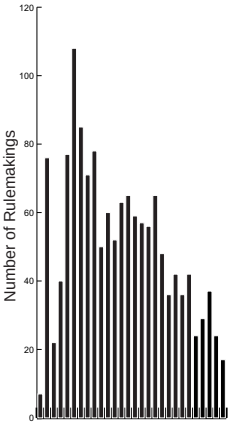
Small family cemeteries are common on mine sites. To protect them, the Surface Mining Law requires that mining be kept at least 100 feet from all cemeteries. On this site in eastern Kentucky, mining was completed leaving an unmined area surrounding this small community cemetery. As the mine site adjacent to the cemetery was reclaimed, the backfill was graded to provide the premining slope that allows easy access from all sides of the cemetery. In addition, this operator went beyond the requirements of the Law by constructing a gravel lane between the county road and the cemetery to facilitate easy access for local citizens.

REGULATION OF ACTIVE COAL MINES

SHARED ENVIRONMENTAL PROTECTION

Under the Surface Mining Law (www.osmre.gov/ smcra.htm), the Office of Surface Mining is responsible for publishing the regulations (www.osmre.gov/regindex.htm) necessary to carry out the Law. The permanent regulatory program and approved state programs provide the fundamental mechanism for ensuring that the goals of the Surface Mining Law are achieved. A major objective is to maintain a stable regulatory program by improving the regulation development process and by obtaining a broad spectrum of viewpoints on rulemaking activities.

Rulemaking and State Program



Final Rulemaking Actions 1978 - 2005

The 2005 rulemaking process included discussions with coal industry representatives, citizen groups, and state regulators to obtain their input and suggestions.

During the year, the Office of Surface Mining published two proposed permanent program rules[6] in the Federal Register: Transfer, Assignment, or Sale of Permit Rights (RIN 1029-AC49) and Topsoil Replacement and Revegetation Success Standards (RIN 1029-AC02), (see Table 7).

Table 7
Proposed Rules Published

Transfer, Assignment, or Sale of Permit Rights
30 CFR 701 and 774 1/26/05

The proposed rule would revise regulations for, and related to, the transfer, assignment, or sale of permit rights. The rule would: 1. revise the regulatory definitions of transfer, assignment, or sale of permit rights and successor in interest; 2. revise the regulatory provisions relating to transfer, assignment, or sale of permit rights; and 3. create separate rules for successors in interest.

Topsoil Replacement and Revegetation Success Standards
30 CFR 816 and 817 3/17/05

The proposed rule would make minor revisions to existing regulations to: encourage species diversity on reclaimed land; provide states more flexibility in using additional success standards and sampling techniques; provide success standards for undeveloped land' remove what the Office of Surface Mining believes to be and impediment to the reforestation of mined lands and provide a practical means of measuring woody shrubs commonly planted in the West; and make the timing of revegetation success measurements in areas receiving 26 inches of annual precipitation or less consistent with those in areas receiving more than 26 inches of annual precipitation.

Subject to Office of Surface Mining approval, states have the right to amend their programs at any time for appropriate reasons. Whenever the Surface Mining Law or its implementing regulations are revised, the Office of Surface Mining is required to notify the states of any changes needed to make sure that the state programs continue to meet federal requirements. As a result, the states have submitted a large number of complex amendments. The Office of Surface Mining has taken several steps to process states' submissions more efficiently. For example, the amendment review process within the Office of Surface Mining has been decentralized and standard format and content guidelines for state program submissions have been issued to the states. In 2005, the Office of Surface Mining published 11 proposed and 17 final state program amendments in the *Federal Register*.

Significant Court Decisions

During 2005, there were four significant court decisions that influenced the implementation of the Surface Mining Law. The cases involved issues on takings and permit approval (see Table 8).

State Programs

Since May 3, 1978, all surface coal mines have been required to have permits and to comply with either Office of Surface Mining regulations or corresponding approved state program provisions (in states that have primacy). Currently, there are 24 primacy states that administer and enforce approved programs for regulating surface coal mining and reclamation under the Surface Mining Law. An effective relationship between the Office of Surface Mining and the states is fundamental to the successful implementation of the Surface Mining Law. This shared federal-state commitment to carry out the requirements of the Surface Mining Law is based on a relationship that includes common goals and principles.

On June 19, 2003, the Missouri Regulatory Authority notified the Office of Surface Mining that the Missouri

6. There were not any final permanent program rules published in the 2005.

Table 8
Significant Court Decisions

Consolidation Coal Co. v. United States; ***Rapoca Energy Co. v. United States,*** No. 03-5019 (Fed. Cir.)
On April 4, 2005, the Court of Federal Claims ruled that the Abandoned Mine Land Fee collected pursuant to the Surface Mining Law § 402, 30 U.S.C. § 1232, violates the "Export Clause" of the United States Constitution to the extent it is imposed upon coal exports. 64 Fed. Cl. 718. However, since significant issues (particularly those related to damages) remain unresolved in this case and four other pending related cases, final judgment has not been entered. The parties filed a joint status report on June 2, 2005, proposing that the parties litigate the damages issues with regard to a representative class of five (out of approximately 64) plaintiffs. After the issue of damages is resolved as to the five test-case plaintiffs, the government could appeal the liability ruling and any damages issues arising out of the test case.

Appolo Fuels, Inc. v. United States, No. 03-5088 (Fed. Cir.)
On February 28, 2005, the Supreme Court denied plaintiff's petition for a *writ of certiorari* in this regulatory takings case. Plaintiff alleged permanent and temporary takings of its coal leases based on the Office of Surface Mining's designation of certain lands as unsuitable for surface coal mining, as well as the Office of Surface Mining's alleged delay in deciding the petition that requested the designation. The designated area includes portions of a lake that provides the sole drinking water supply for the city of Middlesboro, Kentucky. Plaintiff had sought Supreme Court review of an August 30, 2004, decision of the U.S. Court of Appeals for the Federal Circuit, in which the appeals court affirmed the U.S. Court of Federal Claims' grant of summary judgment in favor of the United States and ruled that there had not been a taking of plaintiff's interests.

Stearns Co. v. United States, No. 04-5031 (Fed. Cir.)
On January 28, 2005, the U.S. Court of Appeals for the Federal Circuit unanimously reversed the Court of Federal Claims' finding of a taking in this case. On April 25, 2005, the Federal Circuit denied Plaintiff-Appellee's combined petition for panel rehearing and rehearing *en banc*. Stearns claims that the Office of Surface Mining's application of section 522(e)(2) of the Surface Mining Law effected a physical or regulatory taking of its subsurface mineral rights. In a 1980 letter, the Office of Surface Mining advised Ramex--one of Stearns' lessees--that its proposed underground mining operation was subject to the requirements of section 522(e), and thus, mining could not commence until Ramex received a favorable Valid Existing Rights or compatibility finding. The next day, Ramex orally requested a compatibility finding, but then, at Stearns' insistence, withdrew its request. The Office of Surface Mining, acting expeditiously, had been prepared to render a favorable compatibility finding. Stearns has steadfastly refused to seek a compatibility determination itself and has continued to prevent its lessees from seeking such a determination. Compatibility has never been denied in the Daniel Boone National Forest. The Federal Circuit held that there was not a physical taking because plaintiff was not "required to suffer the physical occupation of either the government or a third party" on its property. The court also held that a regulatory takings claim is not ripe because plaintiff "may still obtain permission" to mine its coal by seeking a "compatibility determination" from the Office of Surface Mining. On or about July 25, 2005, plaintiff filed a petition for Supreme Court review.

Save Our Cumberland Mountains, Inc. (SOCM) v. Norton, No. 03-462 (E.D. Tenn.)
On February 23, 2005, the Court entered a decision dismissing all of the plaintiffs' claims with prejudice. Plaintiffs allege numerous violations of the National Environmental Policy Act in connection with Office of Surface Mining's approval of a permit application submitted in July 2002 by the Robert Clear Coal Corporation. Plaintiffs have appealed to the Sixth Circuit.

Legislature failed to provide adequate funding for the Missouri program, including the inspection, enforcement, permitting, and bonding portions of the program. The Office of Surface Mining substituted federal enforcement on August 22, 2003, for those portions of the Missouri program that the Missouri Legislature did not fund for 2004. On April 15, 2004, the Office of Surface Mining clarified that its substitution of direct federal enforcement included those portions of the Missouri program concerning training, examination, and certification of blasters; areas unsuitable for mining; and small operator assistance.

In May 2004, the Director of the Missouri Regulatory Authority notified the Office of Surface Mining that the Missouri Legislature did not fund the Missouri program for 2005. Missouri submitted a financial and organizational plan for the state to reassume authority to implement its regulatory program in 2006. In response to that plan, the Office of Surface Mining notified the Missouri Regulatory Authority on May 25, 2004, that the current federal substitution plan would continue for another year (July 1, 2004 – June 30, 2005).

In a letter dated May 27, 2005, the Governor of Missouri petitioned the Office of Surface Mining for the return

This reclaimed mine site contains 110 acres of open water, islands, wetlands, uplands, and forest habitat. Wetland islands were constructed in the shallow areas to maximize transition zones for wildlife. The islands were heavily vegetated and quickly became a connection to the surrounding habitat for birds and mammals. This reclaimed mine located in southern Indiana is now a regional wetland attraction.

of the regulatory program and made a commitment to provide funding. On June 28, 2005, the Missouri Regulatory Authority submitted information on the funding and staffing plans that would be used to assume full enforcement authority for the Missouri program. Missouri also provided the Missouri Attorney General's written opinion on the legality of the funding proposal.

The Office of Surface Mining awarded Missouri funding, through a cooperative agreement, effective July 1, 2005, for the period July 1 to December 31, 2005, to resume its regulatory program. The purpose of this funding was to help the Missouri Regulatory Authority hire, train, and retain a sufficient number of qualified personnel to comply with all requirements of the approved Missouri regulatory program before the Office of Surface Mining returns full authority to the state.

In August 2005, the Office of Surface Mining published a proposed rule in the *Federal Register* to announce that the Governor of Missouri petitioned the Office of Surface Mining to consider returning to Missouri the authority to enforce those parts of the Missouri program for which federal enforcement was substituted. A public hearing was held on September 22, 2005, to provide an opportunity for interested persons to comment on the Missouri Governor's petition to resume enforcement authority of those parts of the Missouri program currently being enforced by the Office of Surface Mining. If the Office of Surface Mining approves Missouri's petition, it will terminate federal enforcement and return full enforcement authority to the state.

Oversight of State Programs

Section 517(a) of the Surface Mining Law requires the Office of Surface Mining to make inspections as necessary to evaluate the administration of approved state programs. Most state programs were approved in the early 1980s, and the Office of Surface Mining's oversight of these programs focused on the implementation of the many procedural and process requirements such as permitting, inspection, enforcement, and penalties, each with numerous mandated requirements prescribed to achieve the environmental protection performance standards and the purposes of the Surface Mining Law.

The Office of Surface Mining employs a results-oriented oversight strategy devised in consultation with the states that emphasizes cooperative problem-solving, tailoring evaluations to state-specific conditions and performance agreements between each state and its Office of Surface Mining field office.

As part of this strategy, the Office of Surface Mining evaluates and reports state-specific and national findings for offsite impacts and reclamation success. The purpose of measuring offsite impacts is to gauge how the Surface Mining Law is protecting citizens, public and private property, and the environment outside areas authorized for mining and reclamation activities. This measurement is intended to identify the number and severity of offsite impacts, determine causes of the impacts, and identify where improvements may be made to lessen the number and degree of these impacts. Success is expressed as a percentage of inspectable units[7] that achieve the goal of having no offsite impacts and as the number of acres that meet the bond release requirements for the various phases of reclamation. During 2005, 89 percent of the inspectable units were free of offsite impacts (compared to 93 percent in 2004) which is within five percent of the 93 percent goal of sites free from offsite impacts.

On May 4th, in a letter to the Director of the Ohio Department of Natural Resources, the Office of Surface Mining gave the state 90 days to submit a program amendment to address deficiencies in the state's bonding program to avoid direct federal

Table 9
Federal Oversight of State Programs

State	Site Visits	*Violations Cited by the Office of Surface Mining*[1] Notice of Violations	Failure-To-Abate Cessation Orders	Imminent Harm Cessation Orders
Alabama	69	0	0	0
Alaska	4	0	0	0
Arkansas	6	0	0	0
Colorado	11	0	0	0
Illinois	103	0	0	0
Indiana	58	0	0	0
Iowa	0	0	0	0
Kansas	4	0	0	0
Kentucky	407	9	3	0
Louisiana	3	0	0	0
Maryland	27	0	0	0
Mississippi	1	0	0	0
Missouri	26[2]	0	0	0
Montana	5	0	0	0
New Mexico	2	0	0	0
North Dakota	9	0	0	0
Ohio	119	0	0	0
Oklahoma	29	0	0	0
Pennsylvania	340	1	1	0
Texas	9	0	0	0
Utah	6	0	0	0
Virginia	111	0	0	0
West Virginia	198	0	0	0
Wyoming	7	0	0	0
Total	**1,555**[5]	**10**[3]	**4**[3]	**0**

1. Excludes any Notice of Violations or Cessation Orders that have been vacated.
2. Includes only Office of Surface Mining oversight inspections, see Table 10 for regulatory inspections.
3. Of the 10 Notice of Violations, all were for Abandoned Mine Land Fee related problems (Kentucky 9, and Pennsylvania 1) and of the 4 Cessation Orders, all were for Abandoned Mine Land Fee related problems (Kentucky 3, and Pennsylvania 1).
5. Includes12 inspections related to Abandoned Mine Land Fee collection (Kentucky 9, and Pennsylvania 2 and Tennessee 1).

7. An inspectable unit is a coal mining or exploration operation where an inspection obligation exists under the Surface Mining Law. One unit may consist of an individual permit; a consolidation of several permits issued to the same permittee, which for all practical purposes, constitutes the same mining operation; or in the case of large mines, smaller, logical units of a single permit that are more amenable to inspections.

