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PROTECTING & RESTORING LAND

Making a Visible Difference in Communities

OSWER FY14 End of Year Accomplishments Report

EXECUTIVE SUMMARY

EPA United States Environmental Protection Agency

Message from the Assistant Administrator

In Fiscal Year 2014 (FY14), the Office of Solid Waste and Emergency Response (OSWER) had a productive year of cleaning up contaminated sites and properties in order to protect human health and the environment and revitalize neighborhoods. OSWER also helped ensure the safety and preparedness of communities in the event of an oil spill or chemical accident—all while promoting responsible recycling and the preservation of valuable resources.

The complete document is available at OSWER's website.

This year's report presents OSWER achievements and offers education and resources in order to provide context to OSWER's work. With 51% of America's population living near a superfund, brownfield, or RCRA corrective action site, OSWER cleanup programs demonstrate not only the importance of protecting human health, but the economic value of environmental cleanups. By 2050, our use of energy and natural resources is expected to increase by as much as 300%, which can have an adverse effect on communities, human health, and local economies. In response, OSWER is leading the effort to reduce materials and energy use through our sustainable materials management initiative. With an estimated 600,000 chemical facilities located around the country, OSWER's emergency management programs have been and continue to partner with local leaders to ensure the safety of communities, and prevention of harmful releases and accidents.

Our accomplishments are not possible without the collaboration and support of partners around the country: As co-regulators, states continue to be important partners in pursuing the protection of families and the environment. Additionally, many leaders in local, tribal and business communities, as well as federal agency partners and EPA staff, relentlessly implement and advocate for OSWER's transformative programs. I want to thank all of our stakeholders and partners for their commitment to OSWER's mission.

We are poised for another great year and I am excited about the positive impact we will continue to have on the lives of millions around the country.

Mathy Stanislaus
OSWER Assistant Administrator

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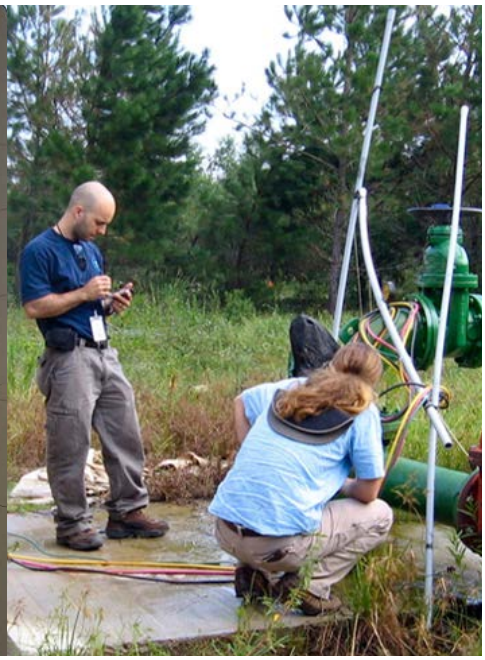
Introduction

In FY14, the U.S. Environmental Protection Agency's (EPA) Office of Solid Waste and Emergency Response (OSWER) staff and their regional colleagues worked steadfastly in communities across America – cleaning up Superfund sites; responding to emergencies; assisting tribes, state and local governments in the cleanup and redevelopment of brownfields and underground storage tank sites; encouraging innovative and energy-efficient materials use and reuse; and establishing protections for the management of hazardous waste.

OSWER's FY14 Accomplishments Report includes highlights of the many on-the-ground activities that are performed every day in communities across the country under the two broad goals of OSWER's work, Preserving Land and Resources and Restoring Land. The full report is available at http://www2.epa.gov/aboutepa/about-office-solid-waste-and-emergency-response-oswer and provides a more comprehensive picture of the diverse programs and efforts underway in OSWER.

Addressing the complex environmental challenges facing us today is a shared responsibility. Many of the activities highlighted here and in the full report that improve the health of American families and protect the environment would not be possible without a partnership with state and tribal co-regulators, local governments, communities, and the regulated community.



