



## OFFICE OF WASTEWATER MANAGEMENT



# 2009 OWM Annual Accomplishments Report

## Message from the Director

I am pleased to present the *2009 OWM Annual Accomplishments Report*, which highlights some of our many achievements this past year as we strive to preserve and protect our nation's waters.

Among our accomplishments in 2009, OWM continued to make significant progress in promoting sustainable infrastructure and water efficiency. OWM's Sustainable Infrastructure Program continued to provide critical outreach, training, and leadership in the areas of effective utility management, asset management, and energy management, helping utilities manage the challenges facing our nation's water infrastructure. In addition, WaterSense, the Agency's premier program for encouraging national water efficiency, continued to expand its suite of WaterSense-labeled products to include the first water-efficiency specification for an entire new home and the first ever commercial building product—flushing urinals. WaterSense labeled products are saving Americans more than 36 billion gallons annually.

In 2009, OWM and our partners also made significant progress in ensuring timely investment of the unprecedented \$4 billion appropriation in financial assistance for wastewater utilities under the American Reinvestment and Recovery Act (ARRA) of 2009. Working with the private sector, local governments, and states, OWM has worked quickly to ensure that all are prepared to properly utilize the funding by Congress' February 2010 deadline and that all projects meet ARRA requirements.

The National Pollutant Discharge Elimination System permit program remains a critically important tool for Clean Water Act protections. In 2009, OWM continued its efforts to implement the 2008 concentrated animal feeding operation (CAFO) rule, which is helping to reduce nutrient and sediment loads impacting the health of our waterways. OWM also undertook a significant review of surface coal mining actions in central Appalachia and the first ever scientific analysis of pollutant discharges from commercial fishing vessels and non-commercial fishing vessels to better evaluate the impacts of these sources on our nation's waters.

Finally, OWM and our partners made great strides in implementing President Obama's Executive Order on Chesapeake Bay Restoration and Protection, releasing, in November 2009, a draft coordinated strategy for bay protection and restoration.

As we look to the future, daunting challenges remain—failing infrastructure, economic struggles at the state and local levels, and unregulated sources of pollution. However, with the help and support of our partners from other federal agencies; state, tribal, and local governments; and nongovernmental organizations, we continue to work to meet these challenges, ensuring better water quality for generations to come.

James A. Hanlon, Director  
Office of Wastewater Management

## OWM Mission

To help meet the nation's clean water goals by ensuring that appropriate regulatory standards, voluntary management approaches, information, financial resources, and technical assistance are provided to states, communities, and regulated entities.

**Integrity**—We aspire to the highest levels of fiscal and scientific reliability for our staff, programs, and research.

**Efficiency**—Through strategic planning and prioritizing and establishing realistic goals, OWM has a successful track record, delivering substantial environmental gains.

**Results**—Setting realistic goals and reaching or surpassing those goals is the cornerstone of OWM's strategic plan.

## Contents

Message from the Director	2
OWM Mission	3
About OWM	4
Program Highlights	6

## Results Areas

Clean Water State Revolving Fund	7
WaterSense Program	8
Wet Weather/Stormwater Program	9
Sustainable Infrastructure Program	10
Rural Program	11
State & Regional Program	12
State & Tribal Water Pollution Control Grants	13
Industrial Program	14
Sustainable Communities	15

## OWM Leadership

*James Hanlon, Director*  
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*Ben Hamm, Director*

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Sustainable Communities Branch  
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Sustainable Management Branch  
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WaterSense Branch  
Veronica Blette, Chief

### **Water Permits Division**

*Linda Boornazian, Director*  
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Tom Lavery, Chief  
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Municipal Branch  
Connie Bosma, Chief

Rural Branch  
Allison Wiedeman, Chief

Industrial Branch  
Marcus Zobrist, Chief

## About the Office of Wastewater Management

**Clean Water** is the ultimate goal of all Office of Wastewater Management (OWM) programs. Overall, our programs are designed to ensure that not only is our water safe to drink, but that our surface waters and aquatic ecosystems protect human health; support economic and recreational activities; and provide healthy habitat for fish, plants, and wildlife. Our office supports EPA's goals for clean and safe water and healthy communities and ecosystems.

While OWM helps regulate and promote effective and responsible wastewater treatment, our programs consist of more than just wastewater management:

- Since its inception, more than 20 years ago, the **Clean Water State Revolving Fund** programs have provided more than 24,600 low-interest loans for wastewater treatment, control of nonpoint source pollution, and estuary protection.
- Through **WaterSense**, we are helping to raise national awareness of water as a scarce resource; encourage water efficiency among utilities, manufacturers, retailers, and consumers; and make it easy for consumers to find products and services that save water while ensuring product performance.
- Our **Green Infrastructure** initiative focuses renewed attention on a blossoming approach to stormwater management and treats stormwater as a valuable resource rather than as a problem. It promotes the use of green roofs, rain gardens, porous pavements, and other techniques that result in improved water and air quality, energy and costs savings, enhanced water supplies, habitat creation, and source water protection.
- The **National Pollution Discharge Elimination System (NPDES) Program** controls water pollution by regulating point sources that discharge pollutants into our surface waters.
- Our **Stormwater Program** oversees the control of stormwater runoff through the issuance of NPDES stormwater permits and provides outreach and support to EPA Regions and states on issuance and oversight of those permits. It also educates local governments, industries, builders, and the public about the impact stormwater has on our local waterways and how to keep pollutants out of stormwater.
- Under our **Sustainable Infrastructure Program**, OWM is promoting widespread adoption of better management practices, water efficiency, full-cost pricing, and watershed approaches to reduce costs and increase system investments.
- Through our **Sustainable Communities Program**, OWM is providing outreach and targeted technical and financial assistance to small communities and tribal communities to help find the assistance that they need to address their wastewater treatment needs.

