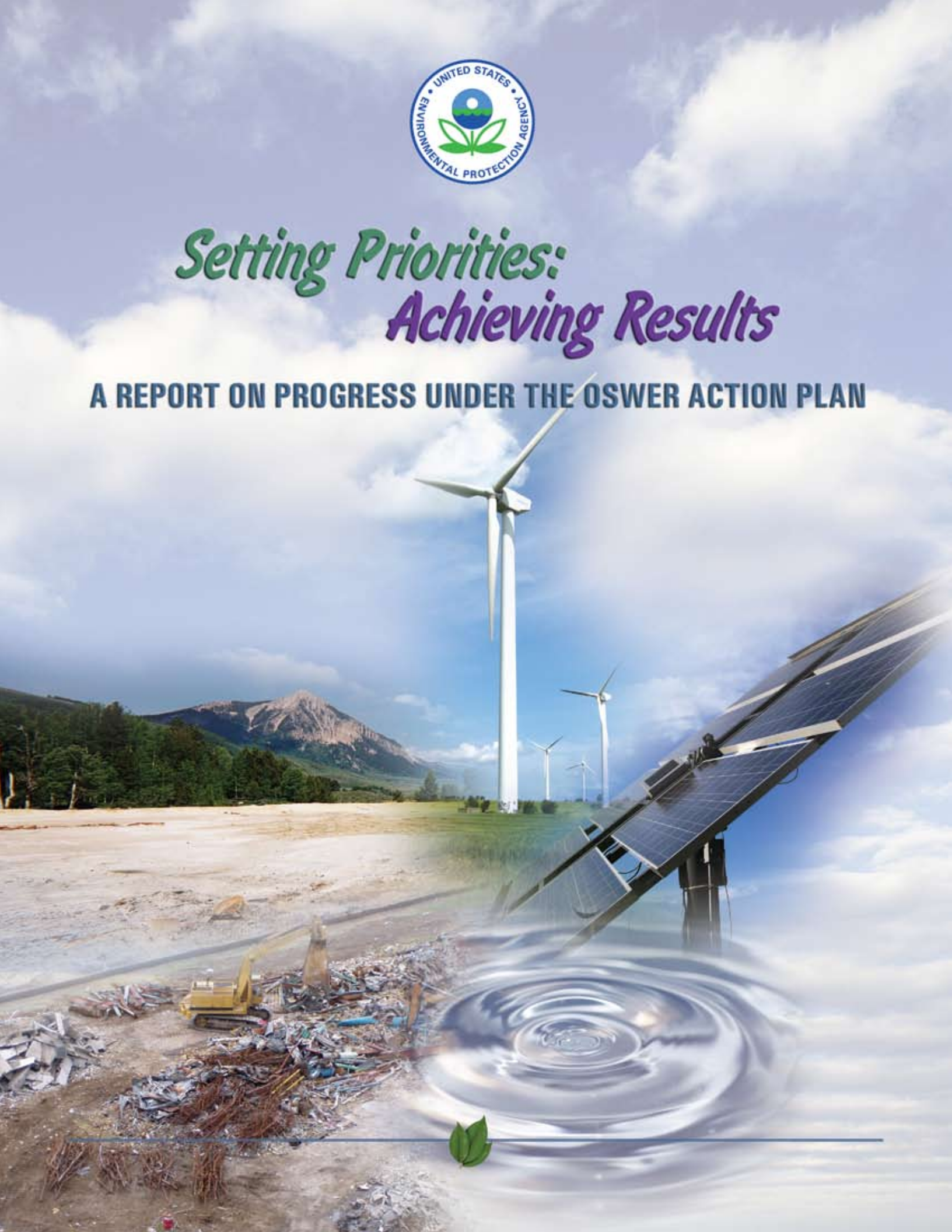
Setting Priorities: Achieving Results

A REPORT ON PROGRESS UNDER THE OSWER ACTION PLAN



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A MESSAGE FROM THE ASSISTANT ADMINISTRATOR

According to our mission statement, OSWER provides policy, guidance, and direction for the Agency's solid waste and emergency response programs. For example, we develop guidelines for the land disposal of hazardous waste and underground storage tanks. We provide technical assistance to all levels of government to establish safe practices in waste management. We lead the Brownfields program, which supports state, tribal, and local governments in redeveloping and reusing potentially contaminated sites. We also manage the Superfund program to respond to abandoned and active hazardous waste sites and accidental oil and chemical releases, as well as encourage innovative technologies to clean up contaminated soil and groundwater. OSWER does all this and so much more.

As detailed in the following report, today's OSWER does more than provide direction for solid and hazardous waste management. We encourage resource conservation. OSWER does more than clean up contaminated property. We encourage sustainable reuse. OSWER does more than respond to accidental oil and chemical releases. We are a major partner in ensuring the nation's homeland security. All these activities are an outgrowth of OSWER's core missions and provide significant benefits.

This report is a testament to the hard work and creativity of the headquarters and regional EPA employees working on OSWER-related issues. It is also a testament to the importance of successful collaboration with co-regulators, stakeholders, and communities. Through the actions described below, EPA employees and partners are producing significant environmental results that will continue to improve the world around us.

INTRODUCTION

Late in 2005, EPA Administrator Stephen Johnson released The Administrator's Action Plan, setting five Agency-wide priorities that responded to a challenge posed by President George W. Bush. The President had charged EPA "with accelerating the pace of environmental protection while maintaining our nation's economic competitiveness." The Administrator's Action Plan laid out the blueprint for meeting that challenge.

The Administrator's Action Plan

- *Cleaner Air and Affordable Energy*
- *Clean and Safe Water*
- *Healthy Communities and Ecosystems*
- *The Global Environment*
- *A Stronger EPA*

In March 2006, the Office of Solid Waste and Emergency Response (OSWER) produced a corresponding Action Plan that defined how OSWER would support the Administrator's plan by prioritizing action in six key areas of responsibility. Since then, OSWER's Action Plan has guided the work of all OSWER offices. See http://epa.gov/oswer/actionplan/index.htm.

The purpose of the OSWER Action Plan was not to launch new initiatives. Rather, the purpose was to set clear priorities for OSWER's daily work effort, reemphasize the importance of a defined set of activities, and impart renewed impetus and urgency to those activities. The Action Plan also integrated into OSWER's programs some earlier successful pilot projects and initiatives.

This report summarizes OSWER's progress under its Action Plan. Specific accomplishments are described in chapters that correspond to the six prioritized items in the Action Plan. This report is not meant to capture all of OSWER's activities over the past several years, but emphasizes those that supported the priorities set by OSWER management and the Administrator in their respective Action Plans.

