2011

Strategic Sustainability Performance Plan

US Department of Health and Human Services

Summarized

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U.S. Department of Health and Human Services (HHS) Sustainability and Adaptation Policy Statement

June 3, 2011

When President Obama signed Executive Order 13514 on October 5, 2009, he committed the federal government to take a leadership role in promoting sustainability and responding to climate change. Actions called for in the order, such as reducing greenhouse gas emissions and conserving water and other resources, will help build a clean energy economy and contribute to mitigating climate change. The order also requires each federal agency to evaluate risks and vulnerabilities associated with both short-and long-term effects of climate change on its ability to carry out its mission.

A number of scientific panels, including the U.S. Global Change Research Program, and International Panel on Climate Change, have published data indicating that climate change is already negatively affecting human health in the United States, and is likely to continue impacting human health in the future. Hazards linked to climate change include increases in the frequency and severity of heat waves, droughts, wildfires, heavy rainfall, and flooding; changes in rates and ranges of infectious and allergic diseases; and threats to communities from rising sea levels and coastal erosion. Although climate change may reduce certain health risks, most likely it will worsen many existing health threats, as well as introduce new ones. Individuals and communities with underlying vulnerabilities that contribute to poor health, such as poverty, being very young or old, having pre-existing health (including behavioral health) conditions, and living in vulnerable geographic areas will be the most at risk of harm. HHS's responsibility is to protect the health of all Americans and provide essential human services, especially for those who are least able to help themselves. As such, our Department has dual critical roles to play in reducing our own environmental impact while facilitating understanding of and adapting to climate change. Through these actions, we will set the example of responsible stewardship and improve individual and community resilience, supporting a healthier future for the American people.

At HHS, we understand the importance of sustainable, climate-resilient communities. We know that we must take a lead role in ensuring that our own facilities and operations set an example for sustainability. We commit to continued compliance with all environmental, energy, and public health statutes, regulations, and Executive Orders. We will also set the standard for federal agencies in sustainable development, provide climate-resilient health and human services, and support scientific research focused on environmental and public health, including research on the effects of climate change on human health and well-being. Our Department will adopt the Interagency Climate Change Adaptation Task Force guiding principles to integrate climate change adaptation and mitigation strategies into our sustainability and health programs, policies, and operations.

In the coming year, HHS will identify how climate change may impact our Department's ability to carry out its mission, programs, policies, and operations, as well as to determine how we should prepare for and respond to a changing climate. Our plan will focus on ensuring sustainability by integrating climate change and environmental impact considerations into internal management functions and policies; by collecting, analyzing, and utilizing state of the science data; and by enhancing issue awareness and specialty training for our employees. As part of this plan, we will identify and prioritize actions to respond to climate change, and will establish mechanisms for evaluating our ongoing capacity to effectively adapt to current and future changes in the climate. We will leverage HHS regional and preparedness programs and existing healthy community and climate change initiatives to complement and build upon our Strategic Sustainability Performance Plan and enhance collaboration with other federal agencies, State, Local, and Tribal governments.

HHS will continue instilling sustainable practices throughout our programs and operations as we respond to the new challenge of adapting to climate change as we continue to fulfill our mission. Through our past accomplishments and future commitments, the Department of Health and Human Services will lead the way toward a healthy future for all Americans.

Kathleen Sebelius
Secretary, U.S. Department of Health and Human Services

Our Impact…

At 83,745 employees HHS is one of the biggest agencies within the U.S. Government. We own 2,980 buildings, and lease another 1,003 for a total square footage of 51,864,431. We operate 1,240 locations throughout the United States and 12 internationally. HHS has a fleet of 795 owned vehicles and 2,930 leased vehicles. Our operating budget for Fiscal Year 2010 was approximately $854,174,000,000 while the amount of money spent on energy consumption for Fiscal Year 2010 totaled $167,500,000.

Direct Greenhouse Gas Emissions from sources that are owned or controlled by HHS and resulting from generation of electricity, heat or steam purchased by HHS (Scope 1&2 emissions) totaled 0.96 MMTCO2e. Indirect Greenhouse Gas Emissions from sources not owned or directly controlled by HHS but related to agency activities (Scope 3 emissions) totaled 0.29 MMTCO2e.

These statistics show the significant impact that HHS has on the environment, but also the tremendous opportunity that our agency has to make a positive impact.

Most importantly, the crucial contribution that HHS makes has to do with our mission. There is a direct connection between Health and Sustainability, and communicating this relationship is where our agency will make its stand.

Sustainability and Our Mission…

Sustainability is integral to the HHS mission, which is to protect the health of all Americans and provide essential human services, especially to those who are least able to help themselves. Sustainability has been defined as "the enduring prosperity of all living things." By this measure, sustainability is directly linked to the health of humans, the health of the environment, and the health of economic systems that support and promote our well-being. This triple health bottom line – human health, environmental health and economic health– is integral to HHS's mission and the sustainability mandates of Executive Order (EO) 13514.

The Department's mission activities are carried out by a large number of employees in numerous facilities across the U.S. and abroad. The unique character of HHS is reflected in the types of buildings we occupy. Office buildings comprise less than 36% of total gross square footage, with the balance housed in laboratories and hospitals (34% and 8%, respectively), family housing (7%), warehouses (4%), and other buildings (11%).