## How We Do Our Work

The Office of Wastewater Management (OWM) and its staff of more than 110 employees promote effective and responsible water use, treatment, disposal, and management and encourage the protection and restoration of watersheds. OWM is comprised of an Immediate Office of the Director; the Water Permits Division (WPD); the Municipal Support Division (MSD); and the Planning, Information and Resources Management Staff (PIRMS).



Source: USDA/NRCS Image Gallery

**MSD** manages the Clean Water State Revolving Fund program; assists small communities and Indian tribes, U.S./Mexico Border communities, and Alaska Native Villages; and implements special appropriations acts projects. The division maintains and regularly updates inventories and cost estimates of existing and needed future municipal wastewater treatment works and capital investments to meet the goals of the Clean Water Act. In addition, the division publishes technical information about conventional and innovative municipal wastewater collection systems and treatment technologies and provides support and technical assistance to EPA Regions and states to promote the proper management of on-site and decentralized wastewater systems nationwide. Through the WaterSense program, it also is promoting a national ethic of water efficiency and market enhancement for water-efficient products, programs, and practices.

In 2009, MSD underwent a structural reorganization to more effectively meet its goals and responsibilities. In addition to creating a separate branch for the WaterSense program, MSD has also made adjustments to the existing branches by strategically shifting several responsibilities and providing new titles that more accurately reflect the branches' core missions. These changes will ensure that MSD is well positioned to provide the needed support for the cost-effective management of community water resources.

**WPD** provides national program direction to the National Pollutant Discharge Elimination System permit, pretreatment, and sewage sludge management programs under sections 401, 402, and 405 of the Clean Water Act, including: development of regulations, policy, and guidance; development of national strategies; implementation management; compliance assurance; and overview of Regional and state operations. The division also coordinates with the Office of Science and Technology in the development of national standards for point source controls, indirect dischargers, and biosolids use and disposal.

## Our Partners

- EPA Regional Offices
- State, Interstate, Tribal, and Local Programs
- Water and Wastewater Agencies
- Non-government Organizations
- Private Industry
- Regulated Community
- Academic Institutions
- Private Citizens

## Budget

In FY 2009, OWM's programs, including state and tribal assistance (excluding American Reinvestment and Recovery Act funding), accounted for more than \$974 million, or nearly 13 percent of EPA's budget.

Through its programs and initiatives, OWM promotes compliance with the requirements of the Clean Water Act (CWA). Under the CWA, OWM works in partnership with EPA's Regions, states, local governments, and tribes to regulate point source discharges into surface waters such as wetlands, lakes, rivers, estuaries, bays, and oceans.

## Our Work

- The NPDES Permit Program
- Clean Water State Revolving Fund
- Clean Watersheds Needs Survey
- Sustainable Infrastructure
- WaterSense Water Efficiency Program
- Onsite/Decentralized Wastewater Systems Program
- Innovative Management Systems (EMS, Asset Management, CMOM, etc.)
- Infrastructure Grants (Congressional Earmarks)
- Outreach, Technical Assistance, and Training Programs
- State and Tribal Program Assistance (CWA Section 106)
- Small Communities
- U.S./Mexico Border
- Wastewater Treatment Technologies
- Water Quality Cooperative Agreements (104(b)(3))

## Highlights — 2009 Results

**Clean Water State Revolving Fund** — Clean Water State Revolving Fund (CWSRF) programs provided \$5.2 billion in 2009, which included \$430 million from the American Reinvestment and Recover Act (ARRA), to fund water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management. To date, the CWSRFs have provided \$74 billion, funding 24,688 low-interest loans.<sup>1</sup>



Source: USDA/NRCS Image Gallery

**ARRA Implementation** — OWM made great strides in designing and implementing policies, guidance, and training materials to help states apply for the \$4 billion in ARRA funding obligated by Congress for the CWSRF programs. By the end of 2009, almost 1,400 funding agreements had been signed in all 50 states and Puerto Rico, totaling more than \$2.96 billion, and EPA was well situated to have all funding under contract by Congress' February 2010 deadline.

**Green Infrastructure** — OWM collaborates with EPA's Office of Wetlands, Oceans, and Watersheds in the development of technical guidance for federal facilities on implementing stormwater runoff requirements for federal projects under Section 438 of the Energy Independence and Security Act. This guidance will help reduce water quality problems from stormwater runoff from development and redevelopment at federal facilities.

**Implementing the Chesapeake Bay Executive Order** — OWM worked to help implement President Obama's May 2009 Executive Order on Chesapeake Bay protection and restoration. OWM, participating in a cross-Agency effort, developed and reviewed key sections of the report, *The Next Generation of Tools and Actions to Restore Water Quality in the Chesapeake Bay*, which identifies recommended pollution control strategies and actions to protect and restore the bay watershed.

**Priority Permits** — EPA and authorized states exceeded the national commitment for issuing priority permits by 50 percent, issuing more than 1,110 priority permits in FY09. This is the fourth consecutive year the national goal has been exceeded.



Source: USDA/NRCS Image Gallery

**WaterSense** — The WaterSense program released its final single-family new home specification, creating the first national, voluntary water-efficiency specification for an entire new home. WaterSense-labeled new homes will be 20 percent more water efficient than typical new homes.

**Tribal Section 106 Program** — OWM published a status report for the Tribal Section 106 Program, highlighting tribal achievements over the program's 20-year history in developing comprehensive, effective water quality programs and improving and protecting water quality in Indian Country.

<sup>1</sup> CWSRF National Information Management System. U.S. EPA, Office of Water. Data is reported on an annual basis, covering the period from July 1 to June 30.