Chapter 1:

As a legacy of industrialization and past practices, hundreds of thousands of properties and millions of acres across the country have been damaged by environmental contamination. Fortunately, a movement has grown across the country to restore and reclaim these properties for community, economic, and ecologic uses. In many places, government, private, and non-profit organizations are working together to assess, restore, and return these unproductive properties to sustainable and beneficial uses that are protective of health and the environment. Neighborhood parks, residential and commercial developments, manufacturing facilities, and restored natural environments exist around the country because of revitalization partnerships. Cleaning up and reinvesting in these properties also take development pressures off undeveloped, open land, so the momentum around cleanup and sustainable land reuse will continue to grow. To help promote these activities, OSWER's Action Plan emphasized specific areas of cleanup programs that would improve the effectiveness of cleanups and promote sustainable land reuse.

RESTORE CONTAMINATED PROPERTIES TO ENVIRONMENTAL AND ECONOMIC VITALITY

IMPROVE THE CONSISTENCY, MANAGEMENT, AND EFFECTIVENESS OF SITE CLEANUP

CSTAG

Contaminated sediments present a unique cleanup challenge. Because a number of Superfund sites contain contaminated sediments, the Contaminated Sediments Technical Advisory Group (CSTAG) was established in 2002 to monitor the progress of—and provide advice regarding—large, complex, or controversial Superfund sites containing contaminated sediments. CSTAG is encouraging national consistency in the management of sediment sites and improving the effectiveness of sediment cleanups by providing a forum for the exchange of technical and policy information. It is also providing a mechanism for monitoring and evaluating cleanup progress at the largest or most complex sites. At this time over a dozen sites have been identified for CSTAG review, and more are likely to be identified as additional information becomes available. See *http://epa.gov/superfund/health/conmedia/sediment/cstag.htm.*

Green Remediation

Another way to improve the effectiveness of cleanups is to embrace the concept of green remediation, which promotes the idea that all aspects of environmental protection should be considered throughout the remediation process. With this principle in mind, remedies used at contaminated sites are built and operated in ways that minimize any negative environmental impact.

For example, in the past the energy used to clean up contaminated sites was almost entirely carbon-based. Increasingly, however, cleanup projects carried out by OSWER's programs are using renewable solar and wind energy to power some equipment. In April 2008, EPA released the *Green Remediation Primer: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites* to make it easier for site decision makers to use environmentally friendly cleanup techniques. The primer explains how remediation fits into EPA's mission to clean up contaminated sites, and provides practical examples—including case studies—for site decision makers. See *http://www.clu-in.org/greenremediation/.*

ACRES

Our Brownfields program recently implemented the Assessment, Cleanup, and Redevelopment Exchange System (ACRES), a Web-based environmental

A solar panel to be used to power irrigation is installed at a cleanup site in Crozet, Virginia

accomplishments reporting tool for brownfields grantees, to help improve the management of brownfields grant programs. The system was first used on a pilot basis in the fall of 2006, and all grantees are now eligible to use the system. The database is improving the timeliness of reported accomplishments, and reducing the previous data backlog. The use of ACRES is also helping to improve data and information quality by providing a more comprehensive data collection and reporting tool.

FFRRO Odometer

Another tool for improving the management of an OSWER cleanup program is the FFRRO Odometer. Tracking information related to federal facility Superfund sites has traditionally been a complex, time-consuming job. The planning and data entry processes were difficult, and reports pulled from the CERCLIS database were cumbersome to use. Managers were not able to easily track cleanup progress at federal facility sites.

Just over two years ago, OSWER began an effort to build a better tracking system, and today the Federal Facilities eFacts Odometer is being used at both the site, regional, and national levels as an effective site planning and tracking tool. Officially released in the spring of 2007, this tool allows cleanup site and program managers to visualize site-specific plans and targets in detail.

Students from Isles, Inc. Brownfields Job Training Program, suited up for training

EMPHASIZE THE ELIMINATION OF HUMAN EXPOSURE TO TOXIC CHEMICALS

Environmental Indicators

In order to measure progress protecting human health through site cleanup programs under both Superfund and the Resource Conservation and Recovery Act (RCRA), OSWER uses two environmental indicators: human exposures and groundwater migration. Before final site cleanup is completed, both programs work to ensure that 1) people are not exposed to unacceptable levels of contamination at cleanup sites, and 2) the migration of contaminated groundwater has been stabilized, if contaminated groundwater is present at the site.

In the Superfund program, there are currently 1,587 sites on the National Priorities List (NPL) for cleanup. By October 1, 2008, human exposures were under control at over 83 percent of the NPL sites where we are tracking human exposures. Contaminated groundwater migration had been stabilized at about 71 percent of the sites where the groundwater was known to be contaminated.

Superfund has undertaken an extensive effort to improve the quality of the data reported under these measures. In addition, to ensure the public is aware of any potential exposures, additional narrative content was recently added to the profile of each Superfund site to help the public learn more about contaminants and exposure pathways at each site. These site profiles can be accessed from the Superfund Site Information page: *http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm.*

The RCRA Corrective Action program has identified 1,968 facilities that are considered priorities for cleanup. By October 1, 2008, human exposures to hazardous pollutants were controlled at 96 percent of those high-priority sites, and the migration of contaminated groundwater had been controlled at about 83 percent of the high-priority sites. See *http://www.epa.gov/epawaste/hazard/correctiveaction/baseline.htm.*

ENCOURAGE THE REUSE AND REVITALIZATION OF CLEANED-UP SITES

Ready for Anticipated Use

An important outcome of OSWER cleanup programs is to make properties available for return to productive use. To measure progress toward that outcome, OSWER recently developed a new performance measure called "Ready for Anticipated Use (RAU)." This new measure counts the total number of sites and acres that all OSWER's cleanup programs—Superfund, Federal Facilities, RCRA, Brownfields, and Underground Storage Tanks—make ready for continued use or reuse. To be considered "ready for anticipated use," remedy construction must be complete, all cleanup goals for media that may affect current and reasonably anticipated future land uses must be achieved, and all needed institutional or other land use controls must be in place, for either the entire site, or the acres of land, for which the RAU determination is made. See *http://www.epa.gov/oswer/landrevitalization/docs/cprmguidance-10-20-06covermemo.pdf.*

This new measure will not only be a useful management tool, but it will also be valuable to communities where once-contaminated property is now RAU, and to any parties interested in developing such property. More than 725,000 acres are now ready for anticipated use in the United States.