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Preserving Land & Resources

Challenge

Land itself is a finite resource. As a result, preventing its contamination and preserving critical resources that rely on available land is vital to creating healthy and vibrant communities and ecosystems. Improper or accidental releases of contaminants and pollutants from facilities threaten nearby communities and ecosystems. For example, discharges of oil into water or on land; accidents at chemical facilities; or improperly stored or treated wastes may threaten human health or result in injury, death, environmental damage, and financial loss. Furthermore, our growing population's increased demand for goods and services is placing greater pressure on land and the other finite resources it supports, underscoring the need to preserve and reuse them.

OSWER, in partnership with our state co-regulators, currently oversees approximately 640,000 facilities through its Spill Prevention, Control and Countermeasure program and roughly 1.3 million facilities in total to prevent releases into communities.

OSWER and its partners oversee approximately 640,000 to 1,319,000 facilitites to prevent releases into communities.

Programs Addressing This Challenge

EPA works collaboratively with states, local governments, other federal agencies, and communities to preserve land and other resources. EPA works to ensure that materials, both hazardous and non-hazardous, are controlled and managed responsibly. To accomplish this, EPA permits, inspects and monitors facilities or requires proper planning to ensure that anyone who generates, recycles, transports, treats, stores, or disposes of potential contaminants is meeting standards that protect human health and the environment.

In addition, EPA works to preserve resources and encourage responsible consumption and usage. This includes advancing sustainable, lifecycle waste and material management approaches.

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Preserving Land & Resources

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OSWER PREVENTION & PREPAREDNESS PROGRAMS

- Resource Conservation and Recovery Act (RCRA) Solid Waste Program
- RCRA Hazardous Waste Program
- Underground Storage Tank (UST) Program
- Oil Spill Program
- Chemical Emergency Preparedness and Prevention Program

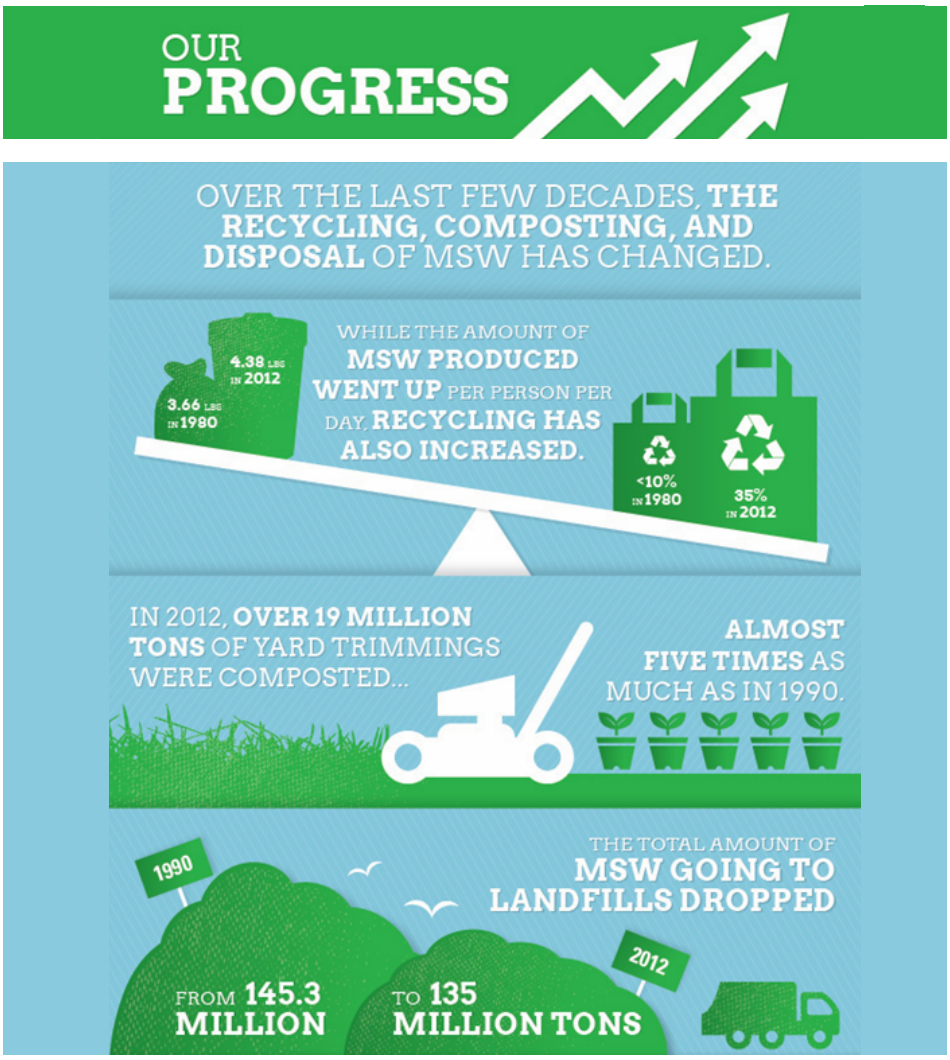
MANAGING MATERIALS SUSTAINABLY HIGHLIGHTS