## Clean Water State Revolving Fund



In 2009, Clean Water State Revolving Fund programs provided \$5.2 billion, which included \$430 million in ARRA funding, for 1,971 loans to communities for water quality protection projects. These projects included wastewater treatment, nonpoint source pollution control, and watershed and estuary management. CWSRFs offer low interest rates, flexible terms, and assistance to a variety of borrowers and partnerships with other

funding sources. Over the last 22 years, CWSRFs have funded \$74 billion through 24,688 low-cost loans for a variety of important water quality projects that help communities meet environmental standards and ensure public health.<sup>2</sup>

### New Employee Training Workshop

OWM is committed to providing Regional and headquarters SRF staff with the resources necessary for effective program management. To support this commitment, a training workshop was held in Chicago, Illinois, from May 5 - 7, 2009 that provided basic training to new employees on conducting oversight of the SRF programs. Participants were shown how to review core SRF documents, including intended use plans and annual reports as well as the proper procedure for conducting annual onsite reviews.

### 2009 CWSRF PISCES Awards

The 2009 PISCES Awards (Performance and Innovation in the SRF Creating Environmental Success) recognized states that have shown exceptional leadership and effectiveness in protecting water quality and financial integrity through the CWSRF program. A PISCES Award was presented to one state from each of the ten EPA Regions. These recipients demonstrated outstanding performance, creativity, and integrity in the CWSRF program. This was the fifth consecutive year that OWM has recognized PISCES Award winners. Recipients were recognized and presented with their awards at the national SRF workshop hosted by the Council of Infrastructure Financing Authorities in Seattle, Washington, in November 2009.

### 2009 CWSRF Conference

The 2009 CWSRF conference took place on July 14 - 15 in Chicago, Illinois. This national conference was organized to provide CWSRF managers and senior staff the opportunity to discuss the strategic management of the CWSRF programs. Participants explored how best to integrate water quality focused management with CWSRF financial management and how to use the CWSRF to maximize public health and water quality protection benefits. With approximately 130 attendees from EPA headquarters and Regional offices as well as managers and staff from 38 states, the conference provided an excellent opportunity for participants to network with colleagues from across the country and share fresh ideas about collaboration, innovation, and what the future of the CWSRF should look like.

### Sustainable Communities Partnership

Plans are underway for the CWSRF to play a critical role in the HUD-DOT-EPA Interagency Partnership for Sustainable Communities by sponsoring a CWSRF pilot program. Under this program, several states will receive technical assistance from EPA to modify or expand their CWSRF programs to encourage development under the principles of the sustainable communities partnership. The goal is to use the results and lessons learned from the pilot program to promote more widespread adoption of practices that encourage states to reinvest in their existing infrastructure systems. At the conclusion of the pilot program, EPA will publish a best practices guide for all CWSRF programs that wish to adopt the principles of sustainable development.

<sup>2</sup> CWSRF National Information Management System. U.S. EPA, Office of Water. Data is reported on an annual basis, covering the period from July 1 to June 30.

<sup>3</sup> CWSRF Benefits Reporting System. U.S. EPA, Office of Water.



## American Reinvestment and Recovery Act Implementation

Signed February 17, 2009, the American Recovery and Reinvestment Act of 2009 provided an unprecedented \$4 billion in funding for CWSRF programs to construct high-priority wastewater infrastructure projects. States were required to provide at least 20 percent of their grants for projects that addressed green infrastructure, energy or water efficiency, or environmentally innovative activities.

During 2009, OWM designed and implemented policies, guidance, and training materials to assist states in applying for ARRA funding and to make modifications to its tracking and reporting systems to accommodate new ARRA and Office of Management and Budget requirements. OWM also visited 49 out of the 51 CWSRF programs, providing additional support to the states' efforts in implementing ARRA.

EPA's progress in implementing ARRA has been significant. By the end of December, nearly 1,400 funding agreements had been signed, in all 50 states and Puerto Rico totaling more than \$2.96 billion. Over \$700 million went to fund green infrastructure, energy or water efficiency, and environmentally innovative projects. The Agency is on track to have all of the Recovery Act Clean Water funding under contract by the February 2010 Congressional deadline. OWM's efforts have been vital to ensuring that all of the clean water federal stimulus funding is reaching communities, funding desperately needed projects to build and restore water utilities and create and save jobs.<sup>3</sup>



### Partner of the Year Awards

More than 1,000 WaterSense partners help Americans save 36 billion gallons of water each year. EPA named five of them as WaterSense Partners of the Year for 2009, each in one of four categories: Promotional Partner of the Year (Large Utility): Cobb County Water System, Marietta, GA; Promotional Partner of the Year (Small Utility): James City Service Authority, Williamsburg, VA; Manufacturer Partner of the Year: Kohler Co., Kohler, WI; Retailer of the Year: Lowe's Companies, Inc., Mooresville, NC; and Irrigation Partner of the Year: Brian Vinchesi, Pepperell, MA.

### Partnerships and Outreach

More than 1,600 organizations and individuals have partnered with WaterSense to help advance its mission of saving water for future generations. Their efforts, combined with those of the EPA, have increased awareness of the need for water efficiency, increased availability of WaterSense-labeled products that save water and perform well, and raised the visibility of the WaterSense brand. To spread the word about WaterSense, the program relies on its Website (<http://www.epa.gov/WaterSense/>), which was redesigned in December; public service announcements; staff-authored articles in trade and consumer publications; and other media coverage. In 2009, our combined media outreach efforts have resulted in more than 1.6 billion media "impressions" with a corresponding advertising value totaling more than \$32.5 million, more than doubling of the exposure earned by the program in 2008.

## WaterSense Program

WaterSense has quickly become a national symbol for water efficiency among utilities, plumbing manufacturers, retailers, and consumers, saving Americans more than 36 billion gallons annually. As of the end of December 2009, more than 1,500 bathroom sink faucets and faucet accessories and 400 toilet models had earned the WaterSense label, which helps consumers make informed decisions when buying water-efficient products.



### First Commercial Building Product

In October, EPA released its first WaterSense specification for a commercial building product — flushing urinals. These WaterSense-labeled urinals will use 50 percent less water than standard urinals, which could save a business 40,000 gallons of water per year for every model installed.