Cleanup at Grand Street Mercury Superfund site

Private Cleanup of Federal Facilities

One of the most encouraging innovations in the federal facility cleanup program is the recent involvement of private parties in the cleanup of contaminated sites. In 2007, EPA along with the State of California, the U.S. Air Force, Sacramento County, and McClellan Business Park, negotiated an arrangement for the Air Force to pay the McClellan Business Park $11.2 million to clean up a 62-acre parcel on the McClellan Air Force Base Superfund Site. The ensuing development is expected to result in as many as 1,200 jobs and $600,000 per year in increased tax revenues for the region. A similar private cleanup is underway at Fort Ord in California.

Green Development/ Sustainability

Besides helping communities clean up contaminated properties, OSWER has begun to take actions that lead to sustainable reuse of these sites. These actions will lead to lower energy demand, reduced greenhouse gas emissions, less water use, and other health and environmental benefits that will contribute to long-term economic and environmental sustainability at cleaned up sites. For example, recently-funded Brownfields Sustainability Pilots will bring long-term air and water quality benefits by promoting green buildings, energy and water efficiency, and other environmentally protective factors in redevelopment projects. See *http://www.epa.gov/brownfields/sustain_plts/index.htm.*

Sustainability also is a factor we consider when selecting from among brownfields grant applicants. Additionally, brownfield training, research, and technical assistance grants are supporting new and innovative ideas in sustainable development.

Three new OSWER innovation and land revitalization priorities have been established: green remediation, green buildings, and long-term stewardship. Grant funding has been provided for eight regional projects that support these priorities, including the development of guidelines for mass transit-specific green buildings (Region 9), guidance for rewriting local building permits, building codes, and ordinances related to green buildings (Region 4), and a pilot project to test environmental stewardship techniques and energy-saving innovations at gas stations.

Reuse for Renewable Energy

One newly-emerging reuse for cleaned-up properties is at sites for renewable energy-based electricity generating plants, like wind farms. Substantial amounts of electricity may soon be generated at once-contaminated Superfund and RCRA sites and sent to the grid for use in American homes and businesses. Because the energy is renewable, there will be no carbon footprint. To facilitate these uses, OSWER, in partnership with the National Renewable Energy Laboratory (NREL), recently launched a Web site with maps and incentive sheets to provide information about opportunities for renewable energy generation on contaminated lands and mining sites in all 50 states. The Web site

A wind turbine is installed at a cleanup site in EPA Region 7

covers potential for five types of renewable energy: 1) community wind energy; 2) utility-scale wind energy; 3) concentrating solar power (CSP); 4) photovoltaic solar energy (PV)); and 5) biomass energy. See *http://www.epa.gov/renewableenergyland/.*

The Petroleum Brownfields Revitalization Action Plan

About 200,000 brownfield sites are estimated to be contaminated with petroleum products. Many of these sites are old, abandoned gas stations. In addition to the grant funds that EPA provides to communities to assess and clean up petroleum brownfield sites, OSWER has begun a much more aggressive effort to support the reuse and revitalization of those sites in order to help communities strengthen their local economies. To that end, in September 2008 OSWER released to the public a Petroleum Brownfields Revitalization Action Plan that presents a comprehensive strategy for putting petroleum brownfields back into productive use. See *http://www.epa.gov/swerust1/rags/petrobfactionplan.pdf.*

ENSURE LONG-TERM STEWARDSHIP

Institutional Controls Tracking System

Institutional controls (ICs) like deed restrictions, zoning, and property easements are often a part of Superfund cleanups when some waste is left in place and there is a need to protect the public from exposure to remaining contaminants. When the more extensive revitalization and reuse of cleaned-up sites became a priority, institutional controls became even more important for ensuring public health and safety. Superfund has developed an Institutional Controls Tracking System to list controls already in place, or being put in place, at every Superfund site. The parties responsible for monitoring the controls are identified, and the actual control instruments are copied into the system. This information is essential for determining when site redevelopment could begin, and what kind of redevelopment is most appropriate. It is available on the site profiles contained on the Superfund Web site, provided the information is quality assured and reliably documented. All published ICs at Superfund sites also may be found at: *http://www.epa.gov/ictssw07/public/export/regionalReport/ALL_REGIONS_IC_REPORTS.HTM.*

Cleanups in My Community

Another way to improve long-term stewardship at cleanup sites is to make sure people are aware of them. In the past, people interested in learning about any cleanups in their communities would have to know which OSWER programs were responsible for cleanups, access those programs' Web sites one-by-one, and then aggregate the information from each Web site on their own. With the development of the Cleanups in My Community Web site, that information is now available in a much more user-friendly format. People can now simply search for their community on the Web site, and they will be presented with information about all cleanups being conducted by the different OSWER programs. They also will be able to map or list all the local cleanup sites. This Web site has been available to the public for about a year, and new information is continually being added to the site. See *http://iaspub.epa.gov/Cleanups/.*

EPA's Cleanups in My Community Web site

Chapter 2: INCREASE AMERICA'S HOMELAND SECURITY

While EPA has been responding to releases of hazardous substances to the environment from any source for over 30 years, EPA's significant involvement in homeland security began with the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001, and since then has expanded dramatically. OSWER's emergency response effort is led by the Office of Emergency Management. OSWER and its regional counterparts have over 30 years experience in hazardous materials emergency response, and this experience is the basis for much of EPA's role in the government-wide National Response Framework. Given the global threat of terrorism in the world today, OSWER's activities related to homeland security are a top priority, and several steps have been taken over the past few years to strengthen response capabilities.

IMPROVE PREPAREDNESS

Incident Command System

Under the government-wide National Incident Management System (NIMS), all agencies are required to implement the Incident Command System (ICS), which includes common terminology, standardized training, pre-designated leadership positions, and well-understood assigned responsibilities. EPA was one of the first agencies to adopt the ICS. On-Scene Coordinators and numerous other EPA personnel at headquarters and in the regions have been trained in appropriate levels in the ICS.

EPA employees during an emergency preparedness excercise

Emergency Operations Center

In 2004, EPA constructed a state of the art Emergency Operations Center (EOC) to serve as a hub for Agency communications during emergencies and support our field operations. The EOC proved its value during the response to Hurricane Katrina, and it is used on a daily basis by EPA watch officers who monitor emergency notifications.