Table 10
Regulatory Program Statistics

State/Indian Lands	Regulatory Staffing[1]	New Permits[2]	New Acreage Permitted[2]	Total Acreage Permitted[2]	Inspectable Units	Complete Inspections[2]	Partial Inspections[2]	Notice of Violations[2]	Failure-To-Abate Cessation Orders[2]	Imminent Harm Cessation Orders[2]	Bond Forfeitures[2]	Acreage of Phase I Bond Release[2]	Acreage of Phase II Bond Release[2]	Acreage of Phase III Bond Release[2]
Alabama	25.00	11	3,621	84,641	219	2,374	373	122	23	1	8	1,104	484	3,485
Alaska	4.13	0	0	9,099	11	28	63	3	0	0	0	0	0	0
Arkansas	3.95	1	481	1,670	12	49	102	5	1	0	0	0	20	20
Colorado	24.00	0	0	163,300	51	182	318	11	0	0	0	187	65	235
Crow[4]	1.00	0	0	5,496	1	3	7	0	0	0	0	377	557	0
Georgia[4]	0.00	0	0	0	6	3	0	0	0	0	0	0	0	0
Hopi[4]	2.00	0	0	6,137	2	8	4	0	0	0	0	0	0	0
Illinois	33.90	4	2,204	63,100	90	395	862	42	3	0	1	2,882	2,580	3,391
Indiana	48.00	10	5,714	257,360	116	596	1,292	54	0	0	0	4,389	5,085	8,070
Iowa	3.00	0	0	386	18	20	8	0	0	0	2	200	200	0
Kansas	3.05	0	0	4,424	12	49	95	3	0	0	0	301	0	59
Kentucky	334.10	82	36,965	1,716,800	1,934	7,621	14,213	598	45	13	5	12,717	5,964	13,862
Louisiana	2.65	0	0	42,910	2	8	16	0	0	0	0	5	5	28
Maryland	11.25	2	87	6,525	66	343	596	20	0	2	1	85	172	85
Mississippi	2.75	0	0	5,809	1	4	9	0	0	0	0	0	0	0
Missouri	2.40	0	0	16,340	38	79[3]	223	0	0	0	3	622	2,569	1,749
Montana	16.90	0	0	62,269	15	89	80	3	0	0	0	277	557	18
Navajo[4]	5.00	0	0	95,822	25	62	46	13	0	0	0	0	0	0
New Mexico	12.50	0	0	77,462	9	32	85	1	0	0	0	3162	54	54
North Dakota	8.70	1	5,710	98,148	34	136	522	0	0	0	0	842	429	828
Northern Cheyenne														
Ohio	23.87	14	3,078	102,351	338	1,323	2,014	195	46	14	11	3,735	2,586	2,801
Oklahoma	19.85	3	839	25,156	69	270	395	20	0	0	0	52	422	3,131
Pennsylvania	241.00	69	9,202	426,592	1,928	6,818	9,782	684	22	0	3	2,850[5]	3,387[5]	4,456[5]
Tennessee[4]	37.00	4	520	30,574	353	810	937	47	2	1	0	520	1,357	1,614
Texas	33.00	0	0	270,700	31	124	248	17	0	0	0	1,530	1,058	1,890
Utah	32.50	0	0	2,716	33	117	224	6	0	0	0	152	62	14
Ute Mt. Ute[4]	0.00	0	0	0	1	4	8	0	0	0	0	0	0	0
Virginia	79.00	16	2,565	79,397	519	2,633	3,214	274	2	9	0	415	107	1,300
Washington[4]	N/A	0	104	15,004	2	8	20	8	0	0	0	0	0	0
West Virginia	281.95	41	6,374	298,964	1,918	7,249	11,864	1,019	75	26	14	2,848	3,386	5,389
Wyoming	28.05	0	0	348,248	35	143	239	5	0	0	0	16,131	306	0
Total	**1,320.50**	**258**	**80,569**	**4,317,421**	**7,889**	**31,588**	**47,850**	**3,145**	**219**	**66**	**48**	**55,383**	**31,412**	**52,479**

1. Number of regulatory program staff as of June 30, 2005.
2. State program statistics for the one year period, July 1, 2004 - June 30, 2005, except where noted (federal statistics for Crow, Georgia, Hopi, Navajo, Tennessee, and Washington, see footnote 5).
3. As a result of the substitution of federal enforcement in Missouri on August 22, 2003, 66 of the 79 complete inspections and 139 of the 223 partial inspections were conducted by the Office of Surface Mining during the period July 1, 2004 - June 30, 2005, and the remainder (13 complete and 84 partial inspections) conducted by the state of Missouri Regulatory Authority during the period July 1, 2004 - June 30, 2005.
4. Federal statistics for the one year period, October 1, 2004 - September 30, 2005.
5. Pennsylvania transitioned to a new bonding system and the statistics for Phase 1, 2, and 3 acreage released are for the period 10/1/04 - 6/30/05, not the July 1, 2004 - June 30, 2005 one year period.
NA. Statistics not available.

When reclamation is successfully completed, the land closely resembles the landscape before mining. This Oswego, Kansas mining operation disrupted the landowners's agricultural operation for only a short time and today it is back into agricultural production.

enforcement of the bonding requirements. On August 2nd, Ohio requested, and the Office of Surface Mining granted, an additional 90 days for the state to address the program deficiencies pending the outcome of discussions with the Ohio Coal Association on restructuring the state's bonding program. Since then, Ohio Department of Natural Resources informed the Office of Surface Mining that it has reached a tentative agreement with the Coal Association and anticipates submitting an amendment to address the bonding program deficiencies before the extension expires on November 4th. (See www.osmre.gov/report05.htm for copies of 2005 Annual State Oversight Reports.)

Table 9 provides a summary of the oversight inspection and enforcement activities during 2005. Detailed monthly reports are available monthly at www.osmre.gov/ieindex.htm.

Federal Programs

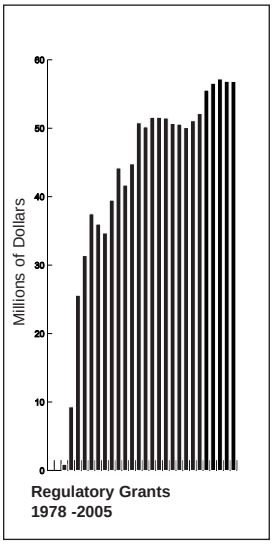
Section 504(a) of the Surface Mining Law requires the Office of Surface Mining to regulate surface coal mining and reclamation activities on non-federal and non-Indian lands in any state if:

- the state's proposal for a permanent program has not been approved by the Secretary of the Interior;
- the state does not submit its own permanent regulatory program; or
- the state does not implement, enforce, or maintain its approved state program.

Although the Office of Surface Mining encourages and supports state primacy in the regulation of coal mining and reclamation operations, some states with coal reserves have elected not to submit or maintain regulatory programs. Those states are called federal program states, and their coal mining and reclamation operations are regulated by the Office of Surface Mining. Federal programs are in effect in 12 states: Arizona, California, Georgia, Idaho, Massachusetts, Michigan, North Carolina, Oregon, Rhode Island, South Dakota, Tennessee, and Washington.

Of the federal program states, only Tennessee and Washington had active coal mining in 2005. Table 10 includes the regulatory activities in those two states during 2005.

Grants to States and Tribes



Section 705 of the Surface Mining Law authorizes the Office of Surface Mining to provide grants to states with approved regulatory programs to administer and enforce the programs. Annual grants provide federal funding not exceeding 50 percent of total state program costs, matching state regulatory funding dollar for dollar. In addition, when a primacy state elects to administer its approved program on federal land through a cooperative agreement with the Office of Surface Mining, the state becomes eligible for financial assistance of up to 100 percent of the amount the federal government would have spent to regulate coal mining on those lands. Table 11 shows grant amounts provided to states during 2005 to administer and enforce regulatory programs.

Regulation of Mining on Federal and Indian Lands

Section 523(a) of the Surface Mining Law requires the Secretary of the Interior to establish and implement a federal regulatory program that applies to all surface coal mining and reclamation operations on federal land. The Office of Surface Mining promulgated the current Federal Lands Program on February 16, 1983. The federal government owns significant amounts of land and coal reserves, primarily in the West. Of the 147 billion tons of recoverable coal reserves in the western United States, 60 percent is federally owned. The development of federal coal reserves is governed by the Federal Coal Management Program of the Department of the Interior's Bureau of Land Management.

Through cooperative agreements, the Secretary of the Interior may delegate most regulatory responsibilities for surface coal mining and reclamation operations on federal lands to states with approved regulatory programs. Through 2005, the Secretary had entered into cooperative agreements with 14 states: Alabama, Colorado, Illinois, Indiana, Kentucky, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Utah, Virginia, West Virginia, and Wyoming (see www.osmre.gov/coop.htm). Under the Surface Mining Law, once the Secretary and a state have signed a cooperative agreement, the state regulatory authority assumes permitting, inspection, and enforcement responsibilities for coal mining and reclamation activities on federal lands in that state. The Office of Surface Mining maintains an oversight function to ensure that the state regulatory authority fully exercises its delegated responsibility under the cooperative agreement.

In states without cooperative agreements, the required permitting, inspection, and enforcement activities are carried out by the Office of Surface Mining. In 2005, the Office of Surface Mining did not issue any new permits on federal lands.

Table 11
Regulatory Grant Funding (Obligations)

State/Tribe	2005 Federal Funding	2004 Federal Funding	Cumulative Through 2005 Federal Funding[1]
Alabama	$987,979	$987,979	$28,050,993
Alaska	188,518	188,518	$6,097,486
Arkansas	149,352	149,352	$3,849,270
Colorado	1,954,760	1,954,760	$33,465,203
Illinois	2,439,511	2,439,511	$58,641,507
Indiana	1,920,252	1,992,281	$36,610,345
Iowa	128,736	128,736	$2,950,946
Kansas	112,578	112,578	$3,115,736
Kentucky	12,313,367	12,313,367	$297,060,812
Louisiana	167,384	167,384	$3,901,459
Maryland	590,933	667,922	$13,043,838
Michigan	0	0	$135,458
Mississippi	113,729	113,729	$1,427,981
Missouri	162,675	84,633	$8,709,693
Montana	1,050,741	1,030,822	$19,435,963
New Mexico	737,526	737,526	$14,373,789
North Dakota	501,284	501,824	$12,514,300
Ohio	2,020,039	2,020,039	$62,887,500
Oklahoma	1,018,398	940,477	$20,392,521
Pennsylvania	10,665,756	10,665,756	$237,693,857
Rhode Island	0	0	$158,453
Tennessee	0	0	$5,340,085
Texas	1,317,376	1,350,638	$25,758,662
Utah	1,743,698	1,730,419	$32,605,369
Virginia	3,259,433	3,259,433	$74,823,293
Washington	0	0	$4,893
West Virginia	10,520,169	10,520,169	$146,066,548
Wyoming	2,120,036	2,120,036	$38,459,577
Crow Tribe	30,174	62,832	$1,180,698
Hopi Tribe	173,977	173,977	$2,059,297
Navajo Tribe	448,675	448,675	$4,698,036
N. Cheyenne Tribe	0	0	$86,888
Total	**$56,837,056**	**$56,863,373**	**$1,195,600,456**

1. Includes obligations for AVS, TIPS, Kentucky Settlement, and other Title V cooperative agreements. Figures for FY 2005 do not include downward adjustments of prior-year awards. However, cumulative figures are net of all prior-year downward adjustments.

For states with leased federal coal, the Office of Surface Mining prepares the documents required by the Mineral Leasing Act for approval by the Secretary of the Interior. During 2005, eight mining plan actions were prepared and approved for coal operations mining leased federal coal (Alabama 1, Colorado 1, North Dakota 1, Utah 3, Oklahoma 1 and Wyoming 1).

Pursuant to Section 701 of the Surface Mining Law, the Office of Surface Mining regulates coal mining and reclamation operations on Indian lands. On September 30, 2005, there were nine surface coal mining operations permitted on Indian reservations or Indian-owned lands.

There were two active permanent program operations on the Navajo reservation (McKinley and Navajo Mines).

Two active operations occur on both the Navajo and Hopi reservations—one permanent and one initial program permit (Kayenta and Black Mesa Mines). An active preparation plant on the Navajo Reservation (Black Mesa Preparation Plant) has had a separate permit application submitted in accordance with the permanent Indian Lands Program, and is operating under administrative delay.

Two Initial Program operations on the Navajo reservation are being reclaimed (Amcoal and Burnham Mines); the Office of Surface Mining, in cooperation with the Bureau of Indian Affairs and the Navajo Nation, is overseeing the final reclamation at these sites.

One active mine is producing coal owned by the Crow tribe on the Crow Ceded Strip (Absaloka Mine).

One permitted haul road is located on the Ute Mountain Ute reservation (La Plata Haul Road).

The Office of Surface Mining awards grants to the Crow, Hopi, Navajo, and Northern Cheyenne Tribes to assist them in developing programs for regulating surface coal mining and reclamation operations on Indian lands. The development of these programs includes: creating tribal mining regulations and policies; working with the Office of Surface Mining in the inspection and enforcement of coal mining activities on Indian lands (including permitting, mine plan review, and bond release); and education in the area of mining and mineral resources. Development grant funding for 2005 was $652,826. Table 10 includes statistics on regulatory activities on Indian lands during 2005.

Mountaintop Mining

As part of a 1998 settlement agreement in *Bragg v. Robertson, No. 98-0636 (S.D.W.Va.)*, the Office of Surface Mining continued to work with the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the West Virginia Department of Environmental Protection to prepare an environmental impact statement on mountaintop mining and valley fills in the steep slope regions of Appalachia. In May 2003, the agencies released the draft environmental impact statement to the public for review and comment. The comment period closed in January 2004, and agencies received more than 83 thousand comments. The agencies are analyzing comments to determine what subsequent steps are needed in the NEPA process.

As provided in the *Bragg* settlement agreement, the Office of Surface Mining agreed to cooperate with the West Virginia Department of Environmental Protection in the review of permit applications proposing to construct large fills as part of the mining operation. In the fall of 2004, the West Virginia Department of Environmental Protection and the Office of Surface Mining agreed to conclude these joint application reviews. The decision was based on several factors, including the West Virginia Department of Environmental Protection program changes, other Office of Surface Mining programmatic and technical assistance to the West Virginia Department of Environmental Protection, and a July 8, 2004, decision by Southern Federal District Judge Joseph Goodwin requiring nearly all mines with valley fills (within the Southern District of West Virginia) to obtain individual Clean Water Act permits.

A complete listing of mountaintop mining information is available at www.osmre.gov/mtindex.htm.

On February 10th the Office of Surface Mining signed a memorandum of understanding with the Army Corps of Engineers, the Environmental Protection

This permanent impoundment on a reclaimed mine site provides a valuable source of water for the agricultural postmining land use. At this Ohio site the water provides an outstanding wildlife habitat for geese, ducks, herons, and a host of fish, while ensuring a dependable source of water for grazing.

Following reclamation at this wise County, Virginia mine site, the landowner established an apple orchard. Reclamation of this mine provided a broad valley with soil and drainage conditions that are more productive for apples than before mining.

Agency, and the Fish and Wildlife Service to improve permit application procedures for surface coal mining operations that place dredged or fill material in waters of the United States. The memorandum is designed to reduce the time it takes to process permit applications and to eliminate, where possible, redundant agency reviews while preserving the statutory and regulatory authorities and responsibilities of each agency.

The Office of Surface Mining also began the scoping process for an environmental impact study of its proposed excess spoil disposal and stream buffer zone regulations. In light of recent court decisions, the Office of Surface Mining proposed the regulatory changes on January 7, 2004 to clarify the interpretation of federal stream buffer zone and excess spoil disposal requirements under the Surface Mining Law.

Pennsylvania Anthracite Program

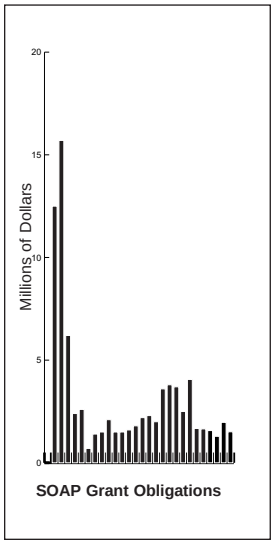
For more than a century, coal has played a major role in the economic and industrial development of Pennsylvania, particularly the steel making industry, and has historically employed thousands of workers. Pennsylvania continues to be a leading coal producing state, due to its estimated bituminous reserves that total 23 billion tons, or 5.3 percent of U.S. reserves, and anthracite reserves that total 7.1 billion tons, or 97 percent of U.S. anthracite reserves.

Section 529 of the Surface Mining Law provides for an exemption from the Federal Performance Standards for anthracite coal mining operations, provided the state law governing those operations was in effect on August 3, 1977. Pennsylvania is the only state with an established regulatory program qualifying for the exemption, and thus regulates anthracite mining independent of the Surface Mining Law standards.

In 2005, the anthracite mining industry produced approximately 1.8 million tons, an increase of 0.1 million from 2004. Approximately 1.6 million tons were produced from surface mines and 0.2 million tons from underground mines. In addition, the reprocessing of anthracite coal waste banks continued throughout the Anthracite region in 2005 and produced 2.3 million tons used to fuel approved cogeneration (waste burning) electric plants.

The Pennsylvania anthracite program currently includes 313[8] inspectable units (44 underground, 15 preparation plants, 4 refuse disposal sites, 122 reprocessing operations, and 124 surface mines). Pennsylvania's Department of Environmental Protection conducted 3,525[8] inspections (compared to 3,090 last year) and issued 123[8] violations (compared to 165 last year) in the anthracite region. Pennsylvania's Department of Environmental Protection continues to successfully enforce the provisions of the anthracite regulatory program.

Small Operator Assistance Program



Section 401 (c)(11) of the Surface Mining Law authorizes up to $10 million annually of the fees collected for the Abandoned Mine Reclamation Fund to be used to help qualified small mine

8. For the 12-month period, July 1, 2004 - June 30, 2005

operators obtain technical data needed for permit applications. Qualifying operators produce no more than 300,000 tons of coal per year. In 1992, Public Law 102-486 expanded the technical permitting services eligible for funding under the Small Operator Assistance Program to include engineering analyses and design necessary for hydrologic impact determination, cross-section maps and plans, geologic drilling, archaeological and historical information, plans required for the protection of fish and wildlife habitat and other environmental values, pre-blast surveys, hydrologic and geologic data collection and analyses required as part of the probable hydrologic consequences determination, and the statement of overburden analysis required.

The Small Operator Assistance Program is operated by states that have Office of Surface Mining approved surface mining programs. In states where the Office of Surface Mining is the regulatory authority, it operates the Small Operator Assistance Program. In 2005, 87 small mine operators received assistance (compared to 59 last year). Table 12 provides a summary of the Small Operator Assistance Program by state during 2005.