### WaterSense for the Commercial and Institutional Sector

The WaterSense program sought input on a potential WaterSense commercial and institutional program in 2009. As a first step, the program released a white paper, "Water Efficiency in the Commercial and Institutional Sector: Considerations for the WaterSense Program," which summarized the best available resources that EPA can use for planning activities to support the sector.

### New Homes

In December, EPA released its final WaterSense single-family new home specification, creating the first national, voluntary, water-efficiency specification for an entire new home. EPA worked with hundreds of stakeholders over a three-year period to develop the specification, which was designed to complement existing green building programs. WaterSense-labeled new homes, which will be 20 percent more water efficient than typical new homes, must be independently inspected and certified by an EPA-licensed certification provider. The new homes will feature WaterSense-labeled plumbing fixtures, ENERGY STAR-qualified appliances (if installed), water-efficient landscaping, and hot water delivery systems that deliver hot water faster, so homeowners don't waste water or energy waiting at the tap.

### WaterSense-labeled Showerheads

In September, the Agency released a draft WaterSense specification for showerheads for public comment. With the specification finalized in early 2010, consumers will soon find WaterSense-labeled showerheads and be able to renovate their bathrooms with a full suite of WaterSense-labeled products—toilets, faucets, and showerheads. As one of the leading uses of water in the home, showering accounts for nearly 17 percent of residential indoor water consumption. By installing the high-efficiency showerheads, the average household could save more than 2,300 gallons of water and enough energy to power their television use for about a year.



### Weather-Based Irrigation Controllers

In November, EPA released its draft WaterSense specification for weather-based irrigation controllers, marking the first irrigation product to be considered for the WaterSense label. Once the specification is finalized, homeowners and irrigation professionals will be able to retrofit with WaterSense-labeled irrigation controllers, which create or modify irrigation schedules, to meet landscape water needs based on real-time weather data. Replacing a standard timer controller with a WaterSense-labeled controller could save more than 11,000 gallons of water annually.

# Wet Weather/Stormwater Program

Urban wet weather sources remain an important EPA priority because of the potential impacts on human health and the environment. Urban wet weather sources are among the most significant sources of water pollution today that EPA can address through the Clean Water Act. Adverse effects from wet weather are typically tied to the condition, type, and extent of the infrastructure.



## Regulatory Programs Incorporate Green Infrastructure Approaches

Increasingly, green infrastructure approaches are being incorporated into stormwater permits. In 2009, two stormwater permits were finalized, in Anchorage, Alaska and in West Virginia, requiring the inclusion of green infrastructure approaches. These approaches provide enhanced environmental benefits by requiring that discharges from all new development mimic natural hydrologic conditions.

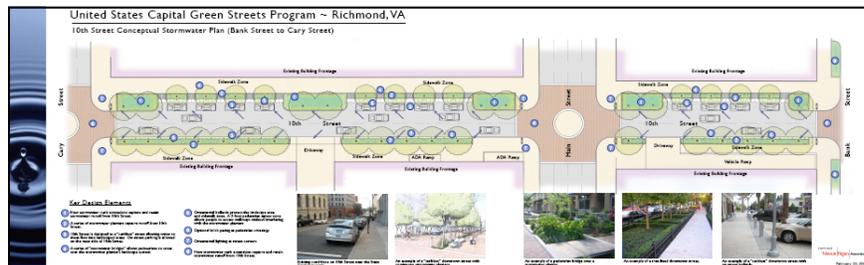
Also in 2009, OWM and EPA's Office of Wetlands, Oceans, and Watersheds jointly released the *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects* under Section 438 of the Energy Independence and Security Act for federal facilities stormwater management. The technical guidance provides background information, case studies, and guidance on meeting the new stormwater runoff guidelines.

## Green Infrastructure Workshops and Webcasts

In 2009, OWM conducted a series of workshops and Webcasts for municipal managers and others on how to manage wet weather events with green infrastructure. Nine in-person workshops were held throughout the country. In addition, a series of six Webcasts were held on a variety of topics, including the benefits of green infrastructure; revising local, plans, codes, and ordinances; water harvesting; models and calculators; site planning and design considerations; funding and incentives; and retrofits (i.e., green streets). All Webcasts are available for viewing on OWM's National Pollutant Discharge Elimination System program training Website ([www.epa.gov/npdes/training](http://www.epa.gov/npdes/training)) and for download as podcasts.

## EPA Promotes Green Capitols Project

The Agency is working to promote the Green Capitols Project, which facilitates and highlights green infrastructure retrofits in and around state capitol buildings. EPA has provided design assistance to several state-municipal partnerships committed to implementing wet weather management projects using green infrastructure approaches on capitol grounds and streets and sidewalks.



## Green Infrastructure Publications

Five installments of the *Green Infrastructure Municipal Handbook* series were released in 2009. The series provides relatively short, easy to read "how to" information on topics of interest to municipal managers. The topics covered include: retrofit policies, rainwater harvesting policies, incentive mechanisms, green streets, and the Water Quality Scorecard (in partnership with EPA's Smart Growth program), a tool to evaluate and modify local codes and ordinances to facilitate implementation of green infrastructure.



In 2009, OWM also released the *Green Jobs Training Catalog*, the *Green Streets Conceptual Design Guide*, and electronically distributed bimonthly bulletins.



## Sustainable Water Leadership Program

EPA redesigned its long-standing CWA Recognition Awards program to recognize utilities that are moving toward sustainable operations. The new "Sustainable Water Leadership Program, or SWLP," will focus on effective utility management, water and energy efficiency, and watershed approaches, including source water protection. Under the SWLP, wastewater, drinking water, and stormwater utilities, as well as managed decentralized systems, will be able to earn recognition for sustainable practices as well as awards for outstanding efforts in topic areas, which EPA will select for each awards cycle. EPA will announce the first Recognition of Sustainable Water Systems in fall 2010.