The EOC was upgraded in 2007 with the inclusion of more work stations, improved communications systems, and event rooms where staff can meet and coordinate activities during emergencies. EPA's EOC is now as technically sophisticated as EOCs in other agencies, and it includes secure areas for holding classified information.

ENHANCE EPA'S RESPONSE CAPABILITIES

Environmental Response Team

Over the past few years EPA has dramatically expanded the capabilities of the Agency's Environmental Response Team (ERT), and has also extended its reach by opening an additional ERT office in Las Vegas, Nevada. ERT's homeland security capabilities now include air surveillance, geophysical surveying, underwater diving, risk assessment, and analytical support related to potential threats; for example, releases of biological and/or chemical agents. ERT also provides training to first responders, such as local fire fighters and other emergency personnel, on all aspects of emergency response and readiness. See *http://www.epa.gov/superfund/accomp/news/ert.htm.*

Response Support Corps

After the events of 9/11, EPA developed a voluntary Response Support Corps (RSC) to bring more personnel into action during emergencies and thus maximize the Agency's response capabilities using currently available resources. Since then, over 2,000 EPA employees from headquarters and the regions have volunteered to support emergency response activities as members of the RSC. RSC personnel are trained in the Incident Command System, and they participate in exercises to enhance their preparedness.

EPA assessing a storage tank flooded by Hurricane Katrina

STRENGTHEN LABORATORY AND DECONTAMINATION CAPABILITIES

Environmental Response Laboratory Network

In 2008, EPA launched the Environmental Response Laboratory Network (ERLN) which, when fully operational, will ensure that EPA has sufficient analytical capability and capacity to support Agency responses to a large-scale event, including a biological, chemical, or radiological attack. Phase I of the ERLN included EPA's laboratories and some state environmental laboratories. Specifically, EPA is building chemical warfare environmental laboratory capacity at five EPA regional labs, two state labs, and three mobile facilities to be deployed into the field during a response. The Agency is also in the process of identifying federal, state, and commercial laboratories that use consistent procedures and that have strong quality assurance programs, so the analytical data needed from multiple laboratories during responses will be consistent and comparable.

National Decontamination Team

The National Decontamination Team (NDT) was established in 2005, and has a staff of approximately 15 personnel with expertise in multiple scientific and technical disciplines. The NDT provides decontamination expertise related to chemical, biological, and radiological contaminants that can be used as weapons of mass destruction. The NDT is prepared to support the decontamination of buildings, building contents, environmental media like soil, and public infrastructure like waste treatment and drinking water systems, chemical plants, power plants, food processing facilities, and mass transit systems. Specialized expertise in biochemistry, microbiology and medicine, health physics, toxicology, HVAC engineering, and industrial hygiene are available through the NDT to assist local, state, tribal, and federal agencies during emergencies.

Decontamination Methods Portfolio

In 2007, the National Decontamination Team developed and published an online portfolio of decontamination methods for select chemical, biological, and radiological agents like anthrax, sarin, ricin, sulfur mustard, cesium-137, and strontium-90. The portfolio not only describes different decontamination techniques, but also the chemical and physical parameters of contaminants, field detection tools, air dispersion models, toxicology/risk parameters, and health and safety characteristics. The portfolio is updated continually for new contaminants and with new information about old contaminants. It is an excellent resource for all responders at all levels and agencies of government.

Chapter 3: FOCUS REGULATORY EFFORTS ON RISK REDUCTION AND STATUTORY COMPLIANCE

OSWER's responsibility to develop and to improve the clarity and implementability of environmental regulations will continue to be a top priority within this office. OSWER also has made a special effort to revise regulations so they no longer contain inadvertent disincentives to the recycling or reuse of industrial waste materials.

In addition, in 2005 the Congress enacted the Underground Storage Tank Compliance Act as part of the Energy Policy Act. Since then, OSWER has put in place regulations and guidance needed to implement it.

CLARIFY AND IMPROVE REGULATIONS

Streamlining Oil Spill Regulations

Under Section 311 of the Clean Water Act, EPA has been delegated the authority to regulate storage tanks holding oil and mixtures containing oil. EPA's rules impose a number of requirements related to Spill Prevention, Control, and Countermeasure (SPCC) Plans, and those requirements impose a substantial burden on the regulated community. In December 2006 and December 2008, EPA amended the SPCC regulations to clarify the requirements, tailor them more appropriately, and provide alternatives to improve compliance. See 71 Fed. Reg. 77266 (Dec. 26, 2006); 73 Fed. Reg. 74236 (Dec. 5, 2008).

Maintenance is performed on an underground storage tank

Underground storage tank maintenance at a large gas station

Tailoring Regulations for Academic Laboratories

In a rule published on December 1, 2008, EPA streamlined the hazardous waste management rules for academic and research laboratories in order to make them more compatible with typical lab operations, and to improve the overall management of chemicals in laboratories. Chemical use and management in academic laboratories is much different from that in large manufacturing processes. Academic laboratories employ students and tend to generate small amounts of many different wastes, while industrial processes tend to generate large amounts of a few wastes. This revised rule recognizes these differences, and tailors the chemical waste management practices to meet the unique needs of academic laboratories, thus improving compliance and environmental performance. See 73 Fed. Reg. 72912 (Dec. 1, 2008).

IMPLEMENT THE UNDERGROUND STORAGE TANK COMPLIANCE ACT OF 2005

The Energy Policy Act of 2005 contained a number of provisions that strengthened federal, state, and tribal programs for preventing leaks from underground storage tanks (USTs). Among those provisions were requirements for:

- Mandatory inspections of all USTs every three years
- Development and implementation of owner/operator training
- Prohibition of product delivery at non-complying facilities
- Secondary containment of tanks or financial responsibility for tank manufacturers and installers
- State compliance reports on government-owned USTs
- Posting and maintaining public records for USTs

Completion of Guidelines

By the end of 2007, OSWER's UST program had written and issued a series of grant guidelines to help states carry out these new requirements. Since then, OSWER has met with many stakeholders to identify and clarify issues and to answer any questions related to implementation of the grant guidelines. This nation is making substantial progress in meeting the mandates of the Energy Policy Act.

Tags used to monitor compliance with underground storage tank regulations

Progress on Inspections

Some of the recent progress under the Energy Policy Act is especially noteworthy—for example, the inspection of USTs. The new law required that all USTs not inspected since 1998 had to be inspected by August 8, 2007; it further required that all USTs in the country—located at almost a quarter of a million facilities—have to be inspected once every three years. All states, tribes, and EPA have successfully completed the first requirement, and the majority of states are on track to meet the required inspections of the first three-year cycle, which ends in August 2010.