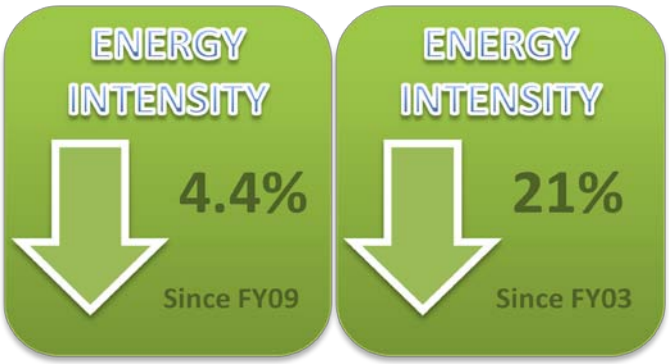
Mission-Related Challenges and Actions Taken to Address Them

A detailed review of relationships between general sustainability goals and mission priorities conducted by HHS in 2011 revealed no significant mission related conflicts or challenges. In fact, the review found that many sustainability initiatives supported our public health objectives. Some potential conflicts and challenges became apparent as specific aspects of goal implementation strategies were developed. In most cases these were identified by subject matter experts in the various goal centric working groups of the HHS Sustainability Task Force. These experts recommended courses of action to address them, which may include changes in policies, funding priorities, research and development, and solicitations for innovation projects.

Our Stand…

HHS must assume a leadership role in concurrently promoting both sustainability and health throughout the Federal government. Just as the Department of Energy (DOE) leads initiatives relating to energy reduction, HHS leads initiatives relating to health and well-being.

What We've Accomplished



In Fiscal Year 2010, HHS reduced energy intensity[1] by 4.4% compared to Fiscal Year 2009. Overall there was an intensity decrease of 21% when compared to the Fiscal Year 2003 baseline year. These results far exceeded the Fiscal Year 2010 Strategic Sustainability Performance Plan goal of a 5.9 percent reduction from the baseline year. This was in large part due to renewable energy projects installed with ARRA[2] funding and significant energy efficiency projects implemented with both ARRA and alternative financing funding.

In early 2011, HHS conducted a survey to collect data on its federal employee commuter habits and began to offer a transit subsidy for bike riders. The HHS Go Green Commuter Survey data will be used in the Fiscal Year 2011 Greenhouse Gas (GHG) inventory to determine the emissions associated with the departmental employee commute. The data will be analyzed for significant trends (e.g., relationships between commuter habits and choices) that will be used to inform behavioral strategies to reduce GHG emissions.

HHS faces a special challenge in improving the performance of its laboratories because laboratory operation consumes far more energy and other resources than commercial office buildings. Nevertheless, great progress is being made. At CDC's Ft. Collins, CO, Building 401, a new laboratory and support space for CDC's Office of Infectious Disease uses 15.84% less energy for lighting and 43.87% less water than a standard laboratory. This project received a LEED® Gold for Commercial Interiors rating.

The National Institutes of Health (NIH) comprehensive mercury reduction policy and program is being deployed throughout HHS. It aims to eliminate all uses of mercury in its facilities by increasing general awareness of mercury hazards, encouraging use of safer alternatives and preventing spills.

In Fiscal Year 2010, HHS reduced water intensity by 2.4% as compared to Fiscal Year 2009, and is currently at the Fiscal Year 2007 baseline consumption. Several water efficiency projects were completed in Fiscal Year 2010 such as cooling tower upgrades, well water use, highly efficient plumbing fixtures, and xeriscape landscaping.

In 2010, HHS completed its first Pollution Prevention (P2) Waste Assessment of all operating divisions with a focus on HHS owned and/or operated facilities. The assessment also attempted to capture non-landholding and lease facilities. Overall, the initial assessment formed the basis for improvements in data collection and a follow up assessment will be conducted in the last quarter of 2011. Although the data collection was incomplete, the information yielded facility recycling rates ranging from 7% to 46% and an HHS-wide recycling rate of 17%.

HHS developed a Sustainable Acquisition Policy Memorandum (APM) to implement: (1) the mandatory collection of green purchasing data in the Departmental Contracts Information System (DCIS); (2) the addition of sustainable evaluation criteria into applicable solicitations; and (3) the incorporation of sustainable acquisition provisions and contract clauses into applicable contracts. The APM will enhance the effectiveness of green procurement practices at HHS.

[1] Ratio between the consumption of energy to a given quantity of output.

[2] The American Recovery and Reinvestment Act of 2009.

HHS has developed policies for Electronic Stewardship and Data Center Management. The establishment of these policies will:

- Ensure we comply with Executive Order (E.O.) 13423 and 13514
- Reduce energy consumption
- Improve electronics recycling
- Save money by reducing energy consumption and increasing electronics life expectancy

At HHS we encourage innovation to bring new ideas to the workplace that will help the Department carry out mission activities and meet sustainability goals. To encourage innovation in sustainable practices and technologies, the Department uses an array of incentive tools including *HHSinnovates,* a new employee award program created as part of the HHS Open Government initiative. Twice a year, HHS employees are invited to submit innovations via an intranet site. The top innovations are posted for secure, on-line voting and commenting by the entire HHS community. One of the recent award winners for a sustainability innovation was the CDC Laboratory Recycling Pilot Program. The program created a procedure for sterilizing plastic containers used in laboratories so they no longer pose a potential biosafety hazard and can be safely recycled. After operating for about 16 months this innovative venture led to a total of 13,772 pounds of solid plastic waste being recycled instead of contributing to landfill waste.

Conclusion

While these summaries are only a snapshot of the steps we are taking at HHS to make the world a greener place to live, they illustrate how we are improving our practices. At HHS, we are committed to doing whatever is necessary to protect the health of all Americans and we recognize that ensuring a clean and healthy environment is a fundamental part of that effort.