## Sustainability Policy

Based on directions contained in the President's FY 2010 budget, OWM led an effort to develop a draft SRF Sustainability Policy for the Clean Water and Drinking Water SRF programs. Working with a group of leading utilities and state SRF managers, the draft policy was submitted to OMB in September 2009. The draft policy stresses the importance of ensuring that projects receiving federal SRF funds emerge from sustainable planning processes and employ best management practices and are tied closely to community sustainability goals.

## Clean Watersheds Needs Survey (CWNS)

States, territories, and the District of Columbia completed 2008 data entry in April using the new CWNS Data Entry Portal. In June, EPA hosted state and Regional CWNS coordinators at the CWNS 2008 End of Survey Meeting in Washington, DC. Participants provided suggestions for improving the data collection process, reviewed the CWNS 2008 Report to Congress, and began plans for CWNS 2012. The CWNS 2012 State-EPA Workgroup was initiated in November. The CWNS 2008 Report to Congress was delivered to OMB for review in October.

## Sustainable Infrastructure Program

Our nation's water infrastructure systems are aging, and much of it will be reaching the end of its useful life in the next 20 to 40 years. To address the mounting needs, OWM is partnering with other EPA offices and across the sector. Our Sustainable Infrastructure Program aims to change the way the country views, values, and manages its water infrastructure. This was a year of great progress for the program, and some of the accomplishments are highlighted below.

### Effective Utility Management

Building on the ground-breaking agreement with six national associations to promote effective utility management in the water sector, OWM worked with industry partners to release a number of tools that all parties are promoting. To accompany the *"Effective Utility Management: A Primer for Water and Wastewater Utilities,"* which walks through a description of the 10 attributes of effective utility management and a simple procedure for prioritizing those areas of most importance to a specific utility, EPA and our partners released an on-line interactive version of the primer, which can be used both in a workshop setting and also by individual utilities on site. In early spring 2009, the partnership released an initial set of case studies and sponsored a pre-conference workshop on Effective Utility Management at WEFTEC 2009 and at the WEF/AWWA Utility Management Conference.

### Asset Management

OWM continued to expand its efforts to move asset management approaches into the mainstream of utility practice. In 2009, OWM continued its ongoing national training program with seven two-day sessions. Workshop materials were expanded and compiled into a stand-alone training CD, serving as both a take home package for workshop participants and a resource for those unable to attend the sessions. During 2009, OWM began the process of working in conjunction with a major university to present the workshop through distance learning, which will be available in the fall of 2010. In addition, OWM began development of a more advanced course that will focus on the developing risk assessment and optimal renewal techniques, which will be available in September 2010.

In 2009, OWM also collaborated with EPA's Office of Ground Water and Drinking Water as they released the Check Up Program for Small Systems (CUPSS), free asset management software that is geared towards small drinking water and wastewater facilities.

In addition, OWM has an ongoing collaboration with the Department of Transportation to foster the cross-sector process and practice of asset management. OWM worked in collaboration with its counterparts at Federal Highways to develop and publish case studies on five communities that are leading edge examples of cross-sector asset management. Additional outreach is underway with several other federal agencies to increase cross-agency collaboration.

### Energy Management

Using the energy management guidebook developed in partnership with EPA Region 1, OWM completed three additional workshops in Regions 3, 6, and 8. To date, OWM has sponsored a total of 11 workshops with over 1,000 participants. As a result of these workshops, the EPA Regions are working with over 100 utilities to help them develop energy management programs based on the energy management guidebook. This work is helping to spark both awareness and progress towards energy efficiency across the country.

In addition, to promote the implementation of energy conservation and recovery at wastewater treatment facilities, OWM is developing two studies that include technical and financial information on various technology options. The first focuses on energy conservation measures and high-efficiency equipment and operational modifications that result in energy savings with reasonable payback periods. The second focuses on combined heat and power technologies for publicly owned treatment works (POTWs) that utilize anaerobic digestion to produce digester gas. Both studies are being developed, and final reports will be available by fall 2010.

## Rural Program

The rural program strives to protect and improve water quality by developing and implementing National Pollutant Discharge Elimination System (NPDES) programs that target rural areas and rural populations. The program develops regulations, policies, technical implementation guidance, and outreach for EPA Regions, states, and the general public. Significant achievements in 2009 include the following:



### NPDES General Permit for Pesticide Discharges

EPA's Aquatic Pesticides rule, promulgated on November 27, 2006, was vacated by the Sixth Circuit Court of Appeals on January 7, 2009. The court ruled that discharges of chemical pesticides that leave a residue and discharges of all biological pesticides will be required, as of

April 9, 2011, to obtain NPDES permits. EPA estimates that the Sixth Circuit's ruling will affect approximately 365,000 pesticide applicators nationwide that perform 5.6 million pesticide applications annually. The court's decision covers, at a minimum, the following pesticide uses: mosquito and other flying insect pest control, aquatic weed and algae control, aquatic nuisance animal control, and forest canopy pest control.

During the past year, OWM has worked closely with the Office of Prevention, Pesticides, and Toxic Substances to collect and analyze data on pesticide applications (including labeling requirements, pesticide uses, best management practices employed to minimize the impact of pesticides on water quality, and existing state water quality standards for pesticides). EPA has drafted an NPDES Pesticides General Permit that it will issue for areas where EPA remains the NPDES permitting authority. The draft permit will be available for public review and comment in spring 2010. OWM has collaborated closely with its co-regulators so that states will be able to develop their permits by April 2011 also.

### Implementing the 2008 CAFO Rule

In 2009, OWM worked to provide a clear and consistent understanding of the 2008 revised concentrated animal feeding operation (CAFO) rule through various public outreach efforts, such efforts included a widely attended public Webcast, regular conference calls with the Association of State and Interstate Water Pollution Control Administrators, and many sector-



Source: USDA/NRCS Image Gallery

specific presentations at various national meetings, including the National Cattlemen's Beef Association and the 2009 International Poultry Exposition. Additionally, OWM hosted a three-day training course for 65 Regional and state regulatory authorities to provide information on how to review nutrient management plans (NMPs) and include terms of the NMPs in the permit.