- Diverted 375,000 tons of food from landfills, preventing landfill greenhouse gas emissions equal to taking 85,000 cars off the road. (Food Recovery Challenge participants)

- Diverted more than 220,000 metric tons of used electronics to third-party certified electronics recyclers, avoiding nearly 580,000 metric tons of CO_2, the equivalent to power more than 52,800 U.S. homes for one year. (Electronics Challenge)

- Reduced the environmental footprint of more than 400 federal facilities by diverting 523,000 tons of waste from landfills, saving tax payers an estimated $42 million. (Federal Green Challenge participants)

- Completed Agency-wide plan to provide solid waste management capacity assistance to tribes to promote the development and implementation of integrated waste management.



MANAGING HAZARDOUS WASTE HIGHLIGHTS

- Issued the E-Manifest One Year Rule to authorize the use of electronic hazardous waste manifests. This allows the current process (which requires paper forms) to be streamlined, greatly reducing the millions of paper manifests produced each year.

- Issued technical guidance to promote compliance with PCB export requirements to reduce any hazards associated with PCBs in former U.S. ships when they are recycled in developing countries.

- Approved or updated controls at 129 hazardous waste facilities to ensure compliance with waste management standards that prevent releases. To date, permits and other enforceable controls have been put in place to prevent dangerous releases at over 20,000 RCRA process units. Preventing releases also provides cost savings, as a typical RCRA corrective action to address a release into the environment can cost $100,000 or more.

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PREVENTING OIL & PETROLEUM RELEASES HIGHLIGHTS

- Increased to 72.5 percent the number of UST facilities that were in significant operational compliance. EPA engaged in rigorous underground storage tank prevention efforts and worked with the states to implement tools from the Energy Policy Act of 2005.

REDUCING RISK AT CHEMICAL FACILITIES HIGHLIGHTS

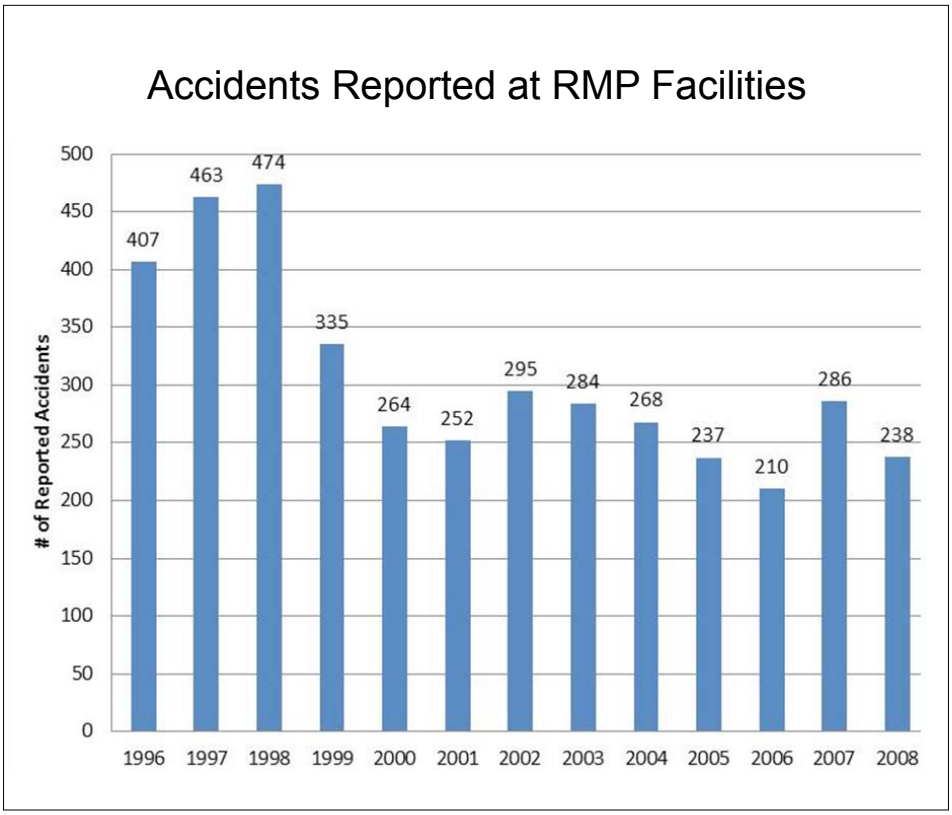
- EPA took critical steps to implement the 2013 Executive Order Improving Chemical Facility Safety and Security by working with federal regulatory representatives and stakeholders with a vested interest in reducing the risks associated with the handling and storage of chemicals.