Support for Tribal Inspections

OSWER made a special effort to increase its support for tribes as they worked to comply with the Energy Policy Act. For example, in order to increase the geographic coverage and frequency of tank inspections in Indian country, OSWER has begun to authorize tribal inspectors to represent EPA. In 2007, EPA issued the first federal credentials to inspectors of the Eastern Band of the Cherokee Nation and the Shoshone-Bannock Tribes. EPA continues to work with other tribes to authorize additional tribal inspectors in the future. (Other OSWER actions to strengthen partnerships with tribes are described in Chapter 6 of this report.)

Chapter 4:

PROMOTE STEWARDSHIP AND RESOURCE CONSERVATION CONSISTENT WITH THE AGENCY'S RESOURCE CONSERVATION CHALLENGE

Promoting the recycling and reuse of natural resources has always been an important part of OSWER's responsibilities. In 1976, the Resource Conservation and Recovery Act (RCRA) explicitly included provisions for resource conservation and recovery. But for the law's first quarter century, OSWER spent most of its time and energy writing and implementing the regulations related to solid waste and hazardous waste management systems. In 2002, OSWER launched the Resource Conservation Challenge (RCC) to heighten the visibility and importance of OSWER's efforts to manage the recycling and reuse of waste materials, thus avoiding the environmental and public health risks of waste disposal altogether. OSWER has promoted the goals of the RCC in two separate but complementary ways: 1) by writing or revising regulations to encourage recycling or reduce inadvertent barriers to recycling; and 2) by forming partnerships with communities, businesses, and other government agencies that work together to promote the recycling and reuse of specific kinds of materials that are currently being wasted.

Furthermore, OSWER is a critical partner in addressing climate change and reducing U.S. greenhouse gas (GHG) emissions. Opportunities exist to reduce or avoid GHG emissions by reducing the amount of materials used to make products or perform services and re-engineering production processes to minimize raw material inputs, extend product life spans, and maximize the ease of subsequent product disassembly for further productive use. OSWER and state co-regulators implement environmental programs authorized by a number of statutes with a range of human health and environmental objectives. Leveraging these programs to achieve measurable climate change benefits in no way replaces or supersedes OSWER program goals. Rather, OSWER hopes to promote the recognition that these programs yield myriad environmental benefits, including significant climate change benefits.

Metals from a demolition site are salvaged for recycling

REVISE RCRA REGULATIONS THAT ENCOURAGE WASTE RECYCLING

The Definition of Solid Waste

In a rulemaking effort of unusual legal complexity, EPA revised the RCRA Definition of Solid Waste in order to encourage more recycling of industrial hazardous materials. Hazardous waste regulations sometimes can act as a disincentive to recycling and resource conservation and may impose unnecessary costs on legitimate and safe recycling. Yet many of those wastes can be safely reclaimed and recycled, with substantial economic and environmental benefits.

The final rule revising the RCRA Definition of Solid Waste was published on October 30, 2008. See 73 Fed. Reg. 64668 (Oct. 30, 2008). In revising this rule, EPA added three new regulatory exclusions for certain industrial hazardous materials that, when recycled consistent with special management standards, are no longer defined as a solid waste if they are reclaimed, thus making it easier and less expensive to recycle them. These exclusions make it easier and less expensive to recycle hazardous secondary materials.

This revision may affect as many as 5,600 industrial facilities, and may result in regulatory compliance cost savings to the regulated community of $95 million per year by tailoring regulations applicable to about 1.5 million tons of secondary material that are or will be recycled. These cost savings include a potential for 23,000 tons per year of newly induced recycling, potentially involving 2,440 facilities and a savings of $17 million per year.

EPA's Region 8 building in Denver, Colorado, has earned the Leadership in Energy and Environmental Design (LEED)® Gold rating and contains recycled industrial materials throughout the structure

Comparable Fuels

EPA expanded the Comparable Fuels Exclusion under RCRA to increase energy recovery from secondary materials while maintaining environmental safeguards. Signed on December 12, 2008, this rule will help cut facility operating costs and reduce the need for burning fuel oil, often imported. The conditions imposed by the rule ensure that these materials, when burned for energy recovery, generate emissions comparable to the emissions generated by burning fuel oil. In addition, expanding the comparable fuels exclusion under RCRA is expected to result in total net social benefits of approximately $13 million per year, which is composed mostly of avoided management and fuel costs. It is estimated that an additional 34,000 tons per year of secondary material would be burned for energy recovery in industrial boilers.

Cathode Ray Tubes

To promote the recycling of cathode ray tubes (CRTs) found in electronics, EPA revised RCRA regulations to exempt recycled CRTs from the definition of solid waste, provided certain conditions that ensure safe recycling are followed. This change removed significant barriers to CRT recycling, and means that recycled CRTs are not considered to be hazardous waste when safe management practices are followed and, therefore, are not subject to hazardous waste regulations.

PROMOTE MATERIAL REDUCTION, REUSE, AND RECYCLING

C^2P^2

The Coal Combustion Products Partnership (C^2P^2), made up of more than 170 government, university, and private sector partners, works to find uses for coal ash and other byproducts of coal combustion. More than 120 million tons of these byproducts are generated in the United States each year, and since the beginning of the C^2P^2 program the recycling rate for these materials has increased from 32 to 40 percent. More than 51 million tons were reused in 2007. C^2P^2 has set a goal of beneficially reusing 50 percent by 2011.

Recycling coal combustion byproducts not only saves money and natural resources, it also conserves energy and significantly reduces greenhouse gas emissions. In 2007, recycling 13.7 million tons of fly ash and using it in place of Portland cement, saved nearly 73 trillion BTUs of energy, equivalent to the annual energy consumption of more than 676,000 households. Greenhouse gas emissions were reduced by 12.4 million metric tons of carbon dioxide equivalent, about the same amount emitted annually by 2.3 million cars. See *http://www.epa.gov/osw/partnerships/c2p2/index.htm.*

WasteWise

WasteWise is one of OSWER's oldest partnership programs, and over the years it has proven to be remarkably successful. By the end of 2008, over 2,200 businesses, schools, hospitals, local communities, and government agencies had joined WasteWise and begun resource conservation practices like recycling and composting. In 2007, partners reduced or recycled 12.4 million tons of waste, saving over 242 trillion BTUs of energy and reducing greenhouse gas emissions by 22 million metric tons of carbon dioxide equivalent (about the same as the annual greenhouse gas emissions from four million passenger vehicles). See *http://www.epa.gov/osw/partnerships/wastewise/index.htm.*