Scope 1 & 2: Greenhouse Gas Reduction

HHS will reduce its total greenhouse gas (GHG) emissions from scope 1(on-site sources) and scope 2 (off-site energy generation sources) by 15.5% by 2020 through a combination of energy reduction efforts and increasing use of renewable energy. This reduction equates to a 32.5% reduction in energy intensity per square foot of facility space. Included in this estimate is an anticipated gross square footage increase in new facility space of approximately one million square feet between Fiscal Year 2010 and Fiscal Year 2020. HHS is also projecting an 11% reduction in scope 1 mobile source GHG emissions (using Fiscal Year 08 as the baseline) by 2020.

In Fiscal Year 2010, HHS developed a stronger foundation and plan for achieving EO energy reductions and GHG savings under the structure of the HHS Energy Program. The core of the HHS Energy Program and structure is the Energy Management Workgroup. This team has established priorities and actions plans under the direction of the HHS Energy Officer. Focusing on the completion of comprehensive audits, installation of energy meters, automation of data gathering and reporting, and training and outreach, the workgroup has determined key actions to be completed in order to achieve significant energy savings.

The workgroup began many of these actions in Fiscal Year 2010 through the completion of training webinars, offering of major outreach events and monthly toolkits, identification of automated reporting tools and development of policy documents. Additionally, alternative financing contracts and specific projects were completed to advance energy savings. Guidance documents on the completion of audits and commissioning were identified or established as well. It is critical that audits be completed in order to identify the most cost effective efficiency projects.

Scope 1&2: Greenhouse Gas Reduction Highlights

In Fiscal Year 2010, the energy consumption of HHS facilities was 8,512,821 million British thermal units (MMBtu) over 31.3 million square feet for an energy consumption rate of 272.3 MMBtu per thousand gross square foot (kSF). The total annual energy consumption includes the credit for renewable energy purchases, which is a 21% decrease when compared to the Fiscal Year 2003 baseline of 344.8 MMBtu/kSF. The Fiscal Year 2010 energy consumption rate for HHS facilities was 4.4% less than the Fiscal Year 2009 usage.

The availability of ARRA funds in Fiscal Year 2010 allowed the Indian Health Service (IHS) Aberdeen Area to fund multiple projects that will improve building system efficiencies (power and water) and employ renewable energy technologies resulting in system reliability that is expected in modern health care facilities. Several HVAC systems in the Area are currently being modernized with new control system components that will replace aged and poorly performing pneumatic systems with modern Direct Digital Control (DDC) systems. Testing, adjusting, and balancing ventilation systems that were funded with ARRA dollars will ensure that system performance is optimized and establish new benchmarks of performance at existing facilities with HVAC systems that were constructed several years ago.

In addition, ARRA funding has been used to develop two renewable energy projects (Rosebud and Pine Ridge) in the IHS Aberdeen area. These projects are in the construction phase and include 50 kW wind generators and a 10 kW photovoltaic (PV) solar cell array at each of the service units. This renewable energy source will be used to reduce the energy purchased from the local electrical utility, reducing utility "demand" charges and saving power consumption charges. These projects are on Native American lands leased to IHS and all energy produced by the wind and PV systems will be consumed at the facilities where the energy is produced.

The NIH Bethesda Campus had two Utility Energy Service Contracts (UESC) implemented in Fiscal Year 2010. One is an initial phase of retro-commissioning[3]; the other is the second phase of a building controls project. The NIH Frederick campus developed a new Energy Service Performance Contract (ESPC) to replace the previous Basic Ordering Agreement (similar to a UESC) with Constellation Energy/Allegheny Power, which expired right after a major steam plant construction project was consummated. This ESPC will enable the implementation of further efficiency projects and is expected to be signed in Fiscal Year 2011.

The IHS Blackfeet Service Unit received a high Energy Star Portfolio Manager score of 84. This score resulted in the unit being awarded an Energy Star award. This award is rare for a facility that is 24 years old and for a hospital that is open 24 hours a day and 7 days a week.

Scope 3: Greenhouse Gas Reduction

In the Fiscal Year 2010, HHS set a reduction target of 3.3% of Scope 3 (indirect emission sources) by Fiscal Year 2020. The following were Fiscal Year 2020 reduction targets for the subcategories of Scope 3 sources:

- 7.5% for transmission and distribution (T&D) losses from purchased electricity
- 1% for federal employee travel
- 14.5% for contract waste and wastewater treatment

[3] Retro-commissioning (RCx) is a systematic, documented process that identifies low-cost operational and maintenance improvements in existing buildings and brings the buildings up to the design intentions of its current usage.

HHS reduced emissions in business ground travel despite a significant growth in employee population. This reduction could be attributed to an increase in the use of web-based collaboration tools and teleconferencing. HHS will continue to offer programs and initiatives that will reduce scope 3 emissions and promote healthy lifestyles. These programs range from offering transit subsidies to flexible work schedules and places. Participation in these programs, primarily telework, has remained steady.

A commuter survey was implemented and shared with the HHS Office of Human Resources to implement behavioral change strategies aimed at increasing use of flexible schedules/places, particularly telework. The increased use of telework is a key strategy in reducing scope 3 emissions. Lastly, many offices within HHS have recycling and energy efficiency programs that conserve resources and reduce the overall consumption of materials. For example the Program Support Center (PSC) and NIH recycle nearly 48% and 30% of waste, respectively.

Scope 3: Greenhouse Gas Reduction Highlights

The challenge for HHS will be setting appropriate GHG reduction targets for each OPDIV. These targets will have to balance mission requirements while encouraging a change in business/management culture during a time of mission expansion. To highlight one such challenge, the larger OPDIVs (CDC, FDA, IHS, and NIH) comprise approximately two-thirds of federal employee population. Because many of the personnel in these OPDIVs perform patient care and laboratory tasks that must be performed at HHS facilities, it is highly likely that a considerable number of employees may not be eligible for recurring telework. Some OPDIVs are increasing personnel making reductions in total emissions more difficult to obtain.