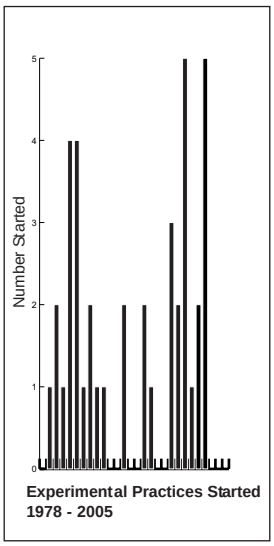
Table 12
Small Operator Assistance Program

State	Grant Amount 2005	Grant Amount 2004	Projects Operators	Projects Started
Alabama	$60,000	$39,049	2	1
Kentucky	606,000	883,844	27	23
Maryland	35,000	35,000	2	1
Ohio	50,000	0	6	9
Pennsylvania	669,000	966,617	48	32
West Virginia	96,000	49,584	2	1
Total	**$1,516,994**	**$1,974,094**	**87**	**67**

1. These figures do not include downward adjustments of prior-year awards.

Experimental Practices

Section 711 of the Surface Mining Law allows variances from the performance standards of Sections 515 and 516 of the Surface Mining Law on an experimental basis.



Experimental Practices Started 1978 - 2005

These variances are intended to encourage advances in mining technology or to allow innovative industrial, commercial, residential, or public postmining land uses. However, the experimental practices must be potentially more, or at least as, environmentally protective as the environmental protection performance standards established by the Surface Mining Law. Approval and monitoring of a permit containing an experimental practice requires a close working relationship between the mine operator, the state, and the Office of Surface Mining.

Since the program began, 49 projects have been undertaken and 26 completed. Of the completed projects, 21 were determined to be successful and five unsuccessful. Two were terminated due to a regulation change. Currently there are 21 projects underway. There were no new projects started in 2005.

Reclamation Awards

The Office of Surface Mining began recognizing outstanding mine reclamation in 1986. Since then, more than 180 mines have received awards. These operations inspire the entire industry, and help establish the high standards of on-the-ground mine reclamation that exists today. For a description of the active mining award program and 2006 rules, see www.osmre.gov/activerules01.htm.

The success of topsoil handling is measured by the land's crop productivity after reclamation. Although mining at this Amish farm in southern Indiana went right up to the barnyard, agricultural production was interrupted for only one growing season.

The final reclaimed slope at this Laurel County, Kentucky mine closely approximates the original contour of the land, leaving no trace of the highwall. Such outstanding reclamation is what the architects of the Surface Mining Law envisioned when they sent it to the President for his signature.

The 2005 awards were presented September 20, 2005, at a banquet hosted by the National Mining Association. The award winners were as follows:

National Awards

Peabody Western Coal Company
Kayenta/Black Mesa Mines
Navajo County, Arizona
In 1998, the Peabody Western Coal Company began developing a grazing management program on reclaimed lands. They met with native American stakeholders, and evaluated data that would help establish management guidelines for livestock grazing. By 2004, 18 families were grazing livestock on 3,700 acres of pasture. This exemplary program returns reclaimed land to its traditional use, long term grazing, a use that's vitally important to the local population.

Red River Coal Company
Humphries Enterprises, Inc. Job 1 and 2
Norton, Virginia
The Red River Coal Company's innovative techniques helped eliminate more than 4,800 feet of dangerous, abandoned highwalls during mining. Red River also worked with Virginia Tech, testing reforestation techniques for reclaimed land. Different mixtures of trees and soil preparation were tested, as well as methods of applying herbicides to control competing vegetation around tree seedlings. We now know more about restoring mine lands to native hardwood forests. And, the lessons learned here are already being employed in the reforestation of Virginia coal fields.

Foundation Coal Holdings, Inc.
Delta Mine
Harrisburg, Illinois
Innovative reclamation at the Delta Mine resulted in a variety of topography, as well as land uses. The 3,800 acre area integrates cropland with forests, lakes and wildlife habitats, providing viable, long-term land use for this rural Illinois community.

Western Energy Company
Rosebud, Mine
Colstrip, Montana
The reclamation plan at the Rosebud Mine was modified to preserve the valuable habitat provided by pre-mine topographic features. By leaving a large area above the final cut untouched, regrading the reclaimed land minimized disturbance and reduced the area of the final highwall. More than 5,000 mature ponderosa pine trees and associated plant and animal species were saved. Although still in the final stages of reclamation, the preservation of native slopes, sandstone cliffs, and established forest has created a reclaimed mine site that is already characteristic of the surrounding Montana landscape.

United Coals, Inc.
Stenger/Bond Surface Mine
Clarksburg, West Virginia
This 90-acre coal mining and reclamation operation had been previously mined, and contained more than a mile of unreclaimed highwalls. Today, the abandoned mine hazards are eliminated and the landowner is harvesting hay from the site. Permanent ponds were constructed, fences were built, and farm roads now interconnect the fields. By working closely with the landowner, the mine has been returned to productive long-term agricultural use. The attention to detail represents special dedication, and has resulted in reclamation at the highest levels.

Peabody Coal Company
Universal Mine Slurry Wetland Area
Universal, Illinois
This wetland area, more than 80 acres, was once a coal wash slurry deposit. Today it includes 20 acres of permanently impounded water and surrounding wildlife habitat.
The reclamation was a cooperative effort by the mining company and the International Union of Operating Engineers. Buildings used during the mining now house a union apprenticeship and training program. Both the wetlands and adjacent training

center are valuable assets to the community, excellent examples of a reclaimed site offering more than before it was mined.

Kennecott Energy, Spring Creek Coal Co.
Spring Creek Mine
Decker, Montana
The Spring Creek Mine is located near the Wyoming/Montana border where rainfall is only 10 inches. This makes both mining and reclamation more difficult. Today, following reclamation native vegetation has been reestablished by a unique combination of grading and seed mixtures. It took a thorough understanding of local topography to sculpt features that would support the diverse vegetation, providing both a wildlife habitat and livestock grazing. This project is a great example for other operations throughout the west.

Director's Award
Each year, one coal mining operation in the country is selected to receive the Director's Award for outstanding achievement in a specific area of reclamation. This year, the award was presented to Arch of Wyoming for dedication and commitment that resulted in developing an innovative reclamation technique that creates a more efficient way of doing the work and improves final reclamation

Arch of Wyoming
Seminoe I Mine
Hanna, Wyoming
The 2005 Director's Award honors innovation, leading to greater efficiency and superior reclamation. The Seminoe I Mine's shrub success greatly exceeds regulatory goals and standards. The new methods employed at this mine established shrubs, grasses and forbs, and specific habitat features were constructed. The results were, outstanding livestock grazing and wildlife habitat in arid Wyoming conditions.

Good Neighbor Awards
Each year three awards are presented for achievement of exemplary interaction, communication, and involvement with the surrounding land owners and local community. Establishment of good working relations and interaction with mine neighbors is an important element of the Surface Mining Law that mine operators are achieving in many different ways. The objective of these awards is to recognize this achievement and communicate the good neighbor concepts so others can use them. This may include successful interaction with landowners throughout the mining and reclamation process, working with local organizations to better inform citizens, or including the community in on-the-ground reclamation activities.

Gold Award
Powder River Coal Company
North Antelope Rochelle Mine
Gillette, Wyoming
The North Antelope Rochelle Mine, the world's largest coal mine, produced nearly 82.5 million tons of subbituminous coal in 2004. It's also a good neighbor to the surrounding community. Frequent demonstrations at the mine site, and educational school tours have taught hundreds of children about modern Powder River Basin mining and reclamation. The company has been the major contributor to the Thunder Basin Grasslands Prairie Ecosystem Association and actively works to increase awareness about stewardship of Wyoming's natural resources.

Silver Award
Peabody Western Coal Company
Kayenta and Black Mesa Mines
Navajo County, Arizona
Native American's have a special relationship with the land. Post-mining livestock grazing at the Kayenta/Black Mesa Complex supports a traditional way of life—with cultural ties going back hundreds of years. Peabody worked with local residents, establishing

The Surface Mining Law requires establishment of a healthy, permanent vegetation cover on all land affected by coal mining. At this reclaimed Texas mine site native trees and shrubs were planted and the site is an integral part of the surrounding landscape that now provides recreational opportunities to the local community.

educational and grazing management programs. Together, they proved that land reclaimed for grazing is both achievable, and sustainable.

Bronze Award
Peabody Energy Black Beauty Coal Co.
Farmersburg Mine
Vigo and Sullivan Counties, Indiana
At Black Beauty, being a good neighbor means involvement with surrounding communities and governmental agencies, including schools. The company runs educational mine site activities, and has provided needed improvements at a local high school. It's installed lights at local baseball fields, and constructed an entrance road for a new town park. It has also built a cemetery monument, and donated land to construct a treatment plant for the town of Farmersburg. Black Beauty proves that coal mining, combined with "good neighbor" spirit, results in valuable benefits for everyone involved.

The good neighbor policies at these three mine operations are beginning to be accepted as "the way" for mine operations to do business. They're shining examples of this growing trend.

Permanent impoundments are frequently constructed on reclamation sites. Although they may not be specifically designed to enhance wildlife habitats, most of them provide excellent cover and a water environment that together increase the potential for wildlife to quickly become established on these sites. Many impoundments create an aquatic habitat where none existed before mining. Careful planning of this impoundment on a southern Indiana reclaimed mine site has significantly enhance the wildlife value.

TECHNOLOGY TRANSFER

ASSISTANCE AND TRAINING

The Office of Surface Mining provides states, Indian tribes, federal agencies, and the coal industry with the technical information and tools they need to carry out their responsibilities under the Surface Mining Law. These activities include:

- providing direct technical assistance to address specific mining and reclamation problems;
- maintaining automated systems and databases used by others in making decisions under the Surface Mining Law; and
- transferring technical capability to others through training, consultations, forums, and conferences.

The goal is to help stakeholders develop the skills needed for solving problems on their own. In recent years, the Office of Surface Mining has been supplementing its traditional oversight presence with an increased emphasis on providing technical assistance and support to states and tribes.

While the focus of the Office of Surface Mining is to help state and tribal partners do their jobs, the ultimate goal is to improve the health, safety, and the environment for our primary customers, the people who live and work in coalfield communities. Using printed publications, website information, and videos, the Office of Surface Mining provides information to citizens to help them better understand their rights and responsibilities under the Surface Mining Law.

Technical Assistance

Computer Tools and Services

The Office of Surface Mining provides states regulators with a comprehensive set of analytical tools to aid in technical decision-making related to the Surface Mining Law. The services provided are centered on off-the-shelf scientific and engineering computer hardware and software supported by the Office of Surface Mining in partnership with the states and tribes. This technical assistance has grown from a few applications available on a single specially designed workstation, to a suite of software on each user's desktop computer. Costs are held low through shared licensing of the software via the internet.

Currently the assistance consists of Windows-based computers at state, tribal, and Office of Surface Mining offices with access to the licensed servers via the Internet and Office of Surface Mining Wide Area Network. The 26 commercially available software applications cover a wide range of regulatory and abandoned mine land subjects. During 2005, an average 134 customers use software provided by the Office of Surface Mining's Technical Innovation and Professional Services each workday. The customer base is composed of over 700 desktop computers at 96 state, tribal, and Office of Surface Mining offices throughout the country. In 2005, this service provided two software updates to each of the customer sites as part of a semiannual service to keep the software tools up to date.

Remote Sensing Technology

High resolution satellite imagery, light detection, and ranging imagery is acquired, processed, and provided to permitting and inspection staff in state and Office of Surface Mining field offices throughout the country. Aerial photography and satellite imagery are an integral part of the Office of Surface Mining geographic information system used in Western states. Satellite imagery is acquired annually and light detection and ranging imagery data is acquired biannually.

In 2005, the Office of Surface Mining provided imaging and mapping services for Alaska, Indian and federal lands mine sites in the Western United States. The inspectors routinely use this imagery to plan for field visits, during consultations with mine operators, and when preparing maps for inspection

Thermal Imaging

The Office of Surface Mining has acquired two thermal cameras (ThermaCAM™ E4) for use in locating acid materials and coal seam fires. The ThermaCAM is a hand held device that can also be used from aircraft. Thermal images and graphs are stored in the camera and downloaded to a personal computer where they can then be used as base layers in a geographic information system, or for inclusion in reports. The camera records temperatures in the range of -20ºC to +250ºC (-4ºF to +482ºF) with an accuracy of ± 2ºC or ± 2% of absolute temperature in ºC. In 2005, the camera was used in North Dakota,

Illinois, and Pennsylvania to define underground coal bed fires. The camera was also used to locate and record surface temperatures of coal seam fires in North Dakota. In Illinois, it was used to search for hidden mine shafts that have been closed by unknown means, and in Pennsylvania to detect coal seam fires and pyrite oxidation areas.

Internet Mapping Services Initiative

During 2005, the Office of Surface Mining formed an Internet Mapping Services team to investigate the application of Internet mapping technology to coal mining operations. The objective of the team is to find practical methods of implementing internet mapping technology for surface mining applications, share information with others implementing this technology, provide technical support, and to identify a unified approach in delivering these services. Internet mapping uses geospatial datasets to produce maps on a server which can be delivered through the Internet to a standard browser as an image for interactive use at a remote workstation. The user can view, pan, zoom, query, select themes, download, and print the interactive map. An internal prototype map service has been established in 2005, and can be viewed by Office of Surface Mining staff. The Internet Mapping Services Initiative is a response to meet the Interior Department's E-Government Strategy, by sharing spatial information inside and outside the Department, modifying information systems to enable them to use geospatial data, and improving the capability to access geospatial information on-line.

Partnership Projects

United States Geological Survey

Representatives from the Office of Surface Mining are negotiating a Cooperative Agreement with the U.S. Geological Survey to use strategic defense imagery from coal-mining areas of the United States to locate coal fires, and waterways containing acid mine drainage. The Office of Surface Mining provided map coordinates of known coal fires and acid mine drainage sites to the Geological Survey's Mid-Continent Mapping Center in Rolla, Missouri. The Mapping Center will determine the spectral characteristics at these coordinates and use the results to locate other potential coal fires and acid mine drainage-producing areas.

If this test is successful, the Office of Surface Mining will improve upon the hand-held thermal camera technology already in place. This new technology will enable the use of remotely-sensed thermal imaging technology to accurately detect, locate, map, and inventory coal seam and coal outcrop fires and acid mine drainage sites over large areas, and also be able to maintain and analyze this data in a geographic information system.

United States Department of Agriculture

An Interagency Agreement was established between the Office of Surface Mining and the Agriculture Department's Agriculture Farm Services Agency. The purpose of this agreement is to provide a cost effective, administratively streamlined way to acquire high resolution aerial photography in support of regulatory and abandoned mine reclamation under the Surface Mining Law. Photography will be flown for Office of Surface Mining designated areas as part of the Agriculture Department's Forest Inventory Assessment program.

United States Forest Service

The Office of Surface Mining partnered with the U.S. Forest Service through an Interagency Agreement to share costs to test airborne thermal imaging remote sensing technology to locate and map coal seam fires. The Forest Service is using an airborne thermal imaging sensor called the Star SAFIRE III to map wildland fire area perimeters and hot

Prior to 1977, when the Surface Mining Law was passed, it was common practice to remove the topsoil and overburden in one operation. This resulted in the loss of valuable topsoil that was essential to reestablishing productive agricultural land uses. The corn coop growing on this reclaimed Indiana mine site has consistently been above required yields and is producing better corps than the surrounding unmined area.

spots to assist in directing fire fighting forces on the ground. The camera is mounted on a Forest Service AH-1 Cobra Helicopter. Using the imaging sensor, the helicopter crew collects ground coordinates of fires or hot spots, mapping the exact location of these fires "on the fly". OSM initiated this partnership with the Forest Service to determine if this technology, used in wildland fire fighting efforts can be applied to mapping coal seam fires.

Mobile Computing

For the past three years, OSM staff have used global positioning systems on tablet computers to conduct reconnaissance activities for bond release and bond forfeiture design. State reclamation experts have used mobile GIS technology in Alaska, Ohio, and Pennsylvania to map mine site features. Wyoming state inspectors and western OSM inspectors verify slope angle, topsoil depth, and placement of wildlife habitat features in the field through the use of company-supplied digital maps.

