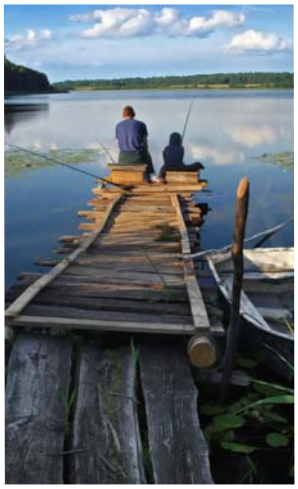
Office of Wastewater Management
2010 Annual Accomplishments Report



United States Environmental Protection Agency

Message from the Director

The Office of Wastewater Management (OWM) manages and implements a diverse array of programs that promote effective and responsible water use, treatment, disposal, and management and encourage the protection and restoration of our waterways. I am pleased to present the 2010 OWM Annual Report, which highlights some of OWM's most significant accomplishments in fiscal year (FY) 2010 as we work to protect public health and preserve and protect our nation's waters.

Among our accomplishments in FY 2010, OWM continued its commitment to supporting and promoting sustainable water infrastructure and water efficiency. In June, OWM issued the *Clean Watersheds Needs Survey 2008 Report to Congress*. The report demonstrates that our current and future infrastructure needs are significant, documenting a 20-year need of $298 billion. To increase the sustainability of our water and wastewater nationwide, in October, the Office of Water released the *Clean Water and Drinking Water Sustainable Infrastructure Policy*. The policy encourages communities to pursue sustainable, cost-effective, and resource-efficient investment in their water resources, while encouraging "green" alternatives. To help educate the public on the importance of water efficiency and encourage consumers to implement water-saving behaviors, in July, the WaterSense program kicked off its "We're for Water" campaign. Since the program's inception in 2006, WaterSense has helped consumers save a cumulative 46 billion gallons of water.

In FY 2010, OWM and its partners worked to ensure timely investment of the $4 billion appropriation in financial assistance for wastewater utilities under the American Reinvestment and Recovery Act (ARRA) of 2009. With our state partners, OWM succeeded in placing 100 percent of ARRA funding under contract by the February 2010 deadline established by Congress, ensuring that all of the clean water federal stimulus funding is reaching communities, funding desperately needed projects to build and restore water utilities and support local economies across the country.

The National Pollutant Discharge Elimination System (NPDES) permit program continues to implement critically important Clean Water Act protections. In FY 2010, OWM initiated rulemaking to both better protect our waterways from stormwater discharges from new and redeveloped sites and to address sanitary sewer overflows and long-standing issues with peak flows. To further clarify and strengthen environmental permitting requirements for Appalachian mountaintop removal and other surface coal mining projects, OWM—working in coordination with Regions 3, 4, and 5; the Office of Wetlands, Oceans and Watersheds; and the Office of General Council—issued guidance to EPA Regions on establishing NPDES permit requirements for discharges from Appalachian surface coal mining sites. In addition, in June, EPA issued a draft NPDES Pesticide General Permit for point source discharges from the application of pesticides to waters of the United States, requiring all operators to reduce pesticide discharges by using the lowest effective amount of pesticide, preventing leaks and spills, calibrating equipment, and monitoring for and reporting adverse incidents.

In 2011, OWM will continue to focus on innovative solutions to encourage and promote green infrastructure approaches, energy- and water-efficiency initiatives, and effective municipal financing mechanisms as we work with our partners to protect human health and the environment.

James A. Hanlon, Director
Office of Wastewater Management

Table of Contents

Our 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.

Message from the Director 2

OWM Mission 3

About OWM 4-5

Commitment to Diversity 5

Program Highlights 6

Results Areas

Clean Water State Revolving Fund 7

WaterSense Program 8

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

About the Office of Wastewater Management

Clean Water is the goal of all Office of Wastewater Management 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 public health; support economic and recreational activities; and provide a healthy habitat for fish, plants, and wildlife. OWM 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 28,190 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.
- 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.
- The **National Pollutant 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.
- 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.
- 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.