Plug-In to eCycling

The Plug-In to eCycling program works with electronics manufacturers, retailers, recyclers, and communities to promote shared responsibility for safe recycling of electronics, including televisions, computers, and cell phones. Initiated in 2003, the program has grown dramatically. In 2006, Plug-In partners voluntarily recycled over 34 million pounds of electronics, while in 2007 Plug-In to eCycling partners recycled or reused over 47 million pounds of electronics. The energy conserved through the efforts of our Plug-In to eCycling partners in 2007 was equivalent to the annual GHG emissions of nearly 24,000 cars. Since the program's inception, over 142 million pounds of electronics have been recycled by the partners' collaborative and voluntary efforts. See *http://www.epa.gov/osw/partnerships/plugin/index.htm.*

Plug-In partners have also been instrumental in supporting other EPA electronic recycling initiatives. In January 2008, OSWER launched a cell phone recycling campaign at the Consumer Electronics Show in Las Vegas. Throughout 2008, print and radio public service announcements promoting cell phone recycling have been distributed to the public. Plug-In partners like AT&T, Best Buy, LG Electronics, Motorola, Nokia, Office Depot, Samsung, Sony Ericsson, Sprint, Staples, and T-Mobile have helped to increase consumer awareness of the ease and opportunities for cell phone recycling. See *http://www.epa.gov/osw/partnerships/plugin/cellphone/index.htm.*

Artist's rendering of the new green building development by WasteWise partner Destiny USA

An electronics recycling (eCycling) drive

Responsible Recycler (R2) Practices

As the first step in the adoption of a commonly-accepted set of responsible recycling practices for used electronics, OSWER worked with state governments, industry organizations, and public interest groups to develop the Responsible Recycler (R2) Practices. These recently released guidelines help electronics recyclers ensure that their materials are safely and legally handled both domestically and in foreign countries.

Specifically, the R2 Practices are intended to be used by accredited certification programs to assess electronics recyclers' environmental, worker health and safety, and security practices. These voluntary standards include general principles and specific practices for recyclers. See *http://www.epa.gov/osw/conserve/materials/ecycling/r2practices.htm.*

Recycle on the Go

Most Americans are aware of recycling opportunities at home and in the workplace, but until a few years ago recycling in public locations like parks, convention centers, sports stadiums, and shopping centers was rarely practiced. The Recycle on the Go Program, begun in 2006, aims to change that. OSWER began the program by working with the National Park Service to recycle beverage containers during the Cherry Blossom Festival in Washington, DC, and many OSWER employees volunteered to collect the containers. Since then, the program has expanded to the point where high-visibility recycling is available at the National Football League's Pro Bowl, at a number of major league baseball stadiums, at college football stadiums like Penn State's Beaver Stadium, at city parks like Seattle's Marymoor Park, and at convention centers like Pittsburgh's David Lawrence Convention Center and San Francisco's Mosconi Convention Center. On this past Earth Day, the EPA Administrator appeared at Fenway Park in Boston to present the Boston Red Sox with an Environmental Merit Award for —among other things—providing their fans with the opportunity to recycle beverage containers. See *http://www.epa.gov/osw/conserve/rrr/rogo/index.htm.*

Mercury Switch Recovery Program

In order to keep the mercury used in automobile light switches from being released to the environment when cars are scrapped, EPA joined with states, auto dismantlers, and steel manufacturers to launch the National Vehicle Mercury Switch Recovery Program (NVMSRP). In 2007, the NVMSRP reached one of its strategic goals: 49 states and the District of Columbia initiated mercury switch recovery programs, while the 50th state has its own state program. By the end of 2008, more than 7,000 car dismantlers and shredders were participating in the program, and more than 1.8 million switches containing over two tons of mercury have been recovered. See *http://www.epa.gov/hg/switch.htm.*

A mercury switch is removed from a car

National Partnership for Environmental Priorities

The National Partnership for Environmental Priorities (NPEP) was established to reduce or eliminate specific chemicals in processes, products, and wastes. A set of 31 of the most persistent, bioaccumulative, and toxic chemicals were targeted for reduced use, as were other toxic chemicals of national concern. To date, 212 partners, including private companies, other federal agencies, schools, communities, and state and local governments, have joined NPEP. In the past four years (2004–2008), the partners have eliminated more than 9.2 million pounds of priority chemicals and more than 8.3 million pounds of other chemicals of national concern. NPEP partners have committed to eliminating an additional 9.7 million pounds by 2011. See *http://www.epa.gov/osw/partnerships/npep/.*

National Lead-Free Wheel Weight Initiative

In August 2008, EPA announced the National Lead-Free Wheel Weight Initiative. A significant percentage of the 50 million pounds of lead wheel weights used in cars and light trucks each year escape into the environment, either when the weights fall off tires and are washed into rivers and lakes, or when hobbyists melt down used wheel weights at home. But with effective, non-toxic alternatives available, a broad national partnership including manufacturers of tires, tire weights, and automobiles, distributors, retailers, tire service shops, and federal and state government agencies have committed to phasing out the use of lead wheel weights in cars and light trucks by the end of 2011. See *http://www.epa.gov/epawaste/hazard/wastemin/nlfwwi.htm.*

Chapter 5: ENCOURAGE VOLUNTARY EFFORTS TO CLEAN UP SITES

Spurred by concerns over the cost of oil, global warming, water quality, and other linked economic and environmental issues, American families, communities, and businesses are increasingly looking for ways to improve their environmental behavior. This "greening" of American society, which is being reported by the national media on an almost daily basis, is leading to an unprecedented level of voluntary action that is intended to clean up old environmental problems or prevent new ones. OSWER is seeing the benefits of the nation's increasing involvement in voluntary environmental action across all its cleanup programs. So for the past few years OSWER has made a concerted effort to encourage and support voluntary efforts to clean up contaminated sites.

SUPPORT STATE PROGRAMS

Voluntary Cleanup Program MOAs

Since the mid-1990s, EPA and some states have entered into non-binding Memoranda of Agreement (MOAs) that promote coordination and define general federal and state roles and responsibilities regarding the voluntary cleanup of contaminated sites. Over time these MOAs have proven to be valuable in accelerating voluntary cleanups and land revitalization led by state governments, because they clarify EPA's enforcement intentions at brownfield sites, and provide the public with confidence that EPA and the state agency are coordinating their cleanup activities.