In the mid-continent region, mapping efforts were initiated to aid in determining bond release areas and estimating reclamation liability of multiple-permit bond forfeiture areas. Additional efforts were conducted in Alabama and Illinois to improve the quality and accuracy of water and soil data collection. During 2004 and 2005, OSM conducted a series of workshops, assistance efforts, and hands-on training sessions with state regulatory and abandoned mine land programs to help introduce them to mobile geographic information systems and mobile computer assisted drafting technologies. In 2005, OSM and state participants in the mobile computing effort have worked together with other programs implementing the Surface Mining Law to improve the technology applications. Additional tools include the development of personal data assistance applications to mobile computing technology as a less expensive, yet effective field tool.

Hydrology Program

In 2005, the TIPS Hydrology Program successfully advanced in four areas: 1). The large watershed review team has been reviewing potential new software to provide staff with tools to assist in the creation and evaluation of Cumulative Hydrologic Impact Assessments (CHIA) and Probable Hydrologic Consequences (PHC), general large watershed analysis, and flooding potential.

2). The surface water team is studying providing additional support for Army Corps of Engineers HEC modeling programs including HEC-RAS and HEC-HMS in response to customer requests.

3). The TIPS Hydrology Program Manager promoted the integration of Hydrology and Geospatial applications at the ESRI User Conference in San Diego in July.

4). In September the Hydrology Program provided training in Denver at the TIPS Training Center for the Geochemist's Workbench software, supporting hydrogeochemical analyses in OSM and state offices.

Slurry Impoundments

Since 1996, there have been four breakthroughs of coal slurry impoundments into underground mines. Slurry impoundments are created from the coal preparation process as coal is washed to remove impurities. A mixture of silt and sand-sized shale particles and water are pumped behind an embankment built of coarse coal waste to assure that off site water pollution will not occur.

OSM is currently completing an oversight review of the state regulatory authorities' procedures for assessing breakthrough potential. This review includes an assessment of the reasonableness of states' decisions related to breakthrough potential. OSM also has recently completed the technical review of the flowability of slurry to determine its potential to flow into underground mines if an opening develops. The study reviewed current knowledge on, or applicable to, the potential flow characteristics of impounded coal refuse. The review explored two interrelated issues:

1. Given the occurrence of a breakthrough event that would result in a potential flow between an underground mine and an impoundment, should we expect coal refuse to flow into the mine?

2. If the refuse would flow, what would be the nature (e.g. velocity and extent) of that flow?

Underground Mine Mapping Inventory

OSM and the states have actively inventoried abandoned mine land features for years using the best available information and technologies. The inventory includes information about the location, size, and type of abandoned mine hazards and the priority for reclamation under the Surface Mining Law. For abandoned underground mines, however, more detailed information, including detailed mine maps, is necessary in order to adequately evaluate the threat posed by these mines to the public, infrastructure, and the environment.

Accurate and readily-available underground mine maps are essential for protecting the public, the environment, and infrastructure from the threats posed by unknown underground mines. The Martin County Coal Company impoundment failure in Kentucky damaged miles of stream and cost hundreds of millions of dollars to clean up. The Quecreek mine accident in Pennsylvania endangered the lives of nine trapped miners and nine others who escaped the inundation. These are just two incidents which have threatened the safety of the public and the environment and could have possibly been avoided if accurate underground mine maps were readily available.

At this Cutler, Illinois reclamation site almost nine miles of streams were restored after being temporarily diverted during the mining. In association with the stream restoration approximately 350,000 trees were planted to provide a diverse wetland, flood plain. and wildlife habitat.

The availability of accurate underground mine maps also protects public investment in public infrastructure, homes, and businesses. For example, in Pennsylvania, millions of dollars have been spent to repair sections of Interstate 70 and other roads that have been damaged when underlying underground mines have subsided. With three interstate highways and numerous other public road projects being planned for the coalfields of West Virginia, billions of dollars of public investment may be protected by knowing how the roads should be backfilled if an underground mine map inventory is available.

In addition, thousands of homes and businesses lie over abandoned underground coal mines. These homes and businesses represent private investments of billions of dollars. In some cases, the homeowners and business owners have no way to find out where the mines are and what should be done to protect their investments or minimize the threat to their safety. According to information provided by the Commonwealth of Pennsylvania, the costs for repairs at only two developments, where homeowners were unaware of the mining and had no subsidence insurance, were nearly $2 million.

Finally, many of these abandoned underground mines are flooded, and in some areas are hydrologically connected to one another, creating massive underground mine pools. These pools of water may contain contamination, such as alkaline or acid mine water and metals. In some cases, the volume of water is increasing to the point where the pools will soon begin discharging to the surface. The availability of maps of the abandoned mine workings will allow more accurate calculations of the volume of water contained in these mine pools and for planning to deal with the discharges. In some cases, the water contained in these pools can be used for industrial or other purposes. Knowing the volume of the water would allow for investment based on the availability of the water supply and the potential economic redevelopment in the coal fields.

During 2005, the Office of Surface Mining began working with the states and the Mine Safety and Health Administration to develop an approach to acquire underground mine maps and to make them readily available to a variety of customers. A benchmarking forum was held in October 2003 to identify the then current activities related to underground mine mapping. The Office of Surface Mining has continued to work with the states and others on development of further initiatives as a follow up to that meeting. The effort has focused on means to identify best practices for preserving, archiving, and distributing mine maps. A part of this effort has also been the identification of practices for georeferencing and manipulation of electronic maps using standard geospatial tools. These best practices will allow the Office of Surface Mining and the states to identify resource needs and develop a set of voluntary standards for addressing the need for underground mine maps in a cost efficient manner.

In June 2005, the Office of Surface Mining and the Interstate Mining Compact Commission co-headed the second benchmarking workshop on underground mine mapping. Over 95 attendees from federal agencies, state regulatory agencies, state abandoned mine land agencies, state geological surveys, and state and federal miners

health and safety agencies spent the two days discussing various aspects of acquiring, preserving, and making mine maps available to various customers in electronic formats. There was also discussion of liability issues and reliability of the maps and the data. The attendees heard presentations based on state and federal experiences, and looked for opportunities to develop further cooperation and a compendium of best practices to assist in acquiring the maps and making them useful for the variety of potential customers.

Congressionally-Mandated Coal Study

In the Consolidated Appropriations Act, P.L. 108-447, Congress directed OSM to enagage the National Research Council of the National Academy of Sciences to carry out a 24-month study on coal research, technology, and policy matters. A formal letter of request from Senators Robert Byrd and Arlen Specter was transmitted to the National Academies on December 17, 2004.

The Senators indicated the need for involvement in the study and a review of work being done by the Office of Surface Mining, Department of Energy, U.S. Geological Survey, Mine Safety and Health Administration , National Institute for Occupational Safety and Health, Environmental Protection Agency, and other federal and state agencies. There have been significant federal expenditures over the past several decades in coal-related research. Most of this funding appears to be directed toward the use of coal in power generation, and in technology development and demonstration; and not in the mining and reclamation of coal or its use in other promising, alternative applications. There is concern that despite the large amount of funding dedicated to coal research, the United States does not appear to have an integrated and coordinated coal research and development approach for all stages of the coal life cycle.

The study will consider the following issues:

- Review the importance of coal to the U.S. energy mix over the next 25 years, including the role coal plays in an integrated energy and environmental policy in order to develop a more comprehensive, roadmap that builds on economic growth, fuel diversity, energy security, and environmental sustainability.

- Review the coal reserve assessments based on recent trends in the coal sector and examine the current and future role of coal imports and exports.

- Evaluate the full range of local, regional, national, and global issues and challenges that lie ahead for the production and utilization of coal. Assess international coal research and development efforts, including trends in international markets in the short, medium, and long term.

- Assess the categories of coal research currently being carried out in the U.S. and investigate whether and how technology developments in other fields can be applied to the coal sector. Review how technologies are being transferred to coal mine operators and other users, recognizing differences among companies.

- Determine the priority of coal research needs, including the areas of exploration, discovery, reserve assessment (including terms of commercial feasibility for known reserves), extraction, coal preparation, delivery to market, waste disposal, reclamation, health and safety, community impact, environmental practices, education and training, and productivity.

- Evaluate the need for a broad-based, coordinated, multi-agency coal research and development program. Review current coal-related research, examine which agencies are conducting it, and determine how much funding is currently being spent throughout the coal life cycle.

- Examine options for supporting and implementing a broad-based coal research program, including approximate costs, and the relative roles and commitments of the public and private sectors now and into the future.

The Office of Surface Mining and the National Academies entered into a cooperative agreement in July 2005 for completion of the study. The Office of Surface Mining has also established a committee made up of representatives of the federal agencies whose programs are involved in the study to help provide information to the National Research Council study committee. The National Research Council committee's report is scheduled for completion in the summer of 2007.

Bat Conservation and Mining

The Office of Surface Mining has worked to protect the populations and habitats of bats associated with mining since 1998 when a Memorandum of Understanding with Bat Conservation International. During November of 2005, the Office of Surface Mining held its third technical forum "Indiana Bat and Coal Mining" on bat conservation and mining. The forum focused on issues related to:

- Bat biology and life history

- Field techniques for biological assessment
- The consultation process

- Case studies

- Guidance development for permitting.

Information provided during the forum showed a dramatic decline in the number of Indiana bats over the last forty years nationwide. This was the basis for increasing efforts by the U.S. Fish and Wildlife Service to protect the federally endangered Indiana Bat and the need for the Office of Surface Mining to work more closely with state regulatory programs during the permitting, mining, and reclamation activities of coal mines that potentially impact Indiana Bat habitat. The Office of Surface Mining is currently publishing proceedings from this forum.

During the life of this Washington coal mine over 14 thousand acres of land will be disturbed and restored. Following mining and reclamation of the land, forests are being replanted using native species of trees. A special benefit of the reclamation is the development of diverse wildlife habitats that range from upland forests to wetlands.

The Office of Surface Mining also cosponsored a forum with Bat Conservation International entitled "Management of Mines and Bats that Depend on Them." The forum focused on issues related to: mining and mining history, conservation considerations, management tools, and conservation research in action, and building a program.

The Office of Surface Mining maintains a bat conservation and mining information website in order to make technical information available to the public. See www.mcrcc.osmre.gov/bats for additional information.

Prime Farmland Reclamation

The Office of Surface Mining continues to work with its partners in the agricultural regions of the nation to improve the success and efficiency of prime farmland reclamation associated with coal mining. During 2005, the Office of Surface Mining partnered with the Agricultural Department's Natural Resources Conservation Service, Illinois and Indiana Regulatory Authorities, the Illinois Coal Association, the Indiana Coal Council, and four coal mining companies in providing financial support for an applied science project being undertaken by the University of Illinois. The project proposes to develop a system to evaluate prime farmland reclamation success based on spatial soil properties. This work has the potential to provide industry and regulatory authorities with a method of determining reclamation success without impacts from the many variables that influence crop production. If successful, the technology would provide a more reliable method of determining if reclamation has restored the productive capacity of our valuable farmlands while also returning the lands to the owner's control sooner than under current productivity evaluation methods.

Reforestation

The Office of Surface Mining has been involved with efforts to encourage reforestation of coal mined lands since 1998. Two interactive technical forums have been conducted with proceedings published and distributed. In 2004, the Appalachian Region established the Appalachian Region Reforestation Initiative with its state counterparts. The Initiative has grown and obtained substantial support since it began. The Initiative's accomplishments in 2005 include:

- A major signing ceremony of the Statement of Mutual Intent event on December 15, 2004 at Stonewall Jackson Lake State Park, West Virginia

- Obtaining over 100 signatories to the Statement of Mutual Intent to date, representing 69 different organizations: 26 Government Agencies (federal, state and local), 16 Environmental Groups, 14 Industry Organizations, nine Academic Institutions, and four Citizen Groups.

- Numerous tree planting events throughout the region in support of Arbor Day including events attended by the Director of the Office of Surface Mining.

- Establishment of an academic team with representatives from universities across the country to support the science behind the Initiative.

- Creating an awards program to honor operators who exemplify the provisions of the Forestry Reclamation Approach.

- Creating materials to promote the Initiative such as brochures, newsletters, a website, and posters.

- Completion of three Initiative draft training modules; one for industry and landowners, one for inspection, and one on permitting.

The Office of Surface Mining also has a team working on a primer which will explain the fundamentals of reforestation by planting high-value hardwood trees using the Forestry Reclamation Approach. Although technical in nature, the primer will also serve as a guide to local, state, and federal government agencies, tribes, the coal industry, landowners, academia, and local citizens, to demonstrate how each can benefit by creating productive forestland on reclaimed mine land. The economic benefits of reforestation are made evident not only in hardwood tree value; but, in eco-assets such as wetland restoration and carbon sequestration. Secretary Norton's 4C's management principle --Conservation through Cooperation, Communication, and Consultation-- is epitomized through this collaborative initiative.

For additional information on the Office of Surface Mining's Reforestation activities see www.osmre.gov/reforestationindex.htm

International Activities

In 2005, the Office of Surface Mining and its state partners were actively engaged in projects with the Indonesian Ministry of Energy and Mineral Resources and the Indonesian Ministry of the Environment, and occasionally with the Ministry of Forestry. The goals were technical and policy assistance in the environmental regulation of mining.

Both agencies had decentralized much of the environmental decision making to the county level, and thus needed assistance in converting themselves into central policy, training, and oversight agencies. Office of Surface Mining's relationships with its state partners and with other federal agencies, such as the Environmental Protection Agency, provided useful models for the Indonesian national ministries to form cooperative, consultative relationships among themselves and with the provincial and county governments.

The United States Agency for International Development provided all the funding for the Office of Surface Mining's activities pursuant to the Technical Assistance Agreement with Indonesia. The December tsunami, however, required the Agency for International Development to reassess its priorities for the near future. The Agency decided that it would need the money it had been providing to the Office of Surface Mining in Indonesia to help with relief for the tsunami victims. As a result,

Wildlife may not usually come to mind when people think of the landscape that results from surface coal mining reclamation. However, wildlife habitat is actually on of the more common postmining land uses. Many mining operations use reclamation techniques to reestablish or even improve wildlife habitats. For example, in the praire landscape of North Dakota, wetlands provide a critical waterfowl habitat and add diversity that is important for other wildlife. This mine operator carefully designed wetland areas at this site to maximize habitat with undulating wetland edges, diverse vegetation, and creation of both shallow and deep water zones.

Coal mining at this Ohio site was a temporary use of the land. In the first step of the mining operation one foot of topsoil and two feet of subsoil were removed and stored separately. During reclamation the soil was restored, seeded with alfalfa, red clover, timothy, and orchard grass and today is used for hay production. This mine reclamation resulted in above average crop yields and very rapid return to the long-term agricultural land use.

the Office of Surface's active assistance to the Indonesian ministries, provinces, and localities ended September 30th. The project director relocated permanently back to the United States and the small staff in Jakarta was terminated.

The Office of Surface Mining and its state partners have provided training for its Indonesian partners in 2005 that included:

- Several seminars and workshops on environmental impact statements for local, provincial, and national government staff, and for the mining industry. The national, provincial, and county governments are telling the Office of Surface Mining that thanks to its seminars, the environmental impact statements are now containing solid baseline and other specific information useful to evaluating an application for a mining permit. The course has been translated into Indonesian and is now being taught by training staff of the Indonesian ministries in an unusual display of inter-ministerial cooperation.

- The Office of Surface Mining, state partners, the Environmental Protection Agency, mining companies, and non-governmental organizations hosted a delegation from both the Ministry of Energy and Minerals and the Ministry of the Environment in the United States for a series of seminars, question-and-answer sessions, and demonstrative tours of active and abandoned mine sites. Topics ranged from the evolution of the relevant U.S. laws and policies, to the technical specifications for controlling pollution from small coal mines and from large gold mines, to the technology and expense of remediating acid mine drainage from abandoned mines. Responding to several governmental units, the Office of Surface Mining developed and presented workshops in several provinces for the small-scale gold mining "industry" and local governments. They have been successful in persuading many of the small operations to adopt cyanide vat leaching instead of using mercury amalgamation. The miners are recovering a greater percentage of gold at lower cost, and are sparing themselves and the environment from exposure to collectively hundreds of tons of mercury per year.