High Performance Green Buildings / Regional Planning

The largest environmental impacts from HHS mission activities are associated with siting, construction and operation of building assets. To help mitigate these impacts, HHS has incorporated the high-performance sustainable design requirements of the federal "Guiding Principles for High Performance and Sustainable Buildings" (GPs) in the HHS Facilities Program Manual. The first HHS Policy for Sustainable and High Performance Buildings was issued in September 2006 and incorporated into the HHS "Sustainable Buildings Implementation Plan (SBIP)." The SBIP was updated in April 2011 as the "Sustainable Buildings Plan" (SBP), to incorporate Executive Order 13514 requirements.

Attainment of the goals and targets in the SBP will significantly reduce energy, water and materials use, and GHG emissions and waste generation, consistent with the goals of this plan. Additionally, HHS is developing science-based indoor environmental quality (IEQ) criteria that will improve the health performance of buildings and supplement the current GPs and LEED®[4] requirements. Each sub-goal below includes a description of current SBP targets and/or focus, along with gaps the Department intends to address in the next year.

HHS semi-annually captures and reports performance in implementation of the GPs into its inventory through update of the OMB Environmental Scorecard, which is available on the OMB website. Progress is updated annually in the SSPP and SBP. The baseline inventory is evaluated annually to capture the most current data.

HHS is an advocate for smart design and construction of buildings to create healthy and productive work environments for Federal tenants, patients and visitors in our owned and leased facilities.

High Performance Green Building/Regional Planning Highlights

Overall, HHS is making operations more efficient and prioritizing facilities investments that will result in long term conservation of energy, water and other resources. We are consolidating our operations in modern, more efficient

[4] Leadership in Energy and Environmental Design.

buildings, and where possible, removing inefficient assets from our inventory. The Department is also striving to improve the health of those who work in, visit, and occupy our facilities by connecting design and operational decisions to positive health outcomes.

One example is the Healthy Community Design Initiative within the CDC's National Center for Environmental Health, which is dedicated to understanding and improving the relationship between community design and public health. Currently, work is being done to identify partners for a cooperative agreement that will increase the knowledge and capacity for Health Impact Assessments (HIA). HIA helps decision-makers avoid adverse health consequences and costs, and improve health. HIA may also reduce environmental injustices by characterizing opportunities to improve the relationship between affected vulnerable groups and the policy or project.

Finally, checklists developed for use in the HHS "Sustainable Buildings Plan" have been adopted for use by other federal agencies, including the U.S. Department of Agriculture. They include: Sustainable Buildings Checklist for Projects , Sustainable Buildings Checklist for Lease Actions, Letter of non-Conformance, and Existing Buildings Assessment Tool.

Water Use Efficiency

HHS has revised the potable water reduction targets to a water use intensity reduction of 21% by Fiscal Year 2020 as compared to the Fiscal Year 2007 baseline year, which is still less than the EO 13514 goal of 26%. Water use trends of each OPDIV were analyzed and new goals were established. In Fiscal Year 2012 and 2013, significant water reductions are expected due to the implementation of a project at the NIH Bethesda Campus in Bethesda, MD. From Fiscal Year 2013 to Fiscal Year 2020, each OPDIV is estimated to reduce water use intensity by 2% per year through additional water efficiency projects and the implementation of leak detection programs starting in Fiscal Year 2014. However, changes in scientific mission and laboratory operations could increase water use intensity and impact the Department's ability to meet the forecasted future water use intensity reduction goals.

HHS will continue with water efficiency training to assist water personnel with the identifying and implementation of water use technologies. One class was held for the OPDIV water managers in December 2010 in which water reuse applications were covered. Additional training for environmental engineers and landscaping engineers needs to be conducted to improve water intensity usage in ILA consumption

The current HHS Sustainable Building Plan (SBP) requires compliance with EISA 2007 and is proactive in addressing stormwater management as a compliance requirement under the Guiding Principles.

HHS has incorporated appropriate reduction strategies for non-potable water use into the HHS SBP where it addresses landscaping and irrigation strategies, as well as the employment of design and construction strategies that reduce stormwater runoff and polluted site water runoff.

In Fiscal Year 2010, HHS developed a stronger foundation and plan for achieving EO water reductions and SSPP savings under the structure of the HHS Water Program. The core of the HHS Water Program and structure is the Water Management Workgroup. This team has established priorities and action plans under the direction of the HHS Energy Officer. Focusing on the completion of comprehensive audits, installation of energy and water meters, automation of data gathering and reporting, training, and outreach, the workgroup has determined key actions to be completed in order to achieve significant savings.

The workgroup began many of these actions in Fiscal Year 2010 through the completion training webinars and classroom hours focusing on water reduction and reuse strategies as well as water auditing procedures. The completion of water audits has been identified as a priority not only to meet EISA auditing requirements, but to identify cost effective water efficiency projects. Additional training on the performance of comprehensive auditing is planned for August 2011 and two more additional dates in Fiscal Year 2012 in order to train HHS energy personnel to perform in-house audits. Once the audits have been completed, specific projects can be planned for implementation. Implementation of projects will fall primarily under alternative financing projects, as it has been in Fiscal Year 2010 and previous years.

OPDIV water metering plans will be updated and the installation of meters will continue in Fiscal Year 2011 and 2012. In addition, the first submission of the leak detection milestones per the new HHS policy will be submitted by the OPDIV in Fiscal Year 2011. These milestones will outline the procedure that the OPDIV will take to implement leak detection programs in their facilities. Leak detection and repair programs are required to be implemented by Fiscal Year 2014 and should provide significant water reductions throughout the Department.