OWM also continued to work with EPA Regions and states to provide ongoing, EPA-sponsored technical support through an \$8 million grant that provides livestock operations with nutrient management plans and environmental assessments at no cost to the operations. OWM assisted authorized states with program implementation including NPDES permit and program reviews for Illinois, New York, Maryland, Missouri, and Pennsylvania as well as Regions 6 and 10 in their development of EPA CAFO general permits. Accordingly, in 2009, OWM began revising existing guidance for permit writers and producers on the CAFO regulations to reflect the 2008 revisions.



Source: USDA/NRCS Image Gallery

## Chesapeake Bay Protection & Restoration

On May 12, 2009, President Obama issued Executive Order 13508 on Chesapeake Bay Protection and Restoration. The Executive Order set 2009 deadlines for EPA to develop a Water Quality Report, referred to as the "202(a) report," and for seven federal agencies to develop a Draft Strategy for Protecting and Restoring the Chesapeake Bay.

To develop the water quality report and draft strategy, OWM led four cross-office workgroups, on animal agriculture, stormwater, POTWs and onsite systems, and worked in consultation with the states, DC, and key stakeholders.

OWM assisted in developing the next generation of federal initiatives to be included in the report and strategy to reduce pollution in the Bay watershed from concentrated animal feeding operations, municipal stormwater, wastewater treatment facilities, and onsite disposal systems.



Source: USDA/NRCS Image Gallery

### Priority Permits

In 2009, EPA and authorized states issued 1,118 priority permits, exceeding the national commitment of 743 permits.

### Permit Backlog Reduction

For the third year in a row since OWM began tracking the backlog in 1999, states and Regions met the national goal of 90 percent current for individual and non-stormwater general permits.

### Permit Quality Reviews

OWM continued to assess the integrity of the national NPDES program by performing permit quality review (PQRs). In 2009, PQRs were conducted in Regions 6 & 10.

### Action Items

Since 2005, Regions, states, and territories have committed to approximately 331 action items. These action items were identified during the 2004 Permitting for Environmental Results review of state and Regional NPDES permitting programs and the most recent PQRs and help improve program integrity and effectiveness. By the end of FY09, 229 of the action items (69%) were completed.

### Petitions to Withdraw State NPDES Programs

The Petition Response Team manages an Agency-wide effort to resolve petitions asking EPA to withdraw the authority of states that administer the NPDES permit program. In 2009, petitions to withdraw three state programs (in Washington, Michigan, and Pennsylvania) were resolved. Since 2001, a total of 23 withdrawn petitions have been resolved.

## State & Regional Program

The State & Regional Program provides technical and policy support to help implement the NPDES program. Through coordination with states and EPA Regions, the program guides consistent and effective translation of water quality goals and standards into permit limits and conditions. It resolves legal barriers that prevent optimal program implementation and provides proactive and consistent management of external legal drivers. It also provides timely information on the integrity of the NPDES program implementation while working cooperatively to produce efficient processes and measurable results.

### Chesapeake Bay Executive Order

OWM has taken an active role in implementing the Chesapeake Bay Executive Order. OWM developed and reviewed key sections of the report titled, *The Next Generation of Tools and Actions to Restore Water Quality in the Chesapeake Bay*. These sections related to challenges, policy, and future regulatory actions in the bay. OWM also has been providing ongoing technical expertise to the workgroups tasked with creating guidance for implementing the Chesapeake Bay Total Maximum Daily Load (TMDL).

### Mountaintop Mining

In 2009, EPA initiated a comprehensive review of surface coal mining in central Appalachia focusing on Clean Water Act Section 402 and 404 permitting, stemming from the *Memorandum of Understanding among the U.S. Department of the Army, the U.S. Department of the Interior, and the U.S. Environmental Protection Agency Implementing the Interagency Action Plan on Appalachian Surface Coal Mining* (June 11, 2009). Working with EPA Regions 3, 4, and 5, OWM conducted a permit quality review for surface coal mining NPDES programs in Kentucky, West Virginia, Ohio, and Tennessee. In addition, OWM staff worked with staff in OW, OST, OWOW, ORD, OGC, OECA, and the Administrator's Office to develop guidance for better environmental permitting of surface coal mines.

### Climate Change

Building upon the 2008 National Water Program's Climate Change Strategy, OWM continued assessing how climate change will affect the NPDES permit program and is developing a white paper to evaluate how to adapt the current NPDES program to address the impacts of climate change.

### Urban Waters

In March 2009, EPA introduced the Urban Waters initiative to focus on helping communities, particularly underserved communities, to reconnect with and revitalize their water environments. OWM has been involved in several Urban Water workgroups and is developing workplans for such topics as integrating green infrastructure into stormwater management plans, reducing combined sewer overflows, and promoting wastewater operation certification training.

### NPDES Permit Writers Training Course

In 2009, the NPDES Permit Writers Training was held in five locations (Phoenix, AZ, Portland, OR, Austin, TX, Atlanta, GA, and Woodbridge, VA) and provided basic NPDES training to approximately 200 students. This course is EPA's principal tool to provide state and EPA permit writers with a comprehensive understanding of the core tenets of the NPDES permit program and to promote consistency across the states and Regions. The course has expanded and evolved over the past 20 years to address program changes and is highly rated by participants.

### NPDES Permit Writers Web-Based Training

In 2009, seven modules from the classroom version of the NPDES Permit Writers Training were converted into a narrated, Web-based training format and posted on EPA's NPDES Website. State and EPA Regional permitting staff, as well as stakeholders and the public, can now access this training and learn the basics of EPA's recommended approach for developing NPDES permits. This Web-based training was well received by state permitting agencies that have had difficulty sending staff out of state to attend classroom training. Efforts to convert all of the modules to the Web-based format are continuing, and we hope to complete the series in 2010.