- At the request of the new chief of the provincial mining agency in East Kalimantan, the Office of Surface Mining developed and taught a course on environmental auditing. The goal was to improve the performance of the provincial auditors and of the mining industry so that the next round of environmental audits by the Ministry of the Environment would show substantial improvement in that province.

- OSM's assistance has been requested beyond the boundaries of mining. During the year, two landfills collapsed in West Java, killing at least 200 people. They were poorly sited and not managed properly for an area that expects monsoon rains during the year. At the request of the national government, the Office of Surface Mining prepared and presented workshops for local and provincial governments on the geologic factors affecting slope stability of landfills. The hope is that the training, plus Office of Surface Mining's technical papers and consultations, will help the officials responsible for locating and managing landfills to avoid such failures and the resulting

At this Montana mine site, the operation went around this natural rock outcrop. With reclamation complete, it is once again part of the natural landscape. The reclaimed land in the foreground has been graded to match the original contour. Native grasses, forbs, shrubs, and trees were planted. Now with the coal resource removed, it has been returned to its long-term livestock grazing land use.

casualties.

- The Office of Surface Mining and its state partners have conducted several sessions of "Training for Trainers" to ministry personnel. Those courses have enabled the ministries' technical, scientific, and policy experts to become effective and efficient trainers for personnel across governmental levels, and for the industry.

- In conjunction with the Indonesian Center for Training and Geology Education, the Office of Surface Mining conducted multiple sessions of training on surface and groundwater hydrology, in support of the U.S. Agency for International Development's plan on improving human services. The course was for managers and administrators responsible for water supply, land use, and watershed management decisions. The course included ground water storage and flow characteristics, surface water and use relationships, and factors affecting water quality.

The Office of Surface Mining consulted with the Ministry of the Environment for many years, and in October 2004, the ministry issued a decree establishing effluent standards for copper and gold mining. Effluent limitations for nickel and tin mining should be completed by the end of the year. There are also now effluent standards for coal mining operations. OSM has been encouraging the provincial and local governments to incorporate those standards into the mining permits, which would provide authority for the Ministry of the Environment to inspect the water discharged from the permitted operations. An initial draft of such a provincial regulation has been circulated. Making the effluent limitations enforceable at the mines would increase environmental protection, and also should benefit the mining industry because miners would no longer have to guess what level of treatment was needed to avoid polluting waterways.

In addition to the project with Indonesia, the Office of Surface Mining, its state partners, and mining firms hosted delegations of visitors from other countries interested in improving their environmental regulation of coal mining, or in reclaiming abandoned mines. In 2005, these included delegations from the Peoples Republic of China Ministry of Land and Resources, from China's Shanxi Province, and from the Republic of Korea (South Korea). OSM has also discussed possible technical assistance projects with agencies that include China's Ministry of Land and Resources and Brazil's Ministry of Science and Technology.

Systems and Databases

Applicant/Violator System

One of the underlying principles in the Surface Mining Law is that those who conduct mining are responsible for returning the land and water to productive use. Section 510(c) of the Law prohibits the issuance of new permits to applicants who own or control operations with unabated or uncorrected violations.

The Applicant/Violator System provides state regulatory authorities with a central database of application, permit, ownership and control, and violation information. Federal and state officials review Applicant/Violator System data when evaluating the applicant's eligibility for new permits. The system is also used to

determine the eligibility of potential recipients of Abandoned Mine Land reclamation contracts and for inspection

and oversight purposes.

Access to the system is available to the public, coalfield citizens, coal companies, and industry representatives through the use of customized communications software distributed free of charge. Upon request, the Office of Surface Mining provides system users with demonstrations and training, often tailored to meet the specific needs of the target audience, on how to access and interpret system information.

During 2005, the Applicant/Violator System Office responded with quality reviews for 3,766 requests for Applicant/Violator System data evaluations from state and federal regulatory authorities and state abandoned mine land program officials. The Office of Surface Mining collected or settled payments of civil penalties and reclamation fees in the amount of $1,386,194 in part because of violation information in the system.

The Office of Surface Mining published a proposed rule in the Federal Register dealing with transfer, assignment, or sale of permit rights. The proposed rule satisfied part of a settlement agreement between the Office of Surface Mining and the National Mining Association, which sought to overturn certain aspects of the 2000 final Ownership and Control rule. The Applicant/Violator System Office concluded an outreach meeting with the states during 2005 on both the proposed 2005 Transfer, Assignment or Sale of Permit Rights rule and the proposed 2003 Ownership and Control rule.

Among other efforts, the Office of Surface Mining sponsored a workshop examining how bankruptcy impacts the Surface Mining Law. The Office of Surface Mining coordinated with the states and the Department of Justice in establishing a presence in two major coal bankruptcies.

The Applicant/Violator System Office continued efforts to improve the usability of the System. The redesign effort involves not only the transformation of the current system to a more user-friendly, web-based system; but, also a rewrite of the business processes and change in language allowing for ease in future system enhancements and modifications.

During 2005 the Applicant/Violator System Office received a customer satisfaction rating of 97 percent. This is the sixth consecutive year that the office has received extremely high customer satisfaction ratings.

General information about the system, including access and user information can be found at www.avs.osmre.gov.

Geographic Information Systems and Geologic Modeling

The Office of Surface Mining is helping to develop a mine subsidence risk maps and reports for the Oklahoma portion of the Tri-State Lead and Zinc Mining District which encompasses multiple counties in Oklahoma, Kansas and Missouri. This work is being accomplished with a multi-agency team involving participants from the Corps of Engineers, U.S. Geological Survey, and multiple state agencies. The Office of Surface Mining is participating at the request of the Oklahoma Abandoned Mine Land Program. Presentation have shown how ArcGIS 9 software provided by the Office of Surface Mining, can be used to digitize scanned maps, integrate geologic data from drill logs, and create three-dimensional views and maps of the mine workings. The Tar Creek Team decided that ArcGIS 9 will be the primary format for the final presentation of maps and three-D products. The other work involved use of drill and log software from RockWorks, to develop stratigraphic profiles and fence diagrams for a complex mining district. The presentation showed that RockWorks can be a powerful tool for geologic data visualization and analysis. Further analysis of RockWorks will result in a recommendation regarding whether or not Rockworks should be added to the Office of Surface Mining suite of tools.

The Office of Surface Mining has just finished a year and a half long joint pilot project with the Wyoming Department of Environmental Quality, Land Quality Division, and the Powder River Coal Company. The project applied geographical information system and global positioning system technology for tracking reclamation and bond release status of permanently reclaimed lands. The scope of this pilot project encompassed two mines, the Caballo and North Antelope/Rochelle mines. Both mines transmitted electronic geographical data to the Wyoming Division for geoprocessing into various bond release data sets. Other global positioning data (such as topsoil depth and wildlife features) was also collected by Wyoming inspectors in the field and integrated into the geographical information system database. The geographical information system data, along with ArcGIS software was then used to analyze and track reclamation and bond release activities. The final report for this work is posted on the web at www.tips.osmre.gov.

Integrated Geographic Information Systems for Regulatory Programs

A cooperative project between the Office of Surface Mining, the Pennsylvania Geographic Information Systems Consortium, and Wilkes College is projecting use of several geospatial applications for regulatory (and bonding) oversight and management at an ongoing mining operation in western Pennsylvania. This project includes the integrated use of geographic information systems, carrier phase (Real-Time Kinematic) global positing systems, and satellite imagery (e.g., Digital Globe's Quick Bird data at 2' pixel resolution) to provide geospatial and geophysical data/analysis needed for engineering mapping and operations monitoring consistent with existing management procedures of the Office of Surface Mining and the Pennsylvania Department of Environmental Protection. This geographic information system tracks and verifies mining operations, related on-site reclamation, and bond release status to test the use of geographic information systems, global positioning systems, and remote sensing technologies. The project objective is to serve as a national model to

Because surface mines are usually located in remote locations, the potential for residential postmining land uses is limited. However, at a mine in Colstrip, Montana, the company reclaimed land near the town's center to facilitate home construction. Today, this reclaimed land contains a large number of the community's single-family houses.

support and enhance environmental and regulatory oversight of active mining operations and related site-reclamation efforts. Training and technology transfer to the Pennsylvania Department of Environmental Protection staff are key components of this project.

Information Technology Support

The Office of Surface Mining personnel assisted the Navajo Nation Abandoned Mined Lands Agency in linking their three offices in Window Rock, Arizona; Ship Rock, New Mexico and Tuba City, Arizona together in one Microsoft Windows Active Directory Domain. As part of this project, the Office of Surface Mining connected these offices together in a Virtual Private Network. Bringing the computer systems at these three offices under the control of one active directory will allow their one-person information technology department to more efficiently manage and administer the computers in all offices. Before this system was installed, the information technology support person spent significant amounts of time driving the hundreds of miles between these offices to perform routine administrative duties. Another side benefit of this new system is that authorized Navajo employees can now access the Navajo Abandoned Mine Land network from anywhere on the Internet via secure client software.

Knoxville Field Office Geographic Information System

The development of the Knoxville Field Office geographic information system is a part of a continuing effort to use the best technology to implement the Surface Mining Law. In 2005, the Knoxville Field Office staff received software vendor training in implementing and managing an ArcSDE geodatabase contained within a Microsoft SQL Server Relational Database Management System. This geodatabase was developed, and available to staff through the Local Area Network, and is presently serving as a high speed, secure, reliable, local repository for some of the spatial datasets used by the Knoxville Field Office. During this development, the office staff adopted a modern coordinate system and datum; migrated selected datasets such as permit boundaries, critical earth fills, haul roads, sediment basins, geologic drill holes, surface water monitoring locations, ground water monitoring locations, and others to the new geodatabase; and constructed a single, seamless mosaic layer from 133 individual files of 7.5-minute U.S. Geological Survey topographic quadrangle maps of the Tennessee coal field. This geodatabase provides data for use of scientific software such as ArcGIS Desktop for direct access through the network, ArcPad for use in the field on hand held mobile geographic information system devices, and ArcIMS through standard web browsers connected to the Internet. The Knoxville Field Office will continue the migration of most of its spatial data assets to the new geodatabase in accordance with the Strategic Plan.

In 2005, Knoxville Field Office continued to manage baseline environmental data submitted in coal mining permit applications. This database now contains approximately 8,749 records representing the laboratory results of 20 years of environmental sampling at 984 unique locations in the northeast corner of the Tennessee coalfield. The estimated cost incurred by coal operators to collect and submit the data during routine development of mining plans is approximately $875,000.00. The cost to the government to hire contractors to collect this same data in the field is estimated to be much greater than the cost to the coal operator, perhaps by a factor of two to three times.

The amount of data presently contained in this database is estimated at 20 percent of the total baseline environmental data which could be harvested from existing paper permit applications. The data has been entered by hand using student interns working under the close supervision of experienced technical personnel. The sampling data is used by mining consultants and the Office of Surface Mining technical staff to augment environmental data submitted in future permit applications, reduce additional data sampling and collection costs to the coal operator, facilitate modeling of potential environmental impacts of proposed coal mining operations, and improve the decision-making process during permit application review. The collection and management of this data in a useful digital format allows it to be distributed to the public for reuse, saving the mining industry and taxpayers money, and provides more usable data for better modeling the potential impacts of surface coal mining operations.

The Knoxville Field Office also launched a mobile geographic information system initiative to implement use of datasets on portable, hand-held devices in the field at coal mine sites. Mobile geographic information systems applies the location-finding capability of global positioning system technology to software and datasets to allow a user to view their calculated ground position on an interactive map while navigating across the ground surface. On February 23, 2005, a Mobile Geographic Information System Workshop was conducted at the Knoxville Field Office. Presentations were given and hands-on demonstrations of equipment and functionality at a local outdoor facility were provided. As a result of this workshop, Knoxville staff began to acquire suitable equipment and training for use of this technology in the field during pre-mining site visits and regulatory inspections of surface coal mining operations.
General information about the system, including access and user information can be found at www.avs.osmre.gov.

Mine Pool Modeling

At the request of the Pennsylvania Department of Environmental Protection, Abandoned Mine Reclamation Division, Office of Surface Mining staff conducted and in-depth study of a massive underground flooded mine pool in Cambria County, Pennsylvania, commonly referred to as the Barnes and Tucker Mine Pool. Pennsylvania operates a pump-and-treat system, removing about 6,500 gallons per minute of mine water from a 10,000 acre underground mine complex. The treated water is discharged into the Ohio River drainage basin. Pennsylvania has a proposal to sell water from the mine-pool to an industrial customer located in the Susquehanna River watershed and have identified several water quantity and quality issues associated with the project and asked the Office of Surface Mining to perform a Hydrologic Assessment of the mine-pool complex. The principal questions that needed to be answered were as follows:

1. Can the mine-pool supply 10 million gallons per day?

2. What is the expected water quality at a new proposed treatment site? How would pumping from two locations affect mine water quality at each site?
3. What is the hydrologic and geochemical influence on the Barnes and Tucker mine-pool of flooded mines in an overlying coalbed?

4. Would the proposed pumping rate impact overlying streams by inducing or accelerating stream leakage to the mine-pool? Could ground-water wells suffer partial or complete loss of yield if the mine-pool is pumped at 10 mgd?

6. How would moving the treatment plant affect leakage from an adjacent mine-pool?

7. Is underground sludge injection possible at a new treatment plant location?

8. What is the potential quality and quantity impacts to the stream currently receiving the treated mine discharge if that water is moved to another watershed?

These objectives were analyzed by review of existing information and additional data collected for the project. Existing reports, pumping records, water quality analyses, and map sources were analyzed.

The Office of Surface Mining performed geologic modeling, ground water storage and flow calculations, geochemical modeling, and collected additional water quality samples, stream and discharge measurements, and water level data. Results of this modeling and analysis included:

The mine-pool could provide about 8 million gallons per day. Higher rates, in the long term, could partially dewater the mine-pool. Mine pool storage is much less than estimated from extraction rates. Water quality is estimated to deteriorate in the short term if a new treatment plant location is started due to a change in flow-path in the mine-pool. Long term water quality is expected to be similar to current conditions. Pyrite oxidation and cation exchange are occurring within the mine-pool.

An overlying mine-pool is hydraulically connected to Barnes and Tucker mine-pool. It increased water storage and improved water quality.

Mine pool pumping will likely have little effect on wells and streams.
Moving the water treatment plant will have little effect on leakage from an adjacent mine-pool.

A sludge injection area was located and conservatively estimated to provide more than 15 years of storage capacity.

Removing the treated mine water discharge from the current receiving stream will impact water quality and quantity. Stream chemistry will be reduced from moderately to lightly buffered. Flow will be reduced.

The Pennsylvania Department of Environmental Protection is currently using the findings from this work to aid in their project planning and decision process of the mine pool. The success of the Barnes and Tucker project has prompted similar requests from Maryland and another from Pennsylvania to conduct similar studies that will continue through 2006.

The Office of Surface Mining continues monitoring the Mon River Mine Pool near Fairmont, West Virginia. The Mon River Mine Pool is a collection of interconnected underground mines that are mostly flooded. They represent a combination of active and abandoned mines. The level of the pool is critical because it is controlled by the pumping of remaining active operations. If allowed to discharge, adverse impacts to the Monongahela River would most likely occur. The Office of Surface Mining and the West Virginia Department of Environmental Protection will continue to monitor this mine pool through 2006.

Technical Library Resource Center

In 2005 the Office of Surface Mining Technical Library website (www.wrcc.osmre.gov/glas/) provided on-line access to recent acquisition lists, *Federal Register* notices, and the on-line library catalog. The library collection of books and reports, along with a growing amount of electronic media, on-line searches, research services, and interlibrary loans enabled the library staff to respond to more than 650 requests from state regulatory agencies, federal agencies, citizens, the coal industry, consultants, and academics, in addition to filling more than 323 Office of Surface Mining requests for information. The technical library plays a large role in technology transfer by assisting with the dissemination of electronic information and publications.