- As part of a multi-agency working group, released the final report to the President highlighting progress and providing a plan to support and enable states and local communities to improve chemical facility safety.

- An integrated standard operating procedure template for a unified federal approach was developed for identifying and responding to risks at chemical facilities.

- A pilot program was established in EPA's Region 2 to develop standard operating procedures for a unified federal, state, and local approach for identifying and responding to risks at chemical facilities and to develop a plan to improve operational coordination. These procedures are now used as a model for other regions across the nation.

- Published a Request for Information on the risk management program (RMP) in July 2014 that describes and requests stakeholder feedback on 19 potential modifications to streamline the program and improve safety requirements.



The number of accidents at RMP facilities decreased from a high of 473 in 1998 to 238 in 2008. However, we continue to see tragic impacts from accidents at RMP facilities. From 2009 to 2013, RMP facilities reported accidents resulting in the following:

- 25 deaths
- 859 injuries
- 179,712 people sheltering in place
- approximately $1 billion in on and off site damages.

Moreover, of the approximately 12,500 currently regulated RMP facilities, EPA is only able to inspect less than 4 percent a year.

Restoring Land

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Challenge

Accidents, spills, leaks, releases and past improper disposal and handling of hazardous materials and wastes have resulted in tens of thousands of contaminated sites in the United States. Substances commonly found on contaminated sites have been linked to a variety of human health problems, such as birth defects, cancer, and changes in neuro-behavioral functions.

Contaminated land can hamper economic growth and the vitality of local communities. OSWER's land cleanup programs track more than 540,000 sites and almost 23 million acres. More than 51 percent of the U.S. population lives within three miles of a superfund, brownfields, or RCRA corrective action site. Using Census data, EPA found that the communities near these sites are more likely to be minority and lower income, and residents of these communities are less likely to have a high school education compared to the U.S. population. As a result, these com-mu¬nities may have fewer resources to address concerns about their health and environment.

Programs Addressing This Challenge

EPA works collaboratively with our federal, state, tribal, and local partners to assess, clean up, and promote the reuse of sites. The cleanup program that becomes involved at a particular site or release is based on the level and type of contamination. Emergency response relies on a complex system of responsibilities that are spread across federal, state, and local governments, depending upon the size and type of emergency.

OSWER CLEANUP & REUSE PROGRAMS

- Superfund Emergency Response and Removal Program
- Superfund Remedial and Federal Facilities Programs
- Brownfields Program
- RCRA Corrective Action Program
- PCB Cleanup Program
- Leaking Underground Storage Tank Program

COMMUNITIES WITHIN 3 MILES OF OSWER SITES INCLUDE:

50%
of all children in the U.S. under 18

62%
of all minorities in the U.S.

58%
of all households in the U.S. below the poverty level

54%
of all people with less than a high school education in the U.S.

Superfund cleanups reduce congenital anomalies in infants of mothers living within 2 km (1.2 miles) of a site by roughly 20-25 percent.