The automated water use data gathering and reporting tools that have been identified will be populated with facility information and specific details. Fiscal Year 2011 will be the year that the tools are set-up and refined, so that in Fiscal Year 2012 more time can be focused on the implementation of projects.

Outreach has become a focus in Fiscal Year 2011 and will continue to gain importance in future years. Educating all employees on the goals and initiatives will maximize savings and efficiency. Through outreach, HHS will aim to change employee habits on use of water and foster new ideas on conservation.

Water Use Efficiency Highlights

As a result of the HHS SSPP, a water management workgroup was formed to coordinate efficiency efforts throughout the Department. The workgroup consists of the water managers of each HHS OPDIV, and the key support personnel.

HHS headquarters coordinated a water efficiency training course in December 2010 for the water managers and technical personnel throughout the HHS OPDIV.

PSC held the Department's first World Water Day on March 22 to raise employee awareness on water efficiency.

The FDA Irvine Laboratory has a grey water capture and reuse system.

Energy Projects

Hubert H. Humphrey Building (HHS)

The fill material in the cooling tower cells replaced to provide enhanced evaporative efficiency. The fill material had deteriorated and was clogged, preventing efficient flow of condensate water and reducing cooling capacity. As a result of the efficiency improvement, the loads on the cooling tower fans and chillers were reduced. The replacement of the fill is estimated to save 76,500 kWh and 535,000 gallons of water per year, for an annual cost savings of $15,070. The project cost $84,196 yielding a simple payback of 5.6 years on the project.

Muirkirk (FDA)

In FY 2010, FDA re-commissioned an abandoned well at the Muirkirk Road facility in Beltsville, MD. The well provides 16,425 MMGal of water each year, which is roughly a 30% reduction in city water consumption. The project is estimated to save $100,000 per year.

San Xavier Health Center (IHS)

The IHS Tucson Area, San Xavier Health Center, installed a xeriscape project to replace the use of potable water on grass with native plants, drip irrigation techniques and decorative rock. The project cost $100,000 and saved 1.3 million gallons of water in FY 2010, which was a 52% decrease in consumption. The total savings of the reduced water use and reduced landscaping labor, fuel and machinery maintenance costs was $12,210, for a simple payback estimated at just over 8 years.

Pollution Prevention

In support of Pollution Prevention and Waste Reduction (P2WR), HHS will focus on the following top 3 activities over the upcoming 12 months:

1. Improve data tracking for solid waste diversion consistent with SSPP P2WE goals

2. Implement the HHS mercury reduction policy and continue to develop strategies to identify and reduce use of toxic materials. Increase diversion of compostable items from the waste stream.

HHS will also:

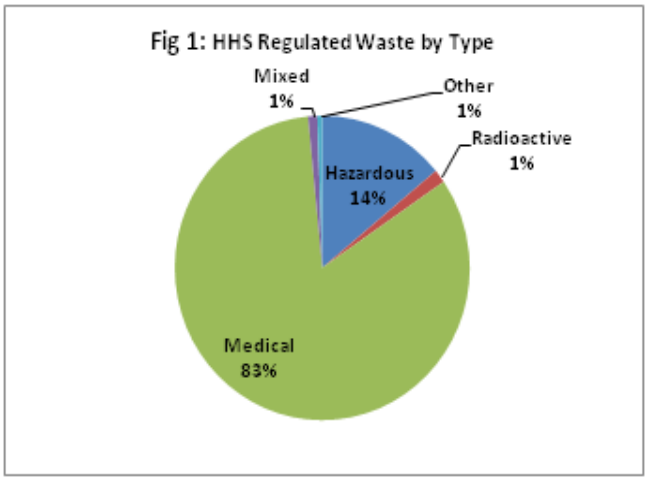
- Increase source reduction of pollutants and waste.
- Divert at least 50% of non-hazardous solid waste by 2015
- Develop agency strategies to reduce municipal solid waste sent to landfills and evaluate how their implementation will assist the agency in achieving 2020 GHG reduction targets.
- Divert at least 50% of Construction and Demolition (C&D) materials and debris by Fiscal Year 2015
- Reduce printing paper use
- Increase use of uncoated printing and writing paper containing at least 30% post-consumer fiber.
- Reduce and minimize the acquisition, use, and disposal of hazardous chemicals and materials.
- Increase diversion of compostable organic materials from the waste stream
- Implement integrated pest management and landscape management practices to reduce and eliminate the use of toxic and hazardous chemicals and materials.
- Increase use of acceptable alternative chemicals and processes.

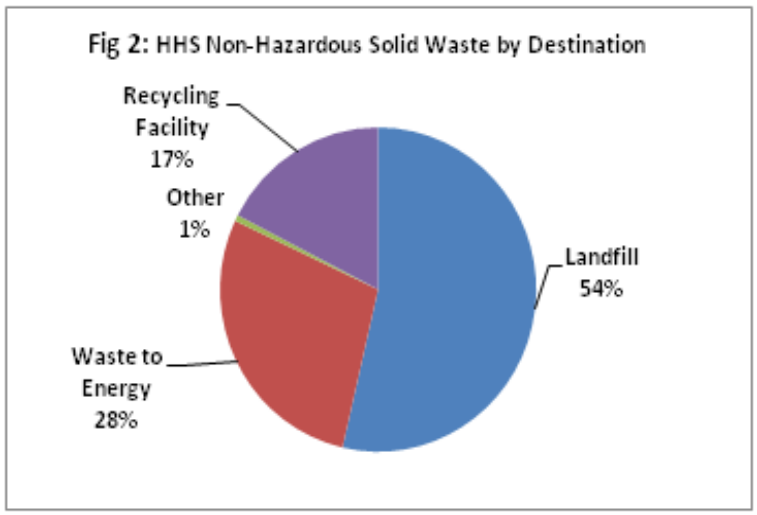
Hazardous/Regulated Waste:

HHS dedicates considerable resources to safe and responsible management of hazardous and radioactive wastes. Management of these wastes is costly and the inherent higher risks associated with these materials requires priority allocation of limited resources over non-hazardous wastes. Figure 1 shows the various quantities of regulated waste generated by HHS in metric tons (MT):

- 2,160 MT Medical waste:
- 364 MT Hazardous waste
- 47 MT Radioactive and mixed waste

These categories are generated at 18 facilities that are categorized by the Environmental Protection Agency (EPA) as large quantity generators; 26 facilities are categorized as small-quantity generators and 33 facilities categorized as conditionally exempt small quantity generators of hazardous wastes.





Non-Hazardous Solid Waste:

Recycling programs were reported at approximately 90% of the facilities and 21% of the facilities reported active composting programs. Non-C&D recycling rates (not including composting) varied from 4% to 47% with the overall average of approximately 17%. The total quantity of solid waste to landfill (used for Scope 3 greenhouse gas emission Figure 2 shows the non-C&D solid waste disposal by destination.

Solid waste data provided here is still preliminary in nature and will be refined as data collection systems are improved.

Waste to Energy:
Over 13,000 tons (28%) of solid waste was diverted from landfill to waste to energy. This is the primary disposal method used by the major HHS facilities in the Greater Washington DC Metropolitan Area.

Composting:
In 2010 HHS identified 24 facilities with on-site composting but no estimates for quantity or volume. NIH Bethesda is seeking a commercial composting facility and conducted a site visit to a recently opened facility in Carroll County, MD. If viable and funds permit, the NIH Bethesda facilities plan to divert cafeteria waste for composting in late 2011. The NIH Research Triangle Park (RTP) in NC initiated composting of all cafeteria food waste and the Office of the Secretary (OS) at the Hubert H. Humphrey Building (HHH) completed a review of sites and environmental requirements for compost sites and developed a Request for Proposal (RFP) for collection and composting of cafeteria waste. New recycling and compost collection bins are on order and promotional plans are under development. Compost plans are anticipated to be finalized in late 2011 and will culminate a multi-year cafeteria greening effort that incorporates healthy menu choices and reusable and compostable containers.

Pollution Prevention Highlights

FDA initiated several actions to improve its recycling program at the White Oak Campus, which resulted in an increase from 30 tons of material recycled in Fiscal Year 2009 to 111 tons in Fiscal Year 2010. This equates to an increase of 27 pounds of recycled materials per person from Fiscal Year 2009 to Fiscal Year 2010 and data will be reported on the follow up waste assessment when requested by headquarters after 2011.

FDA's Office of White Oak Services (OWOS) collaborated with GSA to green the cafeteria services and housekeeping services contracts. Contractors performed assessments of all cooking, cleaning, servware and housekkeeping products and replaced them with green, biodegrable substitutes and/or "Green seal" products.

IHS developed "Chapter 13: Environmental Compliance, Stewardship, and Sustainability" of the IHS Health Manual which incorporates aspects of Executive Order 13514 and the HHS Strategic Sustainability Performance Plan (SSPP) which is expected to become official policy in Fiscal Year 2011. It also developed the Sustainability Advisory Board (SAB) Charter. The SAB, which includes all IHS staff involved in HHS sustainability workgroup and their respective office directors, will support the IHS Chief Sustainability Officer (CSO).

NIH updated lists and tracking of NIH Priority Chemicals through the EMS and used Green Teams and Sustainable Lab Groups to promote hazardous chemical reductions, the use of MIT web based Green Chemicals Alternative Purchasing Wizard and less toxic lab products at two 2010 Green Fairs.

Construction and Demolition Practices

The HHS Sustainability Buildings Program requires diversion and tracking of C&D waste. Although data from all the OPDIV is limited, the NIH, CDC and PSC have demonstrated progress.

CDC

At CDC, the newly constructed building 24 is on track for the LEED Gold credit and is committed to recycle a minimum of 75% by weight of the total project's waste stream. Prior to breaking ground, the CDC invited garden groups in and they were able to reuse 50-60 % of the plants. Additionally, during a recent building demolition of an old auditorium, copper, heavy metals, bricks, air conditioning units, and furniture were recycled or reused. Although not written in their contracts, approximately half or more of the furniture vendors recycle their cardboard and packaging materials.

During this year's demolition of buildings 1Main and 1East at the CDC main campus, a program will be put in place to identify those materials which can be recycled. Every effort will be made to recycle as much of the buildings, furniture, and fixtures as possible given schedule and cost constraints.

NIH

The NIH campus setting in Bethesda lends itself to a high degree of centralized management control over both solid waste and C&D waste. The NIH, Bethesda C&D recycling rate is 90% (5,611 tons). The NIH pioneered C&D demolition with the development of the Sustainable High Efficiency Deconstruction (SHED) methodology that combines decommissioning and deconstruction processes and maximizes reutilization of materials and minimizes waste generation. The NIH SHED method led to the *American National Standard for Laboratory Decommissioning* released in 2008.

PSC

The PSC manages renovation projects in the 110,000 sq. ft., Parklawn building in Montgomery County. Twenty tons of carpet from these projects was recycled in CY 2010 however waste data is not available from the renovation contractor to calculate the recycling rate. A new contract for renovation work will include a C&D recycling requirement.

Program Support Center (PSC) at the Parklawn Building was awarded the 2010 Business Outstanding Achievement in Recycling Award by Montgomery County Maryland. It increased its solid waste diversion rate for calendar year 2010 from 46% to 48% for the Parklawn building.