OWM Leadership

James Hanlon, Director
Randy Hill, Deputy Director

Planning, Information & Resources Management Staff
Ben Hamm, Director

Municipal Support Division
Sheila Frace, Director
Bill Anderson, Deputy Director

Sustainable Communities Branch
Kellie Kubena, Chief
Sustainable Management Branch
Bonnie Gitlin, Chief
State Revolving Fund Branch
George Ames, Chief
WaterSense Branch
Veronica Blette, Chief

Water Permits Division
Linda Boornazian, Director
Deborah Nagle, Deputy Director

State and Regional Branch
Tom Laverty, Chief
Martha Segall, Asst. Chief
Municipal Branch
Connie Bosma, Chief
Rural Branch
Allison Wiedeman, Chief
Industrial Branch
Marcus Zobrist, Chief

Our Budget

In FY 2010, OWM's programs, including state and tribal assistance (and excluding American Reinvestment and Recovery Act funding), accounted for almost $2.4 billion, or nearly 23 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 Regions, states, local governments, and tribes to regulate point source discharges into surface waters, including: wetlands, lakes, rivers, estuaries, bays, and oceans.

About the Office of Wastewater Management

The **Office of Wastewater Management** and its staff of more than 100 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).

The **Municipal Support Division** 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.

The **Water Permits Division** provides national program direction to the National Pollutant Discharge Elimination System permit, pretreatment, and sewage sludge management programs under 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.

A Commitment to Diversity in the Workplace

OWM takes pride in its efforts to foster a diverse work place. In September 2008, OWM revitalized its Diversity Action Team, which strives to advocate for diversity through engaging and thought-provoking events; raise awareness of diversity issues in OWM and the Agency through outreach materials and participation in EPA and other federal government diversity events; and increase awareness and understanding of environmental issues and EPA career opportunities among diverse groups.

This year, the team led, as well as played a lead role in, a number of thoughtful and engaging diversity events. Event themes have ranged from disabilities awareness, to Bengali history and culture, to women's history month. This year's events culminated in October with a speech by civil rights leader, Julian Bond, who spoke on the evolution of diversity within the workplace in his speech, "Race Relations: In the Day, Today and Tomorrow."

Julian Bond gives speech, "Race Relations: In the Day, Today and Tomorrow," at October 2010 diversity event.

OWM also continues to break new ground in the area of recruitment of underserved groups. In partnership with the Immediate Office of Water (OW) and EPA Region 6, OWM aggressively pursued a Memorandum of Understanding (MOU) with Texas A&M University in Kingsville, Texas, a Hispanic-serving institute, to offer upcoming internships and possible longer-term career opportunities to qualified students studying engineering and other scientific disciplines.

On April 13, 2010, Peter Silva, the Assistant Administrator for the Office of Water, signed the MOU, which allows OW and Region 6 to offer short-term (i.e., internships) and longer-term employment opportunities for qualified students at Texas A&M University. This was then followed with an EPA recruitment event at Texas A&M University in October 2010.

In addition, OWM worked with the Washington, DC Mayor's 2010 Summer Youth Employment Program to hire an intern for the summer, providing an opportunity for them to gain practical experience working for the EPA.

Program Highlights — 2010 Results

ARRA Implementation — OWM and its state partners succeeded in placing 100 percent of the $4 billion in American Reinvestment and Recovery Act (ARRA) funding for Clean Water State Revolving Fund (CWSRF) programs under contract by the February 2010 deadline—resulting in more than 1,870 ARRA CWSRF projects being placed under contract in all 50 states and Puerto Rico, totaling more than $3.8 billion.

2008 Clean Watersheds Needs Survey Report to Congress — In June, OWM delivered the 2008 Clean Watersheds Needs Survey to Congress. The report summarizes the results of the Agency's 15th national survey on water quality pollution control needs. The report estimates $298 billion in needs over the next 20 years, including $192 billion for wastewater treatment and collection systems, $64 billion for combined sewer overflow corrections, and $42 billion for stormwater management.

Photo by Jose Rodriguez, EPA. Region 6, Photo courtesy of USEPA

WaterSense "We're for Water" Campaign — In July, the WaterSense program kicked off its new "We're for Water" campaign to educate consumers about water-saving behaviors and WaterSense labeled products. The "We're for Water" campaign builds on WaterSense's continued success in helping to educate the public about water efficiency efforts. Since its inception in 2006, the WaterSense program has helped consumers save a cumulative 46 billion gallons of water and $343 million in water and sewer bills.