Since 2004, seven states have either revised existing MOAs or signed new ones, bringing the total number of states with MOAs to 23. Some of the states have consolidated all their cleanup activities across all programs into a single MOA. In order to encourage states to sign MOAs and make it easier for them to do so, last July OSWER put in place an improved, streamlined process for developing, negotiating, and approving MOAs.

A Brownfields site in Johnstown, Pennsylvania post-redevelopment

Louden Village Tribe first Chief and EPA employees on the Yukon River

Support for State and Tribal Response Programs

Since 2003, the Brownfields program has provided almost $300 million to state and tribal cleanup programs in all 50 states, 65 tribal nations, and four U.S. territories. The states and tribes have been especially active during the past two years. Based on data from 2006 and 2007, OSWER estimates that almost 19,000 sites totaling over 250,000 acres have been cleaned up, with required institutional controls in place, through state and tribal response programs.

Besides the cleanup funding provided to states and tribes, OSWER has supported them with information and technical tools. For example, OSWER supported the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) through a cooperative agreement that facilitated the exchange of information about cleanup techniques among states, supported the development of tools like the "Toolbox for Cleanup and Redevelopment of Contaminated Sites in Small Cities and Rural Communities" (March 2007), and provided a forum for an ongoing exchange of views and information among EPA and the states.

SUPPORT "GOOD SAMARITANS"

Non-liable parties—like non-profit organizations—sometimes are willing to clean up contaminated sites in order to speed up protection of the natural resources at risk. In order to encourage those "good Samaritans," EPA recently has issued policy documents and technical assistance tools that, among other things, clarify the status of non-liable parties and help protect them from liability. See *http://www.epa.gov/ow/goodsamaritan/.*

So far, working closely with the EPA Office of Water and Office of Enforcement and Compliance Assurance, OSWER has completed one settlement agreement with a "good Samaritan," and has delineated policies that may encourage others.

PROMOTE CLEANUP PARTNERSHIPS

Mine-Scarred Lands

Beginning in 2004, OSWER joined in a partnership with four other federal agencies and the Appalachian Regional Commission to help six communities clean up surrounding lands, waters, and watersheds that had been contaminated by minerals mining or processing. These six demonstration projects were carried out in Nye County, Nevada; Hazleton, Pennsylvania; San Juan County, Colorado; Kanawha County, West Virginia; Summit County, Colorado; and Lee County, Virginia. The government partners assisted the communities by collecting information, defining responsibilities, coordinating multi-stakeholder revitalization assessments, and identifying different sources of funding. These projects provide models that other communities can use in cleaning up mine-scarred lands. See *http://www.epa.gov/aml/revital/msl/index.htm.*

Revitalization work is performed at a port in Tampa, Florida

Portfields

Beginning in 2003, EPA joined with several other federal agency partners to help communities redevelop contaminated lands around port facilities. Three port communities served as pilots to help demonstrate how intergovernmental collaboration can assist communities in both economic development and environmental protection. The three community pilots were carried out in Bellingham, Washington; Tampa, Florida; and New Bedford, Massachusetts. The federal partners provided, among other things, technical assistance for dredging projects, expertise in ship scrapping and ballast water treatment, assistance in streamlining permits, hydrographic surveying, and funding. These pilot projects, which were completed in 2007, provide models for how other port communities can clean up their harbors and strengthen local economies. See *http://www.epa.gov/brownfields/policy/portfields_2005.pdf.*

The former Eureka Mill in San Juan County, Colorado

Chapter 6: STRENGTHEN OSWER

The first five priorities listed in the OSWER Action Plan emphasized activities that affect the world external to OSWER—e.g., the public, the environment, national security, and the economy. This last area of emphasis set priorities for action internally, action that would affect OSWER's employees, our internal management systems, the data and information we provide, and our partners who help us fulfill our responsibilities. OSWER's ability to provide public health and environmental services to the American people has always been dependent on the talent and dedication of its career employees, and on the management and information systems they use in their daily work. The OSWER Action Plan placed a high priority on attracting highly-talented employees, retaining them, and improving the training, management tools, and information systems needed to make them even better. Besides the skill of its own employees, OSWER is also dependent in virtually all of its external activities on partnerships with other federal agencies, states, tribes, local governments, and other stakeholders. The Action Plan emphasized the importance of strengthening those partnerships as a way of strengthening OSWER itself.

ATTRACT, RETAIN, AND TRAIN A HIGH-QUALITY WORK FORCE

OSWER Training Leads

In order to create a more unified approach to training, OSWER has established a group of training leads comprised of managers and employees representing all OSWER programs. This group meets on a quarterly basis to share information on initiatives that affect OSWER training. Two particularly high profile initiatives include: 1) closing the competency gaps identified in OSWER's strategic workforce action plan by targeting training on those gaps; and 2) developing OSWER's new on-line training and development calendar.

Training and Development Calendar

For the first time, all OSWER training and development programs are now housed in one place and easily accessible by all OSWER employees through an intranet Web site. It is now easier for employees not only to find out about the training opportunities available, but also to quickly and easily register for them.

The OSWER Honor Awards

Diversity Training

For many years OSWER has offered a number of diversity learning experiences to increase employee understanding of diversity issues and improve their ability to work effectively in a diverse organization. In 2007, OSWER strengthened those efforts by a hosting a training session entitled "M.E.E.T. on Common Ground." This session, which emphasized the need to "Make Time to Discuss, Explore Differences, Encourage Respect, and Take Responsibility," was also offered in July 2008. In addition, in September 2007 an OSWER training session on disability sensitivity examined stereotypes of common disabilities that helped broaden employee understanding of these disabilities and their effects on disabled co-workers.

Mentoring

Because professional mentoring is a useful way for an organization to transfer knowledge and skills among its employees and prepare a new generation of leaders, OSWER is working to build a cadre of mentors at the senior management level. In 2007, an OSWER-wide group of managers was formed to help strengthen the mentoring culture within OSWER by assessing mentoring needs and better defining what both mentors and mentees expect from mentoring.

IMPROVE DATA AND INFORMATION SYSTEMS

Web 2.0

Over the past year EPA's use of the Web to disseminate information both inside and outside the Agency has expanded considerably, and OSWER is contributing regularly to several different Agency-wide Internet tools. For example, OSWER has contributed a series of training podcasts to the Clu-In Web site, and also developed three podcasts about electronics recycling. OSWER is also contributing on a regular basis to EPA's GreenScenes v-casts and Greenversations blog, and developing a recycling tips widget. In addition, OSWER has added Web links to press releases to encourage the sharing of information on blogs.