Training, Forums, Workshops, and Conferences

National Technical Training Program

The Office of Surface Mining continued its emphasis on providing technical assistance to the states and tribes by enhancing the technical skills of regulatory and reclamation staff through the National Technical Training Program. In 2005, the program offered 51 sessions of 39 different courses. In addition to regularly scheduled courses, in response to specific requests, a number of special course sessions were offered. Because of the extensive experience and expertise instructors have with regard to acid-forming materials, the Office of Surface Mining was asked to hold a workshop for the staff of the Commonwealth of Pennsylvania's Departments of Natural Resources and Transportation. Subsequent to the class, Pennsylvania changed their technical requirements for bidding construction contracts and the Commonwealth anticipates that they will save millions of dollars as a consequence of the knowledge their staff gained from this workshop. Mini-sessions of the Blasting course were held for the U.S. Department of Alcohol, Tobacco, and Fire Arms. A special session of the Office of Surface Mining Orientation course was held for new employees to acquaint them with the basics of surface coal mining through a field exercise and with the goals of the Department of Interior and the Office of Surface Mining. Several new courses were

Figure 5
Courses and Enrollment

Course Name	Sessions	Students
Acid-forming Materials: Fundamentals & Applications	1	22
Acid-forming Materials: Planning & Prevention	1	24
AML Design Workshop: Dangerous Openings	1	10
AML Design Workshop: Drilling and Grouting	1	15
AML Design Workshop: Fires	1	14
AML Design Workshop: Landslides	1	9
AML Design Workshop: Subsidence	1	10
AML Realty	1	14
AML Reclamation Projects	1	21
Applied Engineering Principles	2	39
Basic Inspection Workbook 24 Workbooks Distributed		
Blasting and Inspection	1	23
Bonding Workshop: Administrative & Legal Aspects	1	14
Bonding Workshop: Cost Estimation	1	20
Communications Course	1	14
Effective Writing	3	47
Enforcement Procedures	1	18
Enforcement Tools and Applications	1	17
Erosion and Sediment Control	2	33
Evidence Preparation and Testimony	1	14
Excess Spoil Handling	1	26
Expert Witness	1	13
Forensic Hydrologic Investigations	1	12
Historic and Archeological Resources	2	33
Historic and Archeological Resources: Refresher	1	15
Instructor Training Course	1	17
NEPA Procedures	1	16
OSM Orientation	1	31
Passive Treatment	3	59
Permit Findings Workshop	1	19
Permitting Hydrology	1	16
Principles of Inspection	1	21
Quantitative Hydrogeology	2	28
Soils and Revegetation	2	38
SMCRA and the ESA: Implementation of the 1996 Biological…	1	16
Subsidence	2	41
Surface and Groundwater Hydrology	2	41
Underground Mine Mapping	1	90
Underground Mining Technology	1	19
Wetlands Awareness	2	28
Total	**51**	**957**

added to the 2005 offerings. These include a class on Abandoned Mine Land Drilling and Grouting. The audience for the course is abandoned mine land program field staff and project managers. The course has two primary objectives: (1) to evaluate when the commitment of expenditures for drilling is the appropriate response to mine subsidence complaints, and (2) to evaluate where the commitment of expenditures for grouting is appropriate in response to mine subsidence complaints. Another recently developed course which was piloted in 2005 is Forensic Hydrologic Investigations. This course is geared for geologist, hydrologist, and mine inspectors who conduct hydrologic investigations on problems related to surface and underground mines, coal refuse disposal facilities, and other coal mining related activities. Mining related problems include dewatering or contamination of aquifers, wells, streams, springs, ponds, or lakes; problems associated with the increased amount of water from mine flooding; and hydrologic aspects of landslides associated with mining. The training program conducted two low-cost workshops at the National Association of Abandoned Mine Programs annual conference. This workshop included the Managing Media module of the new Coalfield Communications: How To Get It Right! course. The other three modules of this new class which will be piloted in 2006 are Extending the Reach: Effective Outreach, Designing Effective Public Meetings, and Building Trust through Effective Communication. The course contains dozens of practical exercises specific to the public and private mining community. Development was completed for another new course, Geology and Geochemistry of Acid-Forming Materials. This course includes new materials plus select modules from two courses which are being phased out. Additionally, to assure that students are receiving the latest technical and programmatic information, significant revisions were made to seven classes including SMCRA and Endangered Species, Acid-Forming Materials: Fundamentals, the Permit Findings Workshop, Underground Mining Technology, Bonding: Legal and Administrative Aspects, Soils and Revegetation, and Erosion and Sediment Control. Several units specific to Western states were added to the Soils and Revegetation and Erosion and Sediment Control courses. Modeling on the success of previous highly successful state and tribal benchmarking sessions, the training program worked with the Interstate Mining Compact Commission to offer a very well attended session on Underground Mine Mapping. The audience for this session is staff who are intensively involved in capturing and cataloging data from underground mine maps. Topics in the session included methodologies for locating and accessing mine maps, database management, geo-referencing and digitization, and data delivery. The benchmarking workshops provide the opportunity to share information about model state programs with the goal of adopting or adapting processes to more effectively delivering products and services (e.g., permitting) to customers.

All aspects of the National Technical Training program from identification of training needs through course development and presentation are cooperative efforts of state, tribal, and Office of Surface Mining offices. This joint effort exemplifies Secretary Norton's 4Cs of cooperating, communicating, consulting with local agencies for the purpose of fostering good conservation practices. In 2005, there were 180 instructors, 47 percent from 15 Office of Surface Mining offices, 43 percent from 13 states, 6 percent from the Interior Department's Solicitor's Office, and four percent from other sources. The 51 sessions, which reached 957 students, were presented in 23 locations in 14 states. State students accounted for 76 percent of students; tribal students for four percent; Office of Surface Mining students for 18 percent, and two percent for other

Before remining and reclamation, this Pennsylvania mine site contained abandoned spoil banks, dangerous highwalls, water-filled pits, and an abandoned underground mine, and a large illegal domestic dump. Today, it is difficult to see any traces of these hazards or the recent coal mining.

participants. The program exceeded its annual attendance goal of 900 students by training a total of 957 students. The customer satisfaction rating of 98 percent exceeded the goal of 93 percent by five percent. Training courses offered in 2005 are listed in Figure 5.

Scientific and Engineering Software Applications Training

Training of state, tribal, and Office of Surface Mining personnel in the practical application of analytical software is an integral part of the technical assistance function.

Instructor-led courses incorporate the reclamation experience of its instructors and students to provide a unique shared training experience. This training during 2005 totaled 260 participants in 25 classes, compared to 2004 levels of 456 participants in 36 instructor-led classes. Twelve courses were held at sites with critical needs for software use. The training program employed 56 instructors in 2005; 28 of these were state program experts. The Government Performance and Results Act rating for this training satisfaction for 2005 was 91 percent. The four categories making up this score breakdown as follows: class satisfaction rated at 88 percent, facility at 91 percent, lead instructor at 94 percent, and co-instructor at 91 percent. Twenty-two new one-hour geographic information system workshops were offered in addition to 22 on-line courses through a contract with the Environmental Systems Research Institute Virtual Campus for basic geographic information system training. During the year, 77 students started virtual classes.

Bonding Assistance

During 2005 the Office of Surface Mining contracted for on-site bonding technical assistance that provided assistance to Montana, North Dakota, Utah, and Wyoming. In addition the contractor provided a workshop for the State of New Mexico. The assistance included updates on the Treasury Department's Circular 570, including liquidation notice, termination notice, surety company liquidation notice, and requirements for surety company listing.

New Technologies Implementation Workshops

In 2005, seven western states attended three New Technologies Implementation Information Workshops that focused on short and long-term needs for records conversion, database design and mass storage, and implementation of geographic information systems and global positioning systems. The goal of these workshops was to assist in making informed decisions on available technologies and gain a better understanding of what is involved in implementing new technologies. The exchange of information, including successes and failures, resulted in better prepared staff, and more informed managers.

The Alaska Division of Mining Land and Water co-hosted the workshop in Anchorage, Alaska which highlighted Alaska's geographic information system initiatives and the integration of data base systems. Geographic information system applications where demonstrated as well as engineering aspects of permit applications as they relate to electronic permitting and approximate original contour measurements.

Another workshop held in Helena, Montana was co-hosted by Montana Department of Environmental Quality's Industrial and Energy Minerals Bureau. The workshop highlighted Montana's technological advances. Of considerable interest was the development of geographic information systems for bond release and reclaimed land tracking database.

The third workshop was held in Sheridan, Wyoming, and was co-hosted by the Wyoming Department of Environmental Quality, Land Quality Division. Wyoming's geographic information system provided opportunities for technology transfer.

Wetland habitat has a particularly rich and diverse ecology. Creation or reestablishment of wetlands on reclaimed mine land is a high priority in many areas of the country where this post-mining use is suitable. At this Alabama site, the mine operator established the wetland during the reclamation of a large sediment pond.

Although not a common practice, this reclaimed Kentucky mountaintop mine has been developed into very desirable building lots. Located adjacent to the town of Pikeville, the reclaimed mine site provides outstanding features for this land use, including scenic views, flat buildable land in an area of steep terrain, and large lots unavailable in the surrounding area.

Two additional New Technologies Implementation Workshops are scheduled in 2006, and be held in Bismarck, North Dakota and Denver, Colorado.

Technology Transfer

During 2005, the Office of Surface Mining National Technology Transfer Team continued to coordinate Office of Surface Mining technology transfer activities. The Team, formed in 2003, serves as the clearinghouse for technology transfer activities to assure that the Office of Surface Mining and the states make the most efficient use of technical resources, including both funding and staff. Within each Office of Surface Mining region, there are sub-teams that actively solicit technology needs. When transfer activities are identified, they are reviewed to determine appropriateness for regional or multiple regional transfers. The Team has developed plans for reviewing applied science proposals and has worked closely with state mining and reclamation associations on technology transfer events. During 2005, the Team rated a list of applied science proposals and provided funding for the top ten. These proposals were submitted by universities, non-profit organizations, and regulatory authorities. Nine of the proposals submitted were funded for 2006. The areas of study are acid mine drainage testing procedures, reforestation and soil compaction, stream ecosystem rehabilitation, mine pools, prime farmlands, western mined lands revegetation, use of coal combustion by-products, and sediment pond removal in headwater streams.

Manganese Workshop

A one day workshop, sponsored by the Office of Surface Mining's Appalachian Regional Technology Transfer Team, presented issues associated with achieving manganese (Mn) effluent limits for mining operations as required by Title 40 of the Federal Regulations. Manganese has not been shown to have adverse impacts on stream biota and it is often very costly to treat discharges to meet manganese standards. The Office of Surface Mining sought to effect change of the manganese standards through a workshop aimed at both enlightening its participants about the effects of manganese on stream biota, the subsequent treatment methods, and to seek guidance from the Environmental Protection Agency as to how to effect change in the standards. Office of Surface Mining, Environmental Protection Agency, and industry representatives provided presentations on regulatory background, manganese's effects on stream biota, case studies, and treatment costs.

Mine Water Treatment Workshop

On August 15th -18th 2005, the Office of Surface Mining hosted the 2005 Mine Water Treatment Conference in Pittsburgh, Pennsylvania. This technology transfer conference had experts from across the country and Canada providing two days of presentations on active and passive mine water treatment technologies; a full day of presentations on resource recovery; and a full day passive treatment workshop. The event was focused toward those with a technical understanding of the subject material. Putting on the "best ever" conference on mine water treatment was a collaborative effort among several organizations and agencies including the Pennsylvania Department of Environmental Protection, the Western and Eastern Pennsylvania Coalition for Abandoned Mine Reclamation, Southern Alleghenies Conservancy, and the Western Pennsylvania Watershed Program. These groups are all passionate about cleaning up acid mine drainage from streams and rivers.. This conference advanced everyone's working knowledge on the current technology of mine drainage treatment and resource recovery. Approximately 250 participants from federal and state agencies, industry, academia, watershed associations, and environmental groups attend.

Acid Mine Drainage Workshop

The Mid-Continent Region Technology Transfer Team developed and conducted an Acid Mine Drainage Workshop in Evansville, Indiana during October, 2004. The Indiana Division of Reclamation hosted the three day workshop featuring case studies and field trips highlighting acid mine drainage treatment issues and successes. Case studies were prepared for both active and passive treatment of acid mine drainage in a variety of geologic settings. Topics included: wetlands, anoxic limestone drains; freshwater dilution systems; steel slag leach-beds for acid mine drainage treatment; practical exercises on field sampling, measurements, calculations, design principals, and construction techniques; and many others. A follow up acid mine drainage workshop is being planned for 2006

Advanced Integration of Geospatial Technologies in Mining and Reclamation Conference

The Advanced Integration of Geospatial Technologies in Mining & Reclamation conference was held in December 2004 in Atlanta, Georgia. Approximately 175 people attended the three-day conference representing state, federal, tribal, industry, academia, and consulting interests. Fifty-seven speakers made presentations ranging from regulatory permitting to abandoned mine site assessment. Several speakers, representing state regulatory agencies, discussed their respective statewide geographic information system efforts. Several tribal and industry consultants presented geographic information system efforts for several large western mines. Office of Surface Mining's Technical Innovation and Professional Services software vendors manned display booths and were available all week for technical assistance.

The conference was well received and requests were made to have this event become annual or biannual.

Public Outreach and Technology Transfer Events

Office of Surface Mining participated in National Engineer's Week by holding a 2-day event at the Carnegie Science Center in Pittsburgh, Pennsylvania. This event highlighted Pittsburgh's engineering community with booths and exhibits from numerous industry, government, and engineering consulting groups. Office of Surface Mining's emphasis this year was on formation of acid mine drainage, its impact on the local environment, and treatment. It included demonstrations and hands-on experiments of pH, acid formation from coal, and impacts on the aquatic environment. The program encourages young people to consider science and engineering in their future career planning. The audience was principally youth groups, e.g., Girl Scouts, school groups between the ages of eight and 14, families, and the general public. In

At this reclaimed mine site the young trees growing on the reclaimed land blend into the unmined adjacent forest. It will soon be difficult to identify the mined and reclaimed areas from the surrounding Montana landscape.

total, over 400 children and adults participated in the activities and discussions.

Another technology exchange event occurred at the Children's Ground Water Festival held at California State University in Pennsylvania. The audience for this event was sixth graders from local Pennsylvania school districts.

At this eastern Kentucky site the mine operator created a permanent impoundment from a sedimentation pond. Throughout its 4-year function as a sedimentation pond, there were no adverse impacts on designated wild and scenic areas downstream from this mine along the Rockcastle River. As a permanent pond, the impoundment receives clear drainage from the reclaimed site and has been stocked with bass, bluegill, and catfish.

PERFORMANCE GOALS AND RESULTS

A SUMMARY OF GRPA PROGRESS

Following is a summary of the Government Performance and Results Act (GPRA) goals and results. For a complete report readers should see the Office of Surface Mining 2005 Financial Accountability Report in electronic format on the web (www.osmre.gov/annualreport/annualreport05.htm) or on the 2005 Annual Report CD.

The Office of Surface Mining's mission is to carry out the requirements of the Surface Mining Law in cooperation with states and tribes (see Figure 7). The primary objectives are to ensure that coal mines are operated in a manner that protects citizens and the environment during mining, assures that the land is restored to beneficial use following mining, and to mitigate the effects of past mining by aggressively pursuing reclamation of abandoned coal mines. Since 1977, the abandoned mine reclamation program has addressed safety and environmental hazards in 27 states and three Indian tribes on over 560,000 acres adversely impacted from abandoned coal mined lands. Millions of Americans continue to be at risk from the most serious hazards. The regulatory program involves active, or current, coal mining operations on 4,347,262 acres in 26 states and three Indian tribes.

The annual performance plan emphasizes on-the-ground program accomplishments primarily by our partners, the states and tribes. The Office of Surface Mining activities focus on technical assistance. In addition, the Office of Surface Mining seeks improved management efficiencies through implementation of the President's Management Agenda and Secretary Norton's Citizen-Centered Governance Plan. These initiatives complement the Government Performance and Results Act and focus on program performance in five key management areas: strategic management of human capital, competitive sourcing, electronic government, financial management, and budget and performance integration.

In carrying out the mandates of the Surface Mining Law, the Office of Surface Mining continues to seek input from state and tribal partners, industry, citizens, and citizen groups. The development of the initial suite of goals and measures was completed after extensive consultations with these partners and stakeholders in the mid-1990s. Starting in 2002 with the Abandoned Mine Land Reclamation Program and continuing in 2004 with the Regulatory Program, the Office of Surface Mining met with the states and tribes to establish new measures which better reflect program performance. This year will be the first time that results will be reported for some of these new measures.

Figure 7
Mission and vision

Mission

Our mission is to carry out the requirements of the Surface Mining Law in cooperation with states and tribes. Our primary objectives are to ensure that coal mines are operated in a manner that protects citizens and the environment during mining and assures that the land is restored to beneficial use following mining, and to mitigate the effects of past mining by aggressively pursuing reclamation of abandoned coal mines.