Photo by Eric Vance, USEPA., Photo courtesy of USEPA

Sustainability Policy — In October, the Office of Water issued its *Clean Water and Drinking Water Infrastructure Sustainability Policy*, with the goal of increasing the sustainability of water and wastewater infrastructure in the United States. The policy emphasizes the need to build on existing efforts to promote sustainable water infrastructure and focuses on working with states and utilities to employ comprehensive planning processes that result in projects that are cost effective over their life cycle, resource efficient, and consistent with community sustainability goals. The policy encourages effective utility management practices to build and maintain the level of technical, financial, and managerial capacity necessary to ensure long-term sustainability.

Vessels Report to Congress — In August 2010, EPA issued its final report to Congress on incidental vessel discharges. The report provided the Agency's findings from its study of discharges incidental to normal operation of commercial fishing vessels and other non-recreational vessels less than 79 feet in length. The report will provide Congress with information it may use for the regulation of incidental discharges from certain vessels.

Photo by Eric Vance, USEPA., Photo courtesy of USEPA

Pesticide General Permit — In April, OWM issued a proposed Pesticide General Permit that would require dischargers of pesticides in, over, or near U.S. waters to reduce pesticide discharges by using the lowest effective amount of pesticide, prevent leaks and spills, calibrate equipment, and monitor for and report adverse incidents. EPA estimates that the pesticide general permit will affect approximately 35,000 pesticide applicators that perform approximately half a million pesticide applications annually, decreasing the amount of pesticides discharged to our nation's waters.

Clean Water State Revolving Fund

Since the inception of the Clean Water State Revolving Fund (CWSRF) in 1987, in excess of $84 billion in financial assistance has been provided through more than 28,190 assistance agreements to important water quality protection projects. These projects include 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. CWSRF-funded projects have helped communities meet environmental standards, protect valuable resources, and ensure public health.

In FY 2010, the CWSRF programs provided an unprecedented $10 billion (combined American Reinvestment and Recovery Act and base CWSRF program funding) to communities for water quality protection projects. Of the nearly 3,500 assistance agreements funded in FY 2010, approximately 19 percent of those were for "green projects," which incorporated energy- or water-efficiency components or green infrastructure elements, or were deemed environmentally innovative. Under the CWSRF program, states must provide subsidies to eligible funding recipients, including grants, principal forgiveness, and negative interest loans. In FY 2010, more than $2.9 billion in additional subsidization was provided through the CWSRF program.

American Reinvestment and Recovery Act of 2009: Management & Oversight – Signed February 17, 2009, ARRA provided an unprecedented $4 billion in funding for CWSRF programs to help with infrastructure needs nationwide. By the February 17, 2010 deadline mandated by Congress, EPA and its state partners succeeded in placing all of their ARRA funds under contract—resulting in more than 1,870 ARRA CWSRF projects being placed under contract in all 50 states and Puerto Rico, totaling more than $3.8 billion. By the end of FY 2010, more than 56 percent of these funds had been expended, funding efforts to improve our nation's wastewater systems, public health, and the quality of environment while also creating and saving jobs.

Under ARRA, states were also required to provide at least 20 percent of their grants for projects that addressed green infrastructure, energy or water efficiency, or environmentally innovative activities. By the February 17, 2010 deadline, states had far exceeded these "green project" requirements, reporting over $1.1 billion in executed funding agreements for green project reserve projects, representing approximately 30 percent of all ARRA funding for CWSRF projects. The green project reserve, introduced into the CWSRF program by ARRA, was such a success that it has been extended to the 2010 CWSRF appropriation.

Throughout FY 2009 - FY 2010, the CWSRF team at EPA Headquarters has conducted management and oversight of the ARRA funds in all 50 states and Puerto Rico. As a part of this effort, EPA has conducted onsite Regional reviews as well as onsite state visits and project inspections. In addition, the Agency's modifications to its online reporting system, the CWSRF Benefits Reporting system, in 2009, have been critical in successful tracking and monitoring of the ARRA funds. The Agency plans to continue its efforts to monitor and oversee the ARRA funds in FY 2011, and training will be provided to all 10 EPA Regions to ensure that the Regions are performing adequate management of the CWSRF programs.