## State & Tribal Water Pollution Control Grants

Section 106 of the Clean Water Act authorizes EPA to provide federal assistance to states (including territories and the District of Columbia), interstate agencies, and Indian tribes to establish and implement ongoing water pollution control programs. Prevention and control measures supported by water quality management programs include ambient water quality monitoring, water quality standards development, total maximum daily load development, NPDES permitting, enforcement, advice and assistance to local agencies, and the provision of training and public information.

### State Water Pollution Control Grants

Increasingly, EPA and states are working together to develop basin-wide approaches to water quality management. The Section 106 Grant Program is helping to foster a watershed protection approach at the state level by looking at states' water quality problems holistically, and targeting the use of limited finances available for effective program management. In 2009, more than \$175 million in Section 106 Grant funding was provided to states and interstate agencies to help restore impaired water bodies.



### Tribal Water Pollution Control Grants

For tribes, Section 106 grants are a crucial, dedicated source of funding for developing, maintaining, and expanding programs designed to control, prevent, and eliminate water pollution. Tribes began receiving Section 106 funds in 1989. Since then, the tribal set-aside has grown from less than \$1 million to approximately \$25 million, in 2009. Of the 562 federally recognized tribes, approximately 377 meet the criteria to receive Section 106 funding, and 67% (252) of these tribes are currently eligible to receive grants.

Tribes across the country are using Section 106 grants to identify and proactively address water quality priorities and concerns. Tribes can use Section 106 grants for a wide range of water pollution control activities, including: assessing water quality on tribal lands, establishing water quality goals and objectives, conducting regular monitoring and data reporting, and implementing quality assurance processes to ensure data reliability.

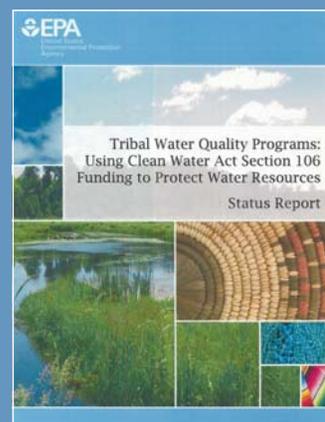
### State and Tribal Water Monitoring Initiative

In 2009, OWM continued its work with EPA's Office of Wetlands, Oceans and Watersheds to enhance state monitoring strategies and implement a multi-year statistically valid survey of the nation's waters. Using approximately \$18.5 million per year, OWM and OWOW are working with states and tribes to enhance their water quality monitoring programs and report on water quality monitoring data collected through the statistically valid surveys. This will allow EPA, states, and tribes to continue to report on the condition of the nation's waters and make significant progress toward assessing trends in water condition in a scientifically defensible manner. In 2009, the National Lakes Assessment was completed. This assessment will provide the first ever baseline study of the condition of the nation's lakes.



## Tribal Section 106 Program Status Report

In December, the Agency published a status report for the Tribal Section 106 Program, which highlights tribal achievements over the program's 20-year history in developing comprehensive, effective water quality programs and improving and protecting water quality on tribal lands.



*The Tribal Water Quality Programs: Using Clean Water Act Section 106 Funding to Protect Water Resources Status Report:*

- Provides an overview of tribal water quality programs,
- Describes the critical water quality activities that tribes fund with Section 106 grants,
- Highlights the rapid growth of the program over the past 20 years,
- Outlines current and future challenges facing tribal water programs, and
- Illustrates how tribes have used this funding to protect water resources across the country.



Source: USDA/NRCS Image Gallery

## Webinars on Emerging Contaminants

OWM, in coordination with EPA Office of Water's Office of Science and Technology, EPA's Office of Resource Conservation and Recovery, and WM Healthcare Solutions, Inc., sponsored two Webinars in 2009 on emerging contaminants. The Webinar topics included efforts to investigate and control dental mercury amalgam discharges to publicly owned treatment works, the management of unused pharmaceuticals, and EPA's proposed universal waste rule. Both Webinars have been archived and can be accessed at: [http://cfpub.epa.gov/npdes/outreach.cfm?program\\_id=0&otype=1](http://cfpub.epa.gov/npdes/outreach.cfm?program_id=0&otype=1).

## Industrial Program

Wastewater discharges from industrial sources may contain pollutants at levels that affect the quality of receiving waters. OWM's industrial program works to protect and improve water quality through technology-based and water quality-based permitting. Stormwater, pretreatment, and industrial permitting are within its scope. As part of the NPDES permit program, it establishes specific requirements that control the pollutant discharges from industrial sources.

## Development of Draft Report to Congress on Vessel Discharges

On March 8, 2009, EPA proposed a report to Congress on vessel discharges, a first of its kind scientific analysis of the level of pollutants in wastewater discharges from commercial fishing vessels and other non-recreational vessels less than 79 feet. The results of the study will be provided to Congress in a report summarizing the findings as to the nature and extent of the potential effects of the discharges, including determinations of whether the discharges pose a risk to human health, welfare, or the environment, and the nature of those risks. Congress mandated that EPA evaluate the impacts of vessel discharges subject to regulation under the NPDES Vessel General Permit in July 2008. The sampling survey was required of EPA by Congress by Public Law 110-299.



Since significant data were not available from existing data sources for most discharges, OWM staff designed and implemented a vessel discharge sampling program. Through this sampling program, the team collected wastewater pollutant characterization data for nine vessel discharges sampled from a total of 61 vessels (one to five discharges sampled per vessel), resulting in more than 22,000 analytical results being obtained from the survey. These samples were collected in 15 different towns and cities in nine separate states, representing several major regions in the United States. The common vessel classes prioritized for evaluation were: commercial fishing vessels and tenders, tugs/towing vessels, water taxis/small ferries, and tour boats. Another critical component of EPA's sampling program was gaining a better understanding of shipboard processes, equipment, materials and operations that contribute to the discharges, as well as the discharge rates, duration, frequency, and location.