Vision

- In regulating active coal mining, we will maintain compliance at high levels and ensure that all mines are properly operated and promptly reclaimed to the standards established under the Law. We will emphasize prevention and ensure that long-term environmental problems do not occur. We will ensure that the premining productivity of the land is restored.
- In reclaiming abandoned mine lands, we will aggressively pursue reclamation with a primary emphasis on correcting the most serious problems related to public health, safety, and the general welfare. We will ensure maximum public benefit through the prompt and fair distribution of public funds.
- In cooperating with state regulatory authorities, the primary enforcers of the Surface Mining Law, and with tribes, we will promote a shared commitment to the goals of the Law. We will develop a comprehensive understanding of the fairness, effectiveness, and efficiency of the Surface Mining Law programs. We will provide constructive program reviews, oversight monitoring, and technical assistance that focus on results. We will act independently to protect the public interest in situations of imminent harm or when a state does not implement an approved regulatory program.
- In dealing with those who are affected by mining and reclamation, we will ensure the protection of citizens from abusive mining practices, be responsive to their concerns, and allow them full access to information needed to evaluate the effect of mining on their health, safety, general welfare, and property.
- In our relations with the coal industry, we will have clear, fair, and consistently applied policies and will respect the importance of coal production as a source of our Nation's energy supply.
- In all communications, we will maintain open, courteous, constructive, and timely dialogue and will use information to understand and improve our programs and those of our state and tribal partners.
- In demonstrating leadership in mining and reclamation, we will promote the development of the highest quality technical information and research and will seek the transfer of technology to those who would benefit.
- In meeting our responsibilities, we will be a diverse, competent, innovative, and highly-trained work force. We will serve with integrity, and demonstrate technical, legal, administrative, and professional excellence at all times. We will constantly strive to create a more responsive, efficient, and effective process for achieving the objectives of the Surface Mining Law.

Resource Protection: Abandoned Mine Reclamation

Strategic Goal: Improve health of watersheds, landscapes, and marine resources that are Department of Interior managed or influenced in a manner consistent with obligations regarding the allocation and use of water.

The reclamation program improves the health of watersheds and landscapes by correcting problems caused by past mining. Federal grants enable states and tribes to reclaim land and water adversely impacted by past coal mining. Technical assistance, training, and technology development is provided to the states and tribes through the Office of Surface Mining's technology development and transfer program.

Measuring Performance Results

In order to report on program accomplishment toward the final desired outcome the Office of Surface Mining developed intermediate measures as indicators of program success. These measures are provided to indicate the amount of reclamation that is occurring annually. The primary indicator is the number of acres reclaimed. For reporting consistency, reclamation results for each of the hazard types (e.g., number of open shafts, miles of stream, feet of highwall) listed in the inventory are converted to acres. It is estimated that over 1.5 million acres of land have been disturbed and 11,500 miles of streams polluted by coal mining. Since 1977, over 208,000 acres of health and safety coal related problems such as underground fires, subsidence, landslides, open shafts, and highwalls have been reclaimed and 232.44 miles of streams have been addressed.

A component of this reclamation program is the *Appalachian Clean Streams Program*, which is designed to facilitate development of partnerships in the form of cooperative agreements to private not-for-profit organizations to undertake local acid mine drainage reclamation projects. The number of partnering agreements and the amount of increased funds derived from these agreements provide an indication of the support and efficiency of this program.

Resource Use: Control of the Environmental Impacts of Surface Coal Mining

Strategic Goal: Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.

The Surface Mining Law requires that coal mining operations be conducted in an environmentally responsible manner and that the land affected be adequately reclaimed during and following the mining process. State and federal regulatory programs are designed to promote and monitor compliance with these requirements. The technology development and transfer program provides resources for technical assistance, training, and technology development activities to states and tribes.

As with the reclamation program, intermediate measures of program success have been developed. On-the-ground results are measured by the percentage of coal operations that are free of offsite impacts. During mining, the potential for impacts affecting safety and the environment increases. When safety and environmental impacts happen outside the permitted mining operation, the events are recorded as offsite impacts.

Serving Communities

Strategic Goal: Protect lives, resources and property.

Abandoned Mine Land Reclamation Program

The reclamation program addresses health and safety problems and serves communities by protecting the lives and property of citizens living in the coal fields. Program performance is indicated by the overall number of people with reduced risk from abandoned mine land problems and the number of people being assisted through the emergency reclamation program.

Performance Measures

In 2005, the Office of Surface Mining is reporting on six performance measures (Figure 8) which are identified as end outcome performance measures for the Interior Department's Strategic Plan.

Figure 8
Strategic Plan Measures

Measure	Target	Results
Mission Area: Resource Protection		
Number of land acres reclaimed or mitigated from the effects of degradation from past mining. (Calculated equivalent acres)	6,900	6,533[1]
Number of stream-miles for which degradation from past surface coal mining has been improved.	35	28[1 & 2]
Number of surface acres of water for which degradation from coal mining has been improved.	35	23[1 & 3]
Mission Area: Resource Use		
Percent of active sites that are free of offsite impacts.	93	89[4]
Number of acres where reclamation goals are achieved as evidenced by release from Phase III Performance Bonds.	70,000	53,353[4 & 5]
Mission Area: Serving Communities		
Number of people with reduced exposure potential to safety risks from abandoned mine lands.	11,000	1,276,549[1 & 6]

1. Information calculated from projects reported with completion dates of 10/1/04 - 9/30/05 and entered in the Abandoned Mine Land Inventory System as of 10/3/05. Data are recorded, processed, and summarized to permit the preparation of performance information in accordance with criteria stated by management and agreed to by the participating states.
2. Results based on 30 projects ranging from 0.05 to 12.12 miles.
3. Results based on 7 projects ranging from 0.10 to 13.13 acres.
4. Calculated values: State programs provide data on a July 1, 2004 - June 30, 2005 time frame, to accommodate the accelerated publishing requirements. Results are calculated by subtracting the 2004 quarter data (July 1 – September 30, 2004) and adding the 2005 quarter for (July 1 - September 30, 2005). Federal data is on the federal fiscal year.
5. Data limitations: restoration of coal-mined land to its pre-mining capability or to conditions capable of supporting higher or better use may be accomplished without coal operators seeking phase III bond release. Operators are not required to request bond release, thus causing an under-reporting of results. Trend data does not support the current target; OSM will revise this target in the future. Furthermore, OSM has made significant progress in developing a new performance measure to compare cumulative acres reclaimed and cumulative acres bonded.
6. Data anomalies: Of the 1,276,549 people with reduced exposure, 1,138,010 were reported on 4 projects in Alaska and 1 project in Colorado. All 4 Alaska projects are located near National Parks or Forests which are visited by local and tourist populations. The Colorado project is located in a popular hiking and outdoor recreation area which attracts visitors and residents alike. Trend data does not support the current target; OSM will revise this target in the future.

ADMINISTRATION AND FINANCE

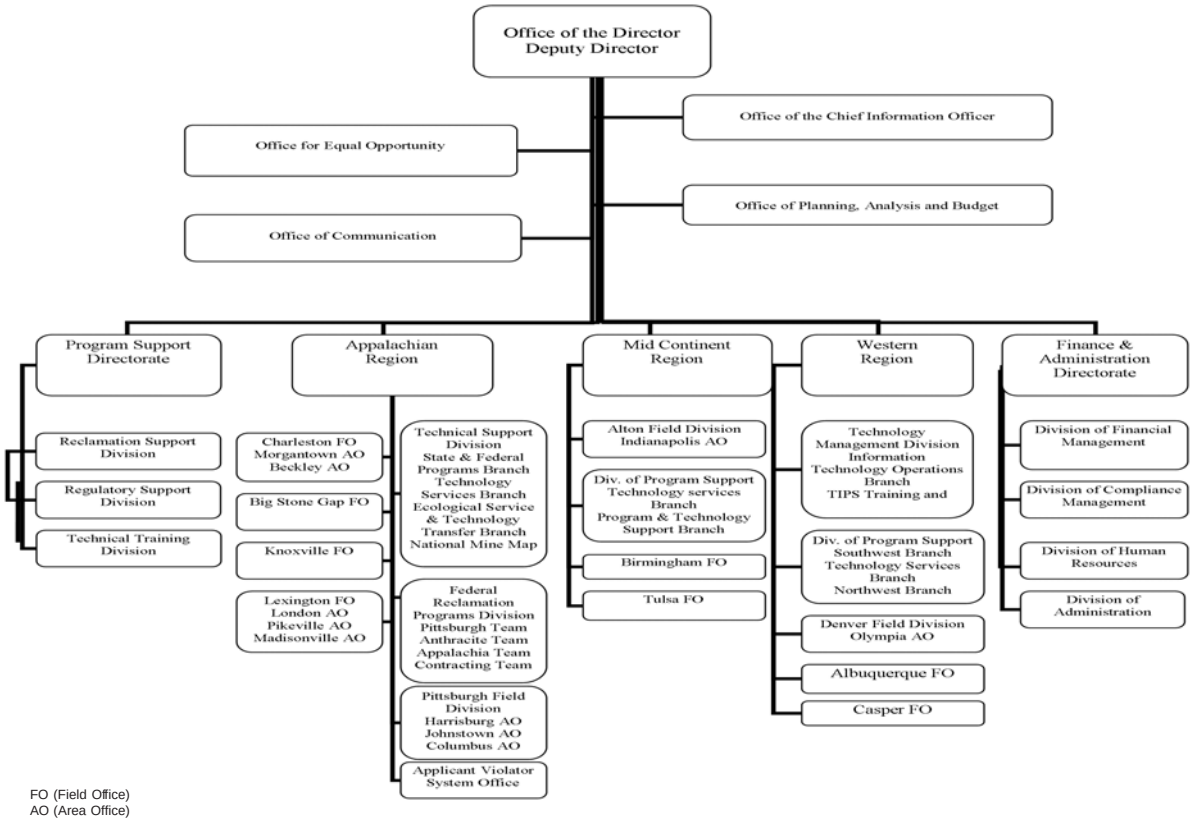
MANAGING THE OFFICE

Since 1977, protecting the environment during coal mining and making sure the land is reclaimed after the coal is removed have been required by the Surface Mining Law. Making sure those requirements are met is the responsibility of the Office of Surface Mining. Functionally, the agency is organized around the two principal requirements of the Surface Mining Law: reclaiming abandoned mines and regulating active coal mining.

Organization

The Office of Surface Mining is field-oriented, with headquarters in Washington, D.C. Three regional centers (Pittsburgh, Pennsylvania; Alton, Illinois; and Denver, Colorado) provide technical assistance to the field offices, states, and tribes. Eight field offices (Albuquerque, New Mexico; Big Stone Gap, Virginia; Birmingham, Alabama; Casper, Wyoming; Charleston, West Virginia; Knoxville, Tennessee; Lexington, Kentucky; and Tulsa, Oklahoma), and 11 area offices (Beckley, West Virginia; Columbus, Ohio; Farmington, New Mexico; Harrisburg, Pennsylvania; Indianapolis, Indiana; Johnstown, Pennsylvania; London, Kentucky; Madisonville, Kentucky; Morgantown, West Virginia; Olympia, Washington; and Pikeville, Kentucky) located where coal mining is most active, are responsible for on-the-ground regulation and oversight (see figure 6). The Office of Surface Mining also

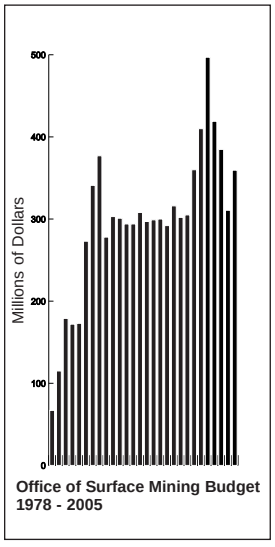
Figure 6
Office of Surface Mining Organization[1]



maintains a financial management office in Denver, Colorado; an Anthracite Office in Wilkes-Barre, Pennsylvania; and Appalachia Abandoned Mine Land Office in Ashland, Kentucky.

In 2005, the Western Region formed a new Technology Management Division that will expanded responsibilities of the national Technical Innovation and Professional Services program. This new organization contains an Information Technology Operations Branch, and Training and Technology Branch that includes a National Training Coordinator. The Mid-Continent Region reorganized the Program Support Division to include two new branches, Technical Services Branch and Program and Technology Support Branch that expand the technical assistance services in that geographic area.

Budget and Appropriations



Office of Surface Mining Budget 1978 - 2005

The Department of the Interior and Related Agencies Appropriations Act of 2005 (Public Law 108-447) appropriated $109,805,000 from the General Fund for the Office of Surface Mining's regulation and technology activities ($3,387,000 more than 2004). Also, $190,863,000 was made available for obligation from the abandoned Mine Reclamation Fund ($2,106,000 more than 2004). That same public law reduced $1,526,699 and $2,751,481 from the Regulation and Technology and the Abandoned Mine Land appropriations respectively for the purpose of a "government-wide" reduction. And, as authorized by Public Law 108-447, $66,533,254 of interest was transferred to the United Mine Workers of America Combined Benefit Fund (see Table 13).

Table 13
Appropriations[1]

	2005	2004
Regulation & Technology		
Environmental Restoration	158,763	160,992
Environmental Protection	22,983,351	22,028,299
Regulatory Grants	56,837,056	56,865,567
Technology Dev. & Transfer	13,299,632	12,386,908
Financial Management	485,165	484,950
Executive Dir. & Admin		
Executive Direction	2,454,422	2,404,032
Administrations Support	4,257,026	4,093,352
General Services	7,793,223	6,688,556
Subtotal:	108,268,638	105,112,656
Abandoned Mine Reclamation		
Environmental Restoration	21,796,086	16,345,085
Reclamation Grants	147,522,671	158,606,290
Environmental Protection		-
Technology Dev. & Transfer	3,021,433	2,653,891
Financial Management	8,444,158	6,182,865
Executive Dir. & Admin		
Executive Direction	1,311,523	1,296,950
Administrations Support	2,207,895	2,208,320
General Services	3,902,059	3,297,857
Subtotal:	188,205,825	190,591,258
Office of Surface Mining Budget	296,474,463	295,703,914
Transfer to United Mine Workers Fund	66,533,254	14,966,929
Total	**363,007,717**	**310,670,843**

1. The appropriation figures include reprogramming and rescissions for 2004 and rescissions for 2005.

The 2005 Regulation and Technology appropriation included:

Where the Office of Surface Mining is the regulatory authority, proceeds of performance bonds forfeited under Section 509 of Surface Mining Law can be used to reclaim lands where the mine operator did not meet all the requirements of the Law and the permit. There were no revenue collections from bond forfeitures in 2005.

Federal civil penalties and related interest collected under Section 518 of Surface Mining Law can be used to reclaim coal mine lands abandoned after August 3, 1977. In 2005, $96,930 in civil penalties was collected. Of that amount, $88,143 (base penalty and interest) was deposited into the Civil Penalty Fund for reclamation purposes, while $8,787 (penalties and administrative charges) was transferred to Treasury. During 2005, $98,610.75 from this fund was obligated for post-Surface Mining Law reclamation projects.

State regulatory program grants were funded at $56,837,056 which was $26,319 less than 2004. These grants are used to fund state regulatory program payroll and other operational costs.

The Abandoned Mine Land appropriation included:

State reclamation grants were funded at $147,522,671, which was $11,083,619 less than the amount appropriated in 2004.

Expenditures up to $10,000,000 were authorized for supplemental grants to states for the reclamation of abandoned sites with acid mine drainage through the Appalachian Clean Streams Program.

Grants to minimum program states were funded at $1,500,000.

Financial Management

The Office of Surface Mining financial management includes three principal activities: Fee Compliance, Grants Management, and Revenue Management.

Fee Compliance

Fee Compliance includes the collection, accounting, audit, investment of abandoned mine land reclamation fees, assistance to operators on compliance matters, and regulatory and policy development on fee issues. During 2005, direct program costs were only about two percent of collections.

The current balance owed by coal companies is $952,209. Of this amount, the Office of Surface Mining assigned $280,463 to the Office of the Solicitor for legal action and referred $58,434 to the Department of Treasury, as required by the Debt Collection Improvement Act. The remaining debt of $613,312 is either in the appeal process, under payment plans, or going through initial debt collection procedures. Table 14 summarizes collections results. Although the Office of Surface Mining is working to eliminate it, some level of non-compliance will probably always occur as a result of company errors and financial difficulties.