Sustainable Communities Partnership: Pilot Technical Assistance Program – On June 16, 2009, EPA joined with the U.S. Department of Housing and Urban Development (HUD) and the U. S. Department of Transportation (DOT) in the Sustainable Communities Partnership. This partnership was designed to coordinate housing investments, federal transportation, and environmental protection to support sustainable development. As part of this partnership, in FY 2010, the CWSRF program, in cooperation with EPA's Smart Growth Office, initiated a Pilot Technical Assistance Program for Sustainable Communities. The program helps states restructure their CWSRF programs to better support communities that adopt sustainable strategies, like transit-oriented, mixed-use development and brownfields redevelopment. CWSRF programs in New York, Maryland, and California were selected to participate in the pilot program. Under this program, the New York Environmental Facilities Corporation, the Maryland Department of the Environment, and the California State Water Resources Control Board received technical assistance from EPA to revise their project rating and ranking criteria, re-evaluate their use of subsidy, and make changes to their intended use plans. This work will help states leverage previous infrastructure investments, use taxpayer dollars wisely, support vigorous community planning, and help preserve valuable natural environments, while ensuring clean and reliable wastewater collection and treatment. The experiences and lessons learned from working with these pilots will serve as a model for other states.

CWSRF Programs Meet to Discuss Implementation Efforts – The CWSRF Branch held a meeting in April 2010 with the directors of the CWSRF programs from the six states in the Chesapeake Bay watershed. The meeting provided a forum to exchange views on the role the CWSRF program plays in supporting implementation of the Chesapeake Bay executive order. At the meeting, the current efforts that CWSRFs are undertaking to fund high-priority projects in the Bay were discussed, along with state project priority setting and nutrient trading. Financing ideas for improving interstate cooperation and collaboration in implementation activities were also discussed. EPA Region 3 plans to include a discussion on the Chesapeake Bay at their All-States meeting in spring 2011 to continue the discussion that was started in April.

WaterSense Program

WaterSense is a national symbol for water efficiency among utilities, plumbing manufacturers, retailers, and consumers. Since the program's inception in 2006, WaterSense has helped consumers save a cumulative 46 billion gallons of water and $343 million in water and sewer bills. In 2009 alone, WaterSense labeled products helped consumers save more than 36 billion gallons of water. As of the end of September 2010, more than 2,100 bathroom sink faucets and faucet accessories, 600 tank-type toilets, 41 flushing urinal fixtures and valves, and 200 showerhead models had earned the WaterSense label, which helps consumers make informed decisions when buying water-efficient products.

Flo Visits Capitol Hill

WaterSense Launches "We're for Water" Campaign — On July 14, 2010, EPA's WaterSense® program kicked off its new multi-year "We're for Water" campaign to educate consumers about water-saving behaviors and WaterSense labeled products. The "Check-Twist-Replace" campaign began with a classic American road trip from Los Angeles, CA to New York, NY. The road trip kicked off with a friendly water-efficiency competition challenge between two families. A gallon of water saved from this competition became Flo, the official "spokesgallon" for the campaign, who then traveled across the country, stopping at national landmarks and local events along the way—from the Las Vegas Strip, to Mount Rushmore, to Graceland and Capitol Hill—to spread the word about saving water. The public was able to follow Flo's progress on the WaterSense website and Facebook page as she helped raise public awareness about the need for water efficiency.