Hubert H. Humphrey building inaugurated a 'green' cafeteria with healthier menu choices and all biodegrable food service items. It also began to upgrade its recycling program, beginning with reinitiating cardboard recycling and replacing 2000 desktop containers (for mixed paper). New signage and central recycling containers are in the works for later FY 2010.

Sustainable Acquisitions

HHS will ensure that 95% of new contract actions, including task and delivery orders under new contracts will incorporate sustainable acquisition requirements. These include requirements for the supply or use of products and services that are energy efficient (Energy Star or Federal Energy Management Program (FEMP)-designated), water efficient, biobased, environmentally preferable (excluding EPEAT-registered products), non-ozone depleting, contain recycled content, and non-toxic or less toxic materials..

HHS will update agency affirmative procurement plans (also known as green purchasing plans or environmentally preferable purchasing plans), policies, and programs to ensure that all mandated federally designated products and services are included in all relevant acquisitions.

Implementation of the HHS Sustainable Acquisition policy will facilitate the systematic collection of green purchasing data and lessen the OPDIV/STAFFDIV administrative burden as it relates to measurement of the 95% sustainability metric and meeting the sustainable acquisition threshold for HHS Agency Sustainability Plans and Federal Environmental Scorecards, e.g., the OMB Sustainability Scorecard.

Assessment and Monitoring - HHS has incorporated an environmental component into its Procurement Management Reviews (PMRs) that assesses the strengths, weaknesses, and best practices of the acquisition function. PMRs will now address compliance with the 95% green purchasing requirement and the effectiveness of each OPDIV sustainable procurement program. In Fiscal Year 2011, HHS will conduct 3 PMRs at the following OPDIV: CMS, IHS, and CDC. In Fiscal Year 2012, HHS will also conduct PMRs at 3 additional OPDIV.

HHS has also added a sustainable acquisition performance metric to the HHS Acquisition Dashboard, which measures OPDIV performance across a spectrum of acquisition related areas. The performance indicator "95% percent of all applicable sustainable acquisitions" will be measured on a quarterly basis beginning 3rd quarter Fiscal Year 2011.

Sustainable Acquisitions Highlights

As part of its long term objective of strengthening the FDA base of operations, the Office of Information Management (OIM) set a goal of increasing the percentage of high efficiency servers from 25% to 50% in Fiscal Year 2010. As of April, 2011, 98% of FDA servers are high-efficiency-energy star compliant. The FDA Office of Acquisition and Grants Services' (OAGS) IT Division supported OIM's objectives with a series of strategic contracts and orders for servers, related equipment and software totaling $9.3 million. Many of these purchases allowed OIM to replace older, less efficient machines with equipment that met or exceeded current Energy Star standards. OAGS ensured that all of these acquisitions contained appropriate green purchasing clauses and made "compliance with all green standards" an element in the overall source selection decision by using a low-price-technically-acceptable evaluation scheme.

The CDC Procurement and Grants Office (PGO) published its Green Procurement Policy in July 2010. This policy was developed to respond to laws and regulations requiring a comprehensive CDC-wide plan to acquire products

that have recycled and biobased material content and that are energy efficient, whenever they are cost effective and meet technical requirements.

OGAPA held a symposium in April 2011 focused on educating and enriching stakeholder and customer knowledge in the acquisition, grants, and small business areas. The symposium included green presentations on understanding sustainable acquisitions and bio-preferred purchasing given by federal subject matter experts.

Each OPDIV Head of Contract Activity (HCA), in concert with their respective Green Procurement Managers, determined the number of applicable contract actions including: Blanket Purchase Agreements (BPAs); solicitations for new contracts modifications to existing contracts; to add green product requirements; task orders under existing multi-year contracts; indefinite delivery indefinite quantity (IDIQ); multiple award contracts; multiple award schedules and requirements contracts) by selecting actions for which green products could be supplied or used. Once the applicable contract actions were selected, a sample of at least 5% of those contracts were manually reviewed to determine whether they included requirements for green products and/or services for which green products could be used.

Electronic Stewardship

HHS has surpassed its goal of ensuring that 95% of agency electronic products purchased are EPEAT-registered[5]. As a department, HHS currently ensures 97% of its computers are Energy Star qualified and is establishing an Electronic Stewardship Policy to extend the useful life of agency electronic equipment.

HHS is currently documenting the compliance with FEMP-designated products. However, with the majority of acquisitions being EPEAT-registered or ENERGY STAR qualified, the majority of acquisitions will also be FEMP-designated.

HHS is establishing an Electronic Stewardship Policy to track and enable power management, duplex printing, and other energy-efficient or environmentally preferable features on all eligible agency electronic products. It will also reflect environmentally sound practices of disposing all agency excess or surplus electronic products

The majority of HHS already disposes of electronic assets using sound disposition practices. For the most part, HHS already disposes of electronic assets using either Unicor donation or through a private recycler certified under the Responsible Recyclers (R2) guidance or equivalent certification. The remaining electronic assets are difficult to dispose due to the remote locations of our facilities and inaccessibility to the proper disposing resources. Currently, if an OPDIV cannot dispose of electronic assets themselves, they will dispose through ITIO[6]. For the remote locations, HHS is determining how to dispose of these electronic assets appropriately and cost-effectively.

The elements of the Electronic Stewardship Plan and the Electronic Stewardship Implementation Plan (May 2007) are being incorporated into the Electronic Stewardship Policy.

Currently, HHS has enabled power management on 72% of eligible PCs. To meet the deadline of 06/30/2011 in meeting the 100% Power Management goal, HHS is implementing numerous solutions across the OPDIVs. All OPDIVs across HHS have committed to meeting the June 30 deadline for implementing power management on 100% of eligible devices.