Geospatial Data Project

Some of the most useful information now being communicated to the public over the Internet is related to geography. Through the Geospatial Data Project, environmental information has been made available to the public in formats that can be incorporated easily into virtual mapping software such as Google Earth and Microsoft Virtual Earth. OSWER has contributed data related to the Superfund and RCRA cleanup sites, and data about the possible use of contaminated lands for renewable energy facility siting was made available to Google Earth in August 2008.

Members of OSWER's Human Resources staff receive a Team Excellence Award from Assistant Administrator Susan Bodine

OSWER's Performance Assessment Tool

Last year OSWER began development of a Performance Assessment Tool (PAT) that will contribute to a better understanding of program performance by organizing information before it becomes an official part of EPA reporting. The PAT will replace a time-intensive system of printouts and manual data entry into spreadsheets. By automating internal information systems, OSWER will reduce the time needed for preparation of performance reports, reduce the chances of errors being generated during manual data entry, and make the data more readily available to more people in real time so, if necessary, mid-course corrections can be made. The first phase of the PAT will be completed this year, and the entire system is expected to be in place by the end of next year.

Segment Architecture

EPA has underway a long-term effort to analyze ongoing business practices in order to identify and facilitate changes in operations that improve program performance and enhance results for its customers. As a part of this analysis of segment architecture, OSWER leads two major segments: Land Quality and Emergency Response. Recently OSWER has emphasized modernizing and reducing the costs of its information technologies. OSWER is modernizing the system to take advantage of new technologies that improve information integration and system interoperability, both of which will improve access to the information and data quality. OSWER is reducing costs by leveraging Agency-wide tools and services and reducing the number of systems that must be maintained. These steps will help manage resources and improve performance across all OSWER programs.

STRENGTHEN PARTNERSHIPS

Tribal Partnerships with the UST Program

Because OSWER has the primary responsibility for implementing the UST program in Indian country, partnerships with Native American tribes are critically important for success. Over the past few years, several steps have been taken to strengthen those partnerships, as called for in the Action Plan.

In August 2006, OSWER produced a UST-related tribal strategy that resulted from the combined efforts of the UST program and the tribes. The strategy identified key issues related to UST cleanups in Indian country, and defined actions that would strengthen the relationship between EPA and the tribes, improve information sharing, help build tribal technical capacity, and improve UST cleanups. OSWER continues to work with tribes to implement the strategy.

In May 2007, the first national meeting of tribal leaders and EPA was held to help identify tribal issues, build collaboration, and identify possible improvements in the UST program in Indian country. A second national tribal meeting was held in Rapid City, South Dakota, in October 2008. This kind of meeting is intended to be held regularly so it builds closer ties to tribes, while strengthening mutual understanding.

Partnerships to Build Tribal Capacity

During this past year OSWER completed a new framework that will expand the ability of Native American tribes to protect the environment on tribal lands. This framework includes a new OSWER tribal Web page that is proving to be a useful tool for sharing information with all tribes, and the site is averaging about 250 hits a month.

In addition, OSWER recently published a tribal strategy that lays out a detailed roadmap for managing tribal programs in partnership with tribes. This strategy ties OSWER's tribal commitments to EPA's overall strategic goals, so performance is now linked closely with how well the OSWER/tribal partnership performs. The tribal strategy received significant input and comment by tribes nationally.

To complete the new tribal framework, OSWER has also strengthened its internal ability to manage tribal programs across all EPA offices. In 2007, OSWER produced the EPA Tribal Snapshot, which for the first time compiled a comprehensive overview of the scope, actions, and direction of all of EPA's tribal programs. The snapshot will help EPA's senior managers on the Indian Program Policy Council to make more informed management decisions, and it will stimulate further analysis, strategic planning, and action related to tribal programs. Furthermore, OSWER established an Interagency Solid Waste Steering Committee to better coordinate cross-agency efforts related to solid waste management in Indian country.

Environmental Justice Partnerships

Following the devastating effects on low-income and minority communities caused by Hurricanes Katrina and Rita, the National Environmental Justice Advisory Council (NEJAC) presented EPA with a report containing recommendations on how EPA should prepare for and respond to emergencies in such special-needs communities in the future. In response to NEJAC's Gulf Hurricanes Recommendations Report, OSWER strengthened the environmental justice aspects of our emergency response system, and included those features in the Agency's 2009 Environmental Justice Action Plan. NEJAC praised OSWER's efforts to incorporate their recommendations into the emergency response system, and the partnership will be stronger in future emergencies because of it.

The OSWER Honor Awards

Partnerships with the States

Some of OSWER's most important partners in terms of site cleanups are the members of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO). OSWER recently strengthened its partnership with ASTSWMO by reinstituting the Senior Cleanup Council (SCC), which is made up of about 20 people, in most instances OSWER's deputy office directors and ASTSWMO's subcommittee chairs. The major goal of the SCC is to improve cross-program communication, understanding, and coordination in order to promote better long-term stewardship of contaminated sites.

In addition to the SCC, OSWER is also working more closely with ASTSWO through mutual inclusion of each other's staff in important policy-setting meetings. For instance, ASTSWMO invites OSWER representatives to its annual Board of Directors meetings, and OSWER now includes state and tribal representatives in meetings with regional division directors.

A LOOK TO THE FUTURE

As this report summarizes, over the past several years OSWER has made substantial progress in the six priority areas defined in the OSWER Action Plan. Everyone who works in OSWER contributed to this progress, and everyone should be proud of these accomplishments.

The future undoubtedly will bring new challenges and new priorities for action. OSWER already is seeing events across the globe that are likely to affect OSWER's programs in ways both subtle and dramatic. For instance, the recent contractions in the global and domestic economies, together with the corresponding sharp declines in virtually all commodity prices, are affecting material recycling and reuse rates, which may cause the development of new incentives to support this country's ongoing recycling efforts. And the recent terrorist attack in Mumbai, India, has shown that preparedness and response programs will have to evolve to meet evolving terrorist tactics and technologies.

Yet the six priorities defined in OSWER's Action Plan are likely to remain priorities for the foreseeable future. Site restoration, homeland security, improved regulations, resource stewardship, voluntary programs, and a talented, well-trained workforce: these are the strategic underpinnings of all OSWER's programs. Continued progress in each of these areas will be critically important to OSWER's future success.

United States
Environmental Protection
Agency

Office of Solid Waste
and Emergency
Response (5105T)

EPA-500-R-09-001
January 2009
www.epa.gov