New WaterSense Specifications —

In December, WaterSense released its new homes specification

- In October 2009, WaterSense released its final specification for flushing urinals, the program's first commercial product. WaterSense labeled urinals are independently certified to be 50 percent more efficient than the current federal standard of one gallon per flush and perform just as well, even in busy commercial settings.
- In November 2009, WaterSense released its draft specification for weather-based irrigation controllers, the first irrigation product to be considered for the WaterSense label. Replacing a standard timer controller with a WaterSense labeled controller can save more than 11,000 gallons of water annually.
- In December 2009, WaterSense released its final specification for new homes, creating the first national, voluntary, water efficiency specification for an entire new home. The new homes, which will be at least 20 percent more water efficient than typical new homes, will feature WaterSense labeled plumbing fixtures, ENERGY STAR-qualified appliances (if installed), and water-efficient landscaping.
- In March 2010, WaterSense released its final specification for showerheads, which will allow consumers to completely make over their bathrooms with WaterSense labeled products. Installation of a WaterSense labeled showerhead can save more than 2,300 gallons per year and also save energy costs associated with heating that water.

2010 Partner of the Year Awards — The WaterSense program's nearly 2,000 partners help save water for future generations by promoting water efficiency and WaterSense labeled products. In 2010, EPA named four of these partners as the 2010 WaterSense Partners of the Year for their exceptional efforts in promoting WaterSense in 2009:

- Promotional Partner of the Year: Cascade Water Alliance, King County, Washington
- Manufacturer Partner of the Year: Moen Incorporated
- Retailer Partner of the Year: Lowe's Companies, Inc.
- Irrigation Partner of the Year: Judy Benson of Clear Water Products and Services, Inc. (Clear Water PSI), Florida

This year, WaterSense expanded its awards program to include its first ever Excellence Awards, which recognize additional organizations and individuals whose WaterSense support stood out in one or more of the evaluation categories:

Strategic Collaboration

- Albuquerque-Bernalillo County (New Mexico) Water Utility Authority
- Robert Dobson of Middletown Sprinkler Company, Port Monmouth, New Jersey
- Drains Plus, Inc., Durham, North Carolina
- Kohler Co.

Labeled Products in the Marketplace

- Caroma

Demonstrated Results

- Bryan Condray of DLC Resources, Inc., serving Arizona and Nevada.

2010 WaterSense Partners of the Year

Second Annual Fix-A-Leak Week — The WaterSense program held its second annual Fix-a-Leak Week, March 15 to 21, 2010, to encourage the public to improve the water efficiency of homes and irrigation systems by checking for and fixing leaks. Partnering with water utilities, manufacturers, retailers, communities, plumbers, and other professionals, WaterSense promoted ways to identify and repair dripping faucets, running toilets, and leaky showerheads. Dozens of WaterSense partners and other organizations helped spread the word, hosting dozens of events. For example, Dallas Water Utilities, in partnership with EPA, held The Great Dallas Fix a Leak Week Roundup, ramping up an existing plumbing repair and retrofit program for qualified, low-income residential water customers. Dallas estimates the repairs and renovations made during the roundup will save more than 2 million gallons annually.

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 water infrastructure.

Strengthening Stormwater Regulations — In FY 2010, EPA initiated national rulemaking to better protect water bodies from the harmful effects of stormwater discharges from newly developed and redeveloped sites and to make other regulatory improvements to the nation's stormwater program. Some of the regulatory improvements EPA is considering include: (1) establishing more specific requirements to control discharges from newly developed and redeveloped sites, (2) designating additional stormwater discharges subject to federal regulation, (3) establishing requirements to better manage existing discharges (retrofitting), where necessary, to protect water quality, and (4) establishing more specific requirements to protect the Chesapeake Bay.

Photo by Eric Vance, USEPA., Photo courtesy of USEPA

To help inform the rulemaking, EPA held a number of listening sessions in January through March of 2010, and conducted a national webcast, with more than 2,000 participants attending these sessions. In addition, the Agency accepted written comments via the public docket to gain early input on stormwater practices and ideas for revisions to EPA's stormwater regulations under the Clean Water Act. EPA also distributed surveys to regulated municipal separate storm sewer systems (MS4s); unregulated MS4s, NPDES permitting authorities, state departments of transportation, and owners/operators of sites. The information gathered from these surveys will be used to estimate the impact of any regulatory changes. EPA also initiated efforts to convene a panel of small businesses that may be affected by this rulemaking to obtain their perspectives and advice on the regulatory changes that EPA is considering. EPA issued a *Federal Register* notice soliciting nominations of small businesses to participate on this panel and has selected the panel members. EPA intends to propose a rule in September 2011 and take final action in November 2012.