[5] Electronic Product Environmental Assessment Tool.

[6] Information Technology Infrastructure and Operations.

HHS recycles nearly 90% of its electronic devices and/or products disposed of using environmentally sound practices. Each member OPDIV is working to find vendors capable of utilizing sound practices to dispose of electronic devices/products.

Power Reduction Settings that interfere with the intended purpose and use of an individual electronic device may be disabled on a case-by-case basis as required to ensure proper functionality by support organizations, staff delegated with that authority by the OPDIV, or HHS Office of the Chief Information Officer (OCIO).

HHS has developed a data center management policy to enable achievement of the HHS consolidation goals in OMB's Data Center Consolidation Initiative (DCCI) and to satisfy environmental and energy directives and requirements associated with HHS data centers. The policy sets standards and thresholds for sever and rack utilization, server virtualization, data center temperature, green procurement, etc. The policy was ratified on March 22, 2011. We are working with HHS data center managers to ensure all data centers comply with the policy.

2011 Goals:

HHS developed two policies, one for Electronic Stewardship and another for the management of Data Centers. The purpose of the ES policy is to provide the framework for the implementation of sound environmental practices in the acquisition, operations and maintenance, and end-of-life management of HHS-purchased electronic products. The purpose of the Policy for Data Center Management (March 22, 2010) is to establish a course of action and define responsibilities for operating data centers efficiently throughout HHS. The primary focus is to enable achievement of the consolidation goals in OMB's Data Center Consolidation Initiative (DCCI) and to satisfy environmental and energy directives and requirements associated with HHS data centers as provided in Executive Orders 13423 and 13514. The establishment of these practices: a) will enhance and expand existing HHS sustainable practices in order to comply with Executive Order (E.O.) 13423 and 13514, b) may reduce energy consumption, c) may reduce toxics disposal related to electronics, and d) may save money through reduced energy consumption and increased electronics life expectancy. In all aspects of its acquisitions and operations, HHS aspires to be a good steward of the earth's resources and a wise manager of the taxpayer's dollar.

These policies incorporate the Electronic Stewardship Plan (May 2007) and Electronic Stewardship Implementation Plan. The Electronic Stewardship policy will be finalized in Fiscal Year 2011 and the Policy for Data Center Management was finalized in March 2011. In addition to the above, the intent of the policies is to:

- Set precedence and standard for collecting information to determine if HHS is on course in complying with the mandate;
- Facilitate compliance and highlight when HHS has veered off course; and
- Require operating divisions to participate in the Federal Electronics Challenge.

The OMB data center definition has changed significantly since our plan was delivered to OMB in August of 2010. The current OMB data center definition requires a data center to be at least 500 sq. ft. in area. HHS has 45 data centers that meet the new definition. Our plan is to close 10 of them by the end of 2013. Two have been closed already this year. One of which was closed through a cross servicing opportunity with the Department of Interior. This cross servicing opportunity enabled the operations of an HHS data center in Albuquerque, NM to move to a Department of Interior data center in the same city. Two additional HHS data centers are scheduled to be closed this year and the remaining six will be closed in 2012 and 2013.

HHS has 131 data centers that do not meet the 500+ sq. ft. threshold set by OMB. We are tracking those internally and plan to close 46 of them by the end of 2013.

Electronic Stewardship Highlights

HHS established a Department-level Electronic Stewardship Workgroup (ESWG) to discuss progress towards meeting the ES Goals, share lessons learned and best practices on ES activities, and contribute towards workgroup deliverables, such as policy, SSPP, etc. The ESWG contributed to the development of the ES Policy, assisted in the development of reporting mechanism to capture progress towards meeting the sub-goals, contributed to revising the SSPP, and mandated enrollment in the Federal Electronics Challenge.

HHS consolidated legacy mainframe workloads and began server virtualization to reduce the number of physical servers.

HHS added contract language and engaged procurement officers to only purchase green office supplies as well as EPEAT and Energy Star compliant devices.

HHS enabled duplex printing on new and legacy printers, and instituted printing best practices including default black and white printing, toner and print cartridge returns, and no personal desktop printers without justification.

HHS instituted green best practices for the office including minimal use of personal fans, heaters and refrigerators, and lighting controls to ensure lights turn off after 30 minutes.

HHS created an Aggressive Power Management campaign to meet mandate of being Power Management (PM) enabled on 100% of eligible devices.

Agency Innovation

Most of the relatively short term goals of current directives and this plan focus on only making HHS operations more sustainable (reduced use of resources and no net degradation of the environment). In the longer term, attainment of such goals may not ensure the availability of sufficient resources and prevent the public health impacts of scarcity, pollution and climate change. Global trends of rapid population growth and increasing per capita consumption will concomitantly increase environmental impacts and accelerate resource depletion. To adapt, a fundamental shift from our current goals to more comprehensive sustainability goals will be required:

- Energy neutral buildings →*Energy positive buildings*
- Greenhouse gas reduction → *Carbon negativity, sequestration*
- Health protective indoor environments → *Health improving indoor environments*
- Water conservation →*Total water reuse*
- Waste reduction and recycling → *Zero waste, material renovation to higher uses*

HHS recognizes that progress on meeting its current sustainability goals and these longer range objectives of environmental enhancement will require aggressive pursuit of innovations– strategies that have not been previously implemented by others across the Government. These will range from adaptations and new applications of existing innovations from other fields to the development of new technologies requiring large investments and extensive research and development efforts.

Full 2011 HHS Strategic Sustainability Performance Plan

http://www.hhs.gov/about/sustainability.html

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