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PREPARING FOR AND RESPONDING TO EMERGENCIES HIGHLIGHTS

- Conducted more than 300 removal actions responding to emergencies from natural disasters, train derailments, releases of hazardous substances, and other causes. Examples include:
  - Recovered 35 cars, 329 propane tanks, 259 refrigerators and freezers, and more than 9,000 containers of hazardous waste after the historic flood in Boulder County, Colorado.
  - Recovered and responsibly disposed of more than 100 tons of hazardous materials from abandoned wrecks in the Oakland estuary in Oakland, California.
  - Investigated possible uranium mine drainage into the Grand Canyon in Grand Canyon Village, Arizona by using EPA's Airborne Spectral Photometric Environmental Collection Technology. This collaboration with the National Park Service provided better knowledge of the area and hazards, allowing for a more effective response.

The three stages of the cleanup process, referred to as the cleanup continuum, are used in this section to describe our activities and progress.

The cleanup continuum is:

- **Starting cleanups** – focusing on site identification and assessment activitites in the early stages of the cleanup continuum.
- **Advancing cleanups** – emphasizing coordination activities and activities intended to assure that unacceptable human exposures are eliminated as soon as possible while site cleanup progresses.
- **Completing cleanups and reusing sites** – achieving the goal of providing long-term human health and environmental protection, and promoting land revitalization to return sites to communities for their intended use.

STARTING CLEANUPS HIGHLIGHTS

- Worked with other federal agencies and the Navajo nation to assess 520 mines, 800 homes, and 240 drinking water wells for contamination as a result of abandoned uranium mines.
- Published a compilation of ideas and lessons learned from the first round of 23 Brownfields Area-Wide Planning grants to provide information to other brownfield communities. These grantees leveraged more than $418 million in federal, state, local and private investments to help clean, redevelop, and revitalize their brownfields project areas.
- Released the *Pilot Framework for Integrating Community Health and Wellness into the Superfund Reuse Assessment Process*, which provides a structure for integrating health, prevention and wellness into Superfund reuse assessment to better identify options for future land use.

ECONOMIC BENEFITS OF CLEANUP

As of the end of FY14, 450 Superfund sites actively being reused support approximately 3,470 businesses that generate combined annual sales over $31 billion and employ over 89,000 people. In addition, the Brownfields Program has leveraged a total of 102,740 jobs and $21.6 billion, while making 47,049 acres of land ready for reuse.

Two separate peer reviewed national studies found that residential property values near sites increased 18.6-24.5 percent as a result of superfund cleanup, and 5-11.5 percent as a result of brownfields cleanup.

- Completed 1,659 brownfields property assessments and 794 superfund remedial site assessments.

ADVANCING CLEANUPS HIGHLIGHTS

- Developed tools to help local brownfields grantees and superfund site managers identify vulnerabilities and strategies to make cleanup remedies more resilient to climate change impacts.

- Removed more than 15 million tons of waste from the demolition and cleanup of hundreds of contaminated buildings and sites at the Hanford Reservation Superfund site along the Columbia River. By the end of FY14, 80 percent of the cleanup along the river was completed.

COMPLETING CLEANUPS & REUSING SITES HIGHLIGHTS

- Advanced the Administration's Insourcing Manufacturing Initiative supporting the recovery of manufacturing communities. Community leaders identified their community revitalization challenges and worked with federal and state agency officials to discuss potential solutions.

- Cleaned up a former Navy site near Minneapolis/St. Paul, Minnesota and made it ready for beneficial use. EPA removed the portion of the site that had contained unsaturated soils from the national priorities list, with the exception of soils under a former Plating Shop Area.

- Transformed a portion of a former chemical manufacturing site in Charlotte, North Carolina into the Southeast region's first eco-industrial park. Existing site infrastructure provides a platform for large-scale renewable energy and alternative fuel projects and the site's natural resources have been enhanced by a 185-acre conservation easement area.

- To date more than 135 renewable energy installations on 128 contaminated lands, landfills, and mine sites, have been installed, providing multiple environmental, economic, and community benefits from a landfill or formerly contaminated site.

Go to OSWER's website for the full report: http://www2.epa.gov/aboutepa/about-office-solid-waste-and-emergency-response-oswer