Proposed Rulemaking for Sanitary Sewer Overflow & Peak Flows — In FY 2010, EPA also initiated a process to address sanitary sewer overflows and to resolve longstanding issues concerning peak flows. As a part of this effort, EPA is considering whether to propose possible modifications to the NPDES regulations to address sanitary sewer collection systems and sanitary sewer overflows, clarifying the obligations of municipal satellite sewer systems in reducing overflows and requiring operation and maintenance programs for municipal sewer systems.

In addition, EPA is considering the direction to take to resolve several longstanding issues regarding the management of excess wet weather flows at public owned treatment plants.

In June and July of 2010, EPA held four public listening sessions throughout the country and a public webcast and accepted written comments from the public. The Agency is currently reviewing and considering the comments received.

Issuing a MS4 Permit Improvement Guide — In April 2010, the Agency issued its MS4 Permit Improvement Guide to assist permit writers in strengthening MS4 stormwater permits. The guide provides suggestions for permit writers on how to develop permit language for each of the six minimum control measures required by the Phase II stormwater regulations, including: (1) public education and outreach, (2) public participation and involvement, (3) illicit discharge detection and elimination, (4) construction site runoff control, (5) post-construction site runoff control, and (6) pollution prevention and good housekeeping.

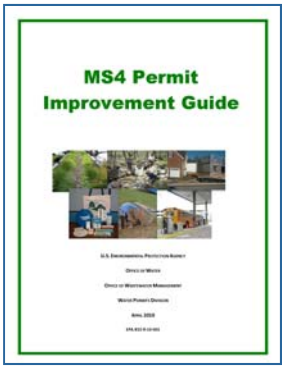


Photo by Nancy Arazan, USEPA., Photo courtesy of USEPA

Green Infrastructure — As part of the stormwater rulemaking, EPA has initiated several efforts that will provide a much better understanding of the benefits of green infrastructure, as well as the cost and operation and maintenance considerations of green infrastructure technologies. EPA is developing and modifying models and collecting information via surveys, site visits, and literature reviews. This information will be used to develop the economic analysis of regulatory options. In addition to the activities associated with the rulemaking, EPA organized five green infrastructure workshops and developed and field tested Green LTCP EZ, a tool that small municipalities can use to incorporate green infrastructure in their long-term plans to control combined sewer overflows.

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. The Sustainable Infrastructure Program aims to change the way the country views, values, and manages its water infrastructure.

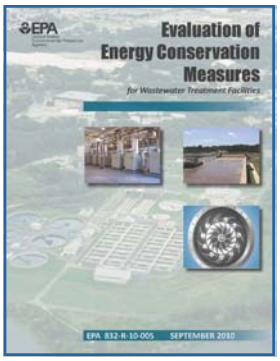
Sustainability Policy — In October 2010, EPA issued its *Clean Water and Drinking Water Infrastructure Sustainability Policy* to promote sustainable water and wastewater infrastructure. The policy emphasizes the need to build on existing efforts to promote sustainable water infrastructure, working with states and water systems to employ robust, comprehensive planning processes that result in projects that are cost effective over their life cycle, resource efficient, and consistent with community sustainability goals. The policy encourages developing sustainable systems that employ effective utility management practices to build and maintain the level of technical, financial, and managerial capacity necessary to ensure long-term sustainability. Working with its state, local, and federal partners, EPA will develop guidance, provide technical assistance, and target federal state revolving fund capitalization funds and other relevant federal financial assistance to increase the sustainability of water infrastructure in the United States and the communities it serves.

Photo Credit: USDA/NRCS Image Gallery

Effective Utility Management — Building on the groundbreaking agreement with six national associations to promote effective utility management (EUM) in the water sector, OWM worked with industry partners to promote the use of a number of EUM tools, including the *Effective Utility Management: A Primer for Water and Wastewater Utilities*, which provides 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 are also promoting an interactive version of the primer, located at http://www.watereum.org/. This version of the primer can be used both in a workshop setting and also by individual utilities on site. In early spring 2009, EPA published an initial set of case studies and participated in a pre-conference workshop on EUM at the Water Environment Federation/American Water Works Association Utility Management Conference. More recently, EPA began work with the Water Research Foundation as this organization begins to develop a tool to help utilities benchmark its performance based on the EUM attributes and associated performance metrics.