Grants Management

Grants management includes the accounting, disbursement, and reporting on grants awarded to states and tribes for abandoned mine land and regulatory grants. All states and tribes have remote access to the Office of Surface Mining or U.S. Treasury systems to request payments. They receive those payments the next business day. Grant recipients can also access on-line reports maintained by the Office of Surface Mining so they can track their grant activity. During 2005, the Office of Surface Mining provided $244,431,641 of grants to states and tribes.

Revenue Management

Revenue management involves managing a variety of non-fee revenues and receivables that come from Office of Surface Mining's operations. These include the accounting and collection of revenue for civil penalties issued for mining violations, bond forfeitures by federally permitted mining companies, and fees for mine permit reviews and blaster certification training. During 2005 $ 96,930 was collected in civil penalties. The percentage of civil penalty dollars collected is low due to the financial condition of the companies that incur civil penalties. Companies that are in good financial condition fix their violations and incur relatively small penalties. Companies that are in poor financial condition do not fix their violations and incur large dollar civil penalties

Table 14
Collections Management

Category	Amount Collected	Balance Owed
Abandoned Mine Land Fees1	$293,604,230	$715,107
Civil Penalties	96,930	237,102
Administrative	0	0
Total	**$293,701,160**	**$952,209**

1. Includes both fees and audits.

Coal Fee Collection Management System

During 2005 the Office of Surface Mining received funding for replacement of its fee, audit and civil penalty accounting and collection systems. This new system will replace the three existing systems with one contemporary system that is less costly and easy to maintain. The new system will also allow the Office of Surface Mining to implement process improvements that will generate operating efficiencies. The project is in the acquisition phase and proposals for developing the new system are being evaluated.

Administrative Accounting

The Office of Surface Mining also performs accounting functions needed by program offices to implement the Surface Mining Law. This includes paying bills, accounting for expenditures, issuing financial management reports, assuring that expenditures are within allocations, collecting administrative debts, and maintaining computer systems that support these functions.

Audited Financial Statements

Since 1990, the Office of Surface Mining has prepared an annual financial statement, as required by the Chief Financial Officers Act of 1990 (Public Law 101-576). In 2005, KPMG LLP audited the financial statements (see www.osmre.gov/annualreports/annualreport05.htm) and gave the Office of Surface Mining its 15th consecutive "clean" audit opinion. This means that Office of Surface Mining financial results are fairly stated and conform to generally accepted accounting principles for federal agencies.

Electronic Funds Transfer

The Office of Surface Mining continued to emphasize compliance with the Electronic Funds Transfer provisions of the Debt Collection Improvement Act of 1996. The Office of Surface Mining transmitted 99.8 percent of vendor payments and 99.78 percent of miscellaneous payments electronically in 2005, for a total of 99.9 percent of all dollars paid.

Integrated Charge Card
During 2005 use of the Integrated Charge Card included 10,824 transactions and $3,521,566 spent, covering 16 percent of all vendor dollars disbursed.

E-Government Initiatives
The Office of Surface Mining is working on expanding electronic government, one of the President's five Management Agenda goals for improving federal management and delivering results that matter to the American people. Initiatives in this area include:

Electronic-filing of quarterly Coal Reclamation Fee Reports (OSM-1 Forms). Electronic filing can be accomplished using a website where coal companies file their quarterly Coal Reclamation Fee Reports (OSM-1 Forms). The E-Filing system streamlines reporting, lowers costs, and reduces the dependency on paper-based processes. Currently approximately 39 percent of the companies file on-line, reporting 83 percent of the total reclamation fees.

Treasury Department's Pay.gov. Coal companies can pay the quarterly coal reclamation fees to Office of Surface Mining using the Internet. Companies schedule their payments using the E-filing system and Treasury's Pay.gov system. During 2005, 135 companies used Pay.gov to make payments of $95 million or 33 percent of the reclamation fees collected.

Single Source Coal Reporting. The Office of Surface Mining modified its E-Filing website to allow companies to report excise taxes to the Internal Revenue Service, and safety and production data to the Mine Health and Safety Administration, and the Commonwealth of Pennsylvania, while filing quarterly Coal Reclamation Fee Reports with the Office of Surface Mining. The system consolidates reporting to multiple agencies and reduces redundant reporting. Currently, the Single Source Coal Reporting option is available only through a pilot program. In 2005, the partner agencies developed a strategy for implementing the new system and received $275.000 in funding from the Small Business Administration under the Business Gateway Initiative. Implementation for the Single Source Coal Reporting System is expected in 2006.

Information Technology

The Office of Surface Mining continues to strengthen its information technology management processes to improve its support capabilities. During 2005, the Chief Information Officer addressed major information management concerns, initiated key information management process improvements, and addressed Departmental initiatives relating to the infrastructure. Primary 2005 activities and accomplishments include:

- Information security program improvements
- Improvements in capital planning and enterprise architecture processes
- Continued migration to Department-centric infrastructure
- Integration of information management functions
- Strengthening of Freedom of Information Act Initiatives
- Draft Privacy Act Initiatives to enhance employee awareness of Privacy concerns
- Approved Change Notice to the INF-1 Directive: Office of Surface Mining Records Disposition Schedule; incorporating disposition instructions for Indian Records

Refinement of the Office of Surface Mining security program was a key initiative during the year. Security policy and procedures were drafted for approval. All Office of Surface Mining information systems and the information technology infrastructure underwent certification, based on

In the past, reclaimed coal mine in East Texas frequently consisted of pasture land planted with coastal Bermuda grass. Today, native vegetation improves the wildlife habitat and provides a richly diverse plant community. At this reclaimed mine site thousands of tree and shrub seedlings were planted. Today, the quality of the diverse wildlife habitat is recognized worldwide.

current system security documentation. Penetration testing was conducted to verify the security of the systems and all were rated green.

Office of Surface Mining management processes for capital planning and enterprise architecture were reviewed and refined during the year. All of the Office of Surface Mining's major investments received passing scores from the Department and significant improvements were applied to 2007 business cases. The Interior Department's Information Technology/ Information Management guide was utilized as a basis for bringing the Office of Surface Mining capital planning process maturity to Level 3.

Emphasis was placed on training, both in the capital planning process and in project management. Capital planning training classes and workshops were held, including a four day project management class. Five Office of Surface Mining Information Technology project managers achieved Project Management Professional certification during 2005. All major projects/ investments are operating within 10 percent of cost, schedule, and performance goals.

The Office of Surface Mining is in the process of building an enterprise architecture management foundation and is currently in Level 2 of the Government Accounting Office's Enterprise Architecture Management Maturity Framework. A Chief Architect has been appointed. Initial priority was placed on populating the enterprise architecture data repository of the major investments reported on the Exhibit 53 to the Office of Management and Budget to establish the "as-is" baseline architecture. Enterprise architecture has been integrated with the capital planning process. This integration will be reviewed and refined during 2006.

Also during 2005, the Office of Surface Mining participated in Interior Department initiatives intended to streamline the information technology infrastructure. These initiatives improved cost control through centralized management of licensing, department-wide common-use contracts, equipment compatibility, and more economical leveraged pricing.

Information Technology improvements included the migration from Groupwise messaging to Exchange and the use of Microsoft Outlook as a Department-centric messaging. Also, during 2005, enterprise services were initiated for Microsoft Office Management, Symantic Antivirus, and system improvements to the Microsoft Active Directory Services.. In addition, centralized management of the procurement of replacement computer hardware was initiated. Microsoft Sharepoint (Insight) was implemented for collaborative efforts. Management of the Office of Surface Mining Wide Area Network was migrated to the Department-managed Enterprise Service Network and the system data telecommunications lines were moved from Frame Relay to MCI's Virtual Backbone System.

The Office of Surface Mining continues to support Departmental efforts in improving Freedom of Information Act and Privacy Act processes. Efforts include support of agency-wide employee training cross-cutting Freedom of Information Act, Privacy Act, and records programs. Initiatives by the administration include elevating Privacy programs throughout all aspects of government along with an improvement in records management awareness and disposition processes. The Office of Surface Mining plans to revise the entire Records Disposition Schedule to

Wooded draws are a natural feature of the North Dakota landscape that provide critical habitat for wildlife. Traditionally mining operations mined through these draws and then reclaimed them. Although this has met with success, this mining company took a new look at working with these unique natural features -- they left the wooded draws alone. Instead of mining through them, they mined around them. Preserving the wooded draws eliminated the years necessary to reestablish mature vegetation and this reclaimed mine is already integrated into the landscape.

Following reclamation at this southern Indiana coal mine, the landowner is farming his land just as he has since the 1930's. After reclamation to prime farmland standards, the land has maintained its high crop production yields it had before mining.

incorporate electronic records in accordance with the National Archives Records Administration guidelines.

The major management initiative undertaken near the end of 2005, which will continue through 2006, was the integration of information management processes through establishment of an Integrated Program Management Office. This office will coordinate the development and application of Information Records Management processes for acquisition, capital planning, enterprise architecture, Freedom of Information Act/privacy, records management, and security. These processes will be integrated with other Office of Surface Mining functions such as asset management; budget, E-Gov, human resources, and facilities management.

Human Resources Management

Automated Recruitment

The automated recruitment, rating and ranking system, SMART, continues to be a significant tool by increasing the number of applicants for jobs. In 2005, the jobs advertised on-line attracted 4,000 applications and since the system was implemented, more than 16,000 applicants have been received.

Workforce Plans

During 2005, the Office of Surface Mining updated its Workforce Plans which outline human resource strategies for the period 2005 through 2008. The Plans focus on future human resource needs to achieve mission objectives. In developing Workforce Plans, the Office of Surface Mining looked at trends in the mining industry, changes in industry, demographics where coal was being mined, emerging technologies, and the transition of conducting oversight and enforcement to providing technology transfer, technical assistance, and training. Strategies used in the Workforce Plans were designed to establish effective and efficient organizational structures, and every vacancy is assessed and redefined against the Workforce Plans. The goal in this effort is to create a workforce size, composition, competency will better meet current and future demands. The end result will be a restructured workforce that enables the Office of Surface Mining to more effectively fulfill its mission.

Retirements

The Office of Personnel Management and Office of Management and Budget approved the Office of Surface Mining's request for "early-out" and "buy-out" authority. Seventy-four employees were sent offer letters for early-out/buy-out and 24 accepted the offer. Attritions resulting from our early-out/buy-out authority in 2005 have provided the opportunity to bring on-board a new complement of people who possess the skills, competencies, and experience needed to accomplish the mission requirements.

During 2005 retirement calculations and counseling sessions continued, with 119 employees eligible for immediate retirement. Counseling sessions provide employees with invaluable information, which prepares them for and allows them to make informative decisions about retirement.

Automated Time and Attendance System: Quick Time

Office of Surface Mining employees continue to use the automated time and attendance system to submit payroll data. Employees are feeling more confident in using Quick Time and there has been a notable decrease in the number of requests for assistance.

Performance Management

The Office of Surface Mining, along with other Interior Department Bureaus, has completely transitioned from a two-level to a five-level performance appraisal system. Computerized training has been made available to all employees, with managers and supervisory training being mandatory. One of the major changes emphasized in the training is that the performance appraisal period now covers the October 1 through September 30 period. For the convenience of the employees, the Departmental Manual performance management policy, performance appraisal handbook, and the performance appraisal form may be accessed on the Office of Surface Mining intranet.

Labor Management

The Office of Surface Mining maintains two labor management agreements with the National Federation of Federal Employees. Local Union 1993 is located in Washington, D.C. and Local Union 2148 is located in the Albuquerque, New Mexico Field Office. There are three other exclusive recognitions: Casper Field Office (Wyoming); Lexington Field Office (Kentucky); and Division of Compliance Management-Region II (Lexington, Kentucky).

Training and Development

On October 30, 2004, the President signed the Federal Workforce Flexibility Act which enacted changes to the training regulations. The changes require federal agencies to regularly evaluate and modify training programs or plans in order to promote a more strategic approach to agencies' integration of training programs into overall mission accomplishment and provide specific training to develop managers as part of a comprehensive management succession program. The Office of Surface Mining is currently developing a Leadership Education and Development Program comprised of leadership/managerial training, mentoring, and developmental assignments. Participants for the program will be selected by a panel, and upon completion of this intensive long term training program may become eligible for non-competitive promotion to a vacant managerial position. This program will ensure availability of qualified candidates as employment vacancies occur in our managerial positions.

The Office of Surface Mining, along with other Interior Department Bureaus, is currently undertaking efforts to improve the ability to manage organizational learning. The major initiative underway is the implementation of an enterprise-wide learning management system which allows each bureau to manage and deliver competencies, curriculum, and certification learning to each employee. The learning system will provide a standardized business practice by providing bureau technology tools to access, deliver, and measure human capital training, learning, and development. The learning system supports the President's Management Agenda by enabling bureaus to more efficiently manage the development of their human capital in order to accomplish their mission. The learning system will be deployed in three phases, with the first phase scheduled for October 2005.

Monitoring Potential Conflicts of Interest

Sections 210(f) of the Surface Mining Law prohibits any federal or state employee "performing any function or duty under this Act" from having "direct or indirect financial interests in underground or surface coal mining operations." The Office of Surface Mining monitors compliance to prevent conflicts with an employee's official duties. In 2004[9], 596 Office of Surface Mining employees, 907 other federal employees, and 2,013 state employees filed financial disclosure statements. No violations were identified. In addition, 596 Office of Surface Mining employees received annual ethics training.

Equal Opportunity

The Office of Surface Mining's workforce continued to decline during 2005 from 559 to 528 permanent employees. Most of the decline can be attributed to retirements. It is expected that this trend will continue over the next five or more years. While this increased retirement trend is a challenge, in some ways it has provided new opportunities to improve diversity. For example, the representation of Black men and women, Hispanic men and Asian men all increased during 2005. Additionally, three of the minority hires were at senior levels; two at grade 15 and one at the SES level. The Office of Surface Mining also made significant improvements in diversity through internal actions. During 2005, there were 49 promotions, with women receiving 29 (53.1 percent) and minorities receiving 14 promotions (28.6 percent).

In an attempt to hold managers more accountable, the Director lead his senior management team in a two-day discussion regarding development of the Office of Surface Mining Equal Employment Opportunity plan. This discussion established a process that lead to a more meaningful participation of the senior managers to define, uncover, examine, and remove barriers to equal participation by employees at all levels of the workforce. This was a major step in ensuring that equal employment opportunity and workforce diversity initiatives are part of the Office of Surface Mining's strategic mission.

Another major accomplishment during 2005, was to provide all employees with training in the area of diversity in the workplace, alternate dispute resolution, and a highlight of the Interior Department's recently completed Strategic Plan for Improving Diversity, the No Fear Act, and whistle blowers' protection requirements. This training included interactive discussions that were designed to increase awareness of the business and cultural need for understanding and managing diversity.

Two new collateral duty Counselors were recruited during 2005. These counselors replaced the two that resigned and/or retired. As a result of this change, there are one full time and six collateral duty

9. Data for 2004 are reported here because 2005 federal statistics will not be available until January 2006, and state statistics until May 2006.

counselors. Due to the Departmental Office of Civil Rights and the desire to provide more professionalism and uniformity during counseling, all Office of Surface Mining counselors, along with other bureaus' counselors received 40 hours of required training. The training included areas of conflict resolution, the No Fear Act requirements, interviewing techniques, and report writing.

Lastly, with the commitment to conflict resolution and the diversity training, there was a decrease in overall workplace disputes. During 2005, there were only five counseling activities, three of which resulted in formal discrimination complaints.

This is the site where it all began. The first permanent program mining permit under the Surface Mining Law was issued in December 1980 by the Montana regulatory authority. The permit authorized mining of a 1,738-acre site by the Western Energy Company in Colstrip, Montana. This photo, taken in 1986, shows the reclaimed land at that first permitted mine site. It was mined, reclaimed, and returned to grazing land that is being used by a local rancher.

This and the other examples shown in this report represent only a small sample of the successful reclamation that is being achieved under the Surface Mining Law. It is a picture of achievement that all Americans can take pride in, and reassure the residents of coal-producing states that they can enjoy the economic benefits of mining without sacrificing long-term environmental quality and land productivity.