## Vessel General Permit Implementation

OWM has led the effort to implement the recently issued Vessel General Permit for many vessels larger than 79 feet. These efforts have included launching an electronic notice of intent (NOI) system for vessels and creating publicly available searchable interfaces of these NOIs (available at: <http://cfpub.epa.gov/npdes/vessels/vesselsnoisearch.cfm>). As of March 2010, over 46,000 NOIs have been received by EPA. Additionally, outreach efforts have included OWM staff presenting to over 3,000 individuals at conferences and on Webcasts.

## Sustainable Communities

Small, rural communities (i.e., communities with fewer than 10,000 people), Indian reservations, and communities along the U.S./Mexico border have historically experienced difficulty in achieving Clean Water Act goals, due in part to lack of resources and technical expertise. The Sustainable Communities program aims to provide small and underserved communities with the financial and technical assistance and education necessary to achieve sustainable, appropriate, and cost-effective water infrastructure.

### Rural Community Assistance Partnership (RCAP)

In FY09, RCAP continued to carry out its mission to help rural people improve the quality of life in their communities by assisting small, lower income rural communities to resolve water supply and waste disposal problems and needs. The organization provides technical assistance, training, and information dissemination, and coordinates community leaders and outside agencies in this effort. In FY09, RCAP held 81 training workshops for nearly 1,309 community leaders in 33 states and territories. RCAP served about 97,000 people through 81 technical assistance projects in 83 communities. RCAP has successfully leveraged and combined funding from other state and federal loan programs, such that for each dollar that EPA invested in RCAP for wastewater, about \$7.17 was spent for communities to have a wastewater system installed or updated.

### U.S./Mexico Border Program

In 2009, the U.S./Mexico Water Border Infrastructure Team received an EPA National Awards Gold Medal from Administrator Jackson for their exemplary work to improve the quality of life for millions of residents in the U.S./Mexico Border area. Public health and environmental concerns due to raw sewage exposure are shared by both countries along the border. Incidence rates for dysentery and hepatitis are significantly higher in border communities than the U.S. national average. EPA and its partners (the Border Environment Cooperation Commission, the North American Development Bank, CONAGUA – Mexico's Water Commission, and state and local governments) have created the capacity to eliminate 300 million gallons per day of raw sewage from the environment. Through FY09, the Agency has invested \$535.7 million in construction funds for 84 water infrastructure projects with a total construction cost of \$1.6 billion. Fifty-one of the 84 projects have completed construction and are providing often first-time drinking water and/or wastewater service to border residents. Program investments through FY09 have provided an additional 178,950 homes with access to wastewater sanitation, exceeding the program's long-term commitment of connecting 172,681 homes by 2012.

### Water Sector Competency Model

In cooperation with EPA's Office of Groundwater and Drinking Water, American Water Works Association, and Water Environment Federation, OWM worked to develop a "water sector competency model," which defines the skill-sets for water-sector jobs. The model is now available on the CareerOneStop Website. Competency models are used by the Department of Labor's (DOL's) Employment and Training Administration to assess career- and skill-development needs. Submission of the water sector model represents a big first step towards orienting the multi-billion dollar DOL training conduit towards water workforce development.

### Partnerships to Improve Management of Septic Systems

In 2009, the decentralized program made great strides in encouraging cooperation among stakeholders with regard to better management and maintenance of septic systems, which are so critical for protecting human health and the environment. For the first time, two major stakeholders in the decentralized field, the State Onsite Regulators Alliance and the National Environmental Health Association, held their annual meetings together to provide maximum opportunity for coordination and education for their members as well as coordination with the EPA staff that held a Regional forum at the same meeting. In addition, the EPA Regional Coordinators met with their respective states in order to better coordinate efforts and to offer their assistance. The 14 decentralized partners also held their annual face-to-face meeting in Washington, DC, and shared information regarding ongoing partnership activities for the purpose of their 2010 workplan.

### Alaska Native Village (ANV) Program

With support from Region 10, the ANV program has coordinated with the Drinking Water and Clean Water Indian Set-aside Programs to increase the percentage of homes in Alaska with drinking water or sewer services from about 60 percent in 1993 to nearly 92 percent. Alaska has also quickly processed stimulus funds from the American Resources and Recovery Act. As of the end of December, three of the six completed ARRA projects are in Alaska. The program utilized findings from the Office of Management and Budget's Program Assessment Rating Tool (PART) reassessment to substantially improve program accountability and ultimately received a significantly improved score. A Web-based project tracking system has been implemented, a program management procedure was developed, and a more meaningful program efficiency measure was developed in coordination with OMB.

### Clean Water Indian Set-Aside (CWISA) Grant Program

The CWISA program awarded \$70 million in grants to Indian tribes for the planning, design, and construction of wastewater treatment facilities in Indian Country in 2009. \$60 million through the American Recovery and Reinvestment Act. Over 19,000 homes in tribal lands received assistance from the CWISA Program to meet basic wastewater needs, and as of the end of December, 94 of the 95 CWISA ARRA tribes had signed memorandums of agreement with the Indian Health Service (IHS) identifying ARRA project scope and milestones. The program continues work with the Inter-Agency Tribal Infrastructure Taskforce to address the United Nation's Millennium Development Goals and coordinates approaches to improve access to safe drinking water and basic sanitation in Indian Country by working closely with staff from EPA's Office of Groundwater and Drinking Water and Office of International & Tribal Affairs and IHS.

## **We welcome your comments!**

Thank you for your interest in the OWM annual report. We welcome all comments and suggestions about how we can make this report a more useful and informative document for our readers. Please send comments to [gude.karen@epa.gov](mailto:gude.karen@epa.gov) or:

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