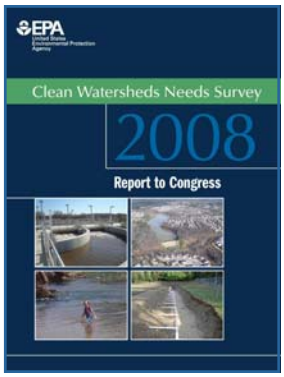
Asset Management— OWM reached a milestone in its work to promote asset management practices, delivering its 50th asset management training session, having trained over 4,000 people. Building on the popularity and success of these courses, OMW also beta tested a new upper-level asset management course. This course is designed for those who are looking to strengthen their existing asset management program and focuses on effectively using risk to determine the end of life of assets.

Energy Conservation Measures for Publicly Owned Treatment Works — In September, EPA released a technical document to assist municipal utility owners and operators in finding information on cost-effective energy management and energy conservation measures and technologies to reduce total energy usage at their facilities. The document, "Evaluation of Energy Conservation Measures for Wastewater Facilities," presents technical and cost information about energy management and energy conservation measures and technologies.



Energy Management — Using the energy management guidebook developed in partnership with EPA Region 1, OWM completed one additional workshop in Region 6 in FY 2010. To date, OWM has sponsored a total of 11 workshops with over 1,000 participants, and the EPA Regions have sponsored an additional 10 workshops. 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 guidebook. This work is helping to spark both awareness and progress towards energy efficiency across the country.

Clean Watersheds Needs Survey — In June 2010, EPA issued the *Clean Watersheds Needs Survey 2008 Report to Congress*. The report summarizes the results of the Agency's 15th national survey, estimating nationwide wastewater and stormwater pollution control capital investment needs at more than $298 billion over the next 20 years. This estimate includes $192 billion for wastewater treatment and collection systems, $64 billion for combined sewer overflow corrections, and $42 billion for stormwater management. In addition to the wastewater and stormwater needs, the report appendix includes other documented needs for nonpoint source pollution prevention ($22.8 billion) and decentralized/onsite wastewater systems ($23.9 billion). In comparison to 2004, an additional 3.6 million people now receive centralized collection and wastewater treatment, for a total of 226.4 million people (or 74 percent of the U.S. population).



Rural Program

The Rural Program strives to protect and improve water quality by developing and implementing NPDES programs to assist rural areas and rural populations. The program develops regulations, policies, technical implementation guidance, and outreach for EPA Regions, states, and the general public.

Pesticide General Permit — In June 2010, EPA issued a draft NPDES Pesticide General Permit (PGP) for point source discharges from the application of pesticides to waters of the United States. The draft, released for public comment and developed in collaboration with states, requires operators to reduce pesticide discharges by using the lowest effective amount of pesticide, preventing leaks and spills, calibrating equipment, and monitoring for and reporting adverse incidents.

EPA conducted a precedent-setting effort to coordinate with its state partners in the development of the PGP. Because NPDES-authorized states, as well as the EPA, must develop permits by April 9, 2011, it was essential that EPA provide states with information about potential permit requirements as early as possible. Regular conference calls as well as three face-to-face meetings were held with the states to share drafts of the permit and exchange valuable input and experiences. This process was well received by the states. EPA plans to finalize the permit in January 2011, with an effective date of April 9, 2011.

Following release of the draft PGP, EPA held three public meetings, a public hearing, and a webcast in June 2010, to present the proposed requirements of the permit and answer questions. EPA accepted written comments on the draft permit through July 19, 2010.

Implementing the Concentrated Animal Feeding Operation (CAFO) Rule — EPA continues to provide technical assistance to states and farmers to help them better understand and comply with the 2008 CAFO Rule. In May 2010, the Agency issued guidance, commonly referred to as the "Duty to Apply" guidance, to assist operators in determining when they need to apply for a NPDES permit. EPA is also developing guidance for permit writers regarding how to review Nutrient Management Plans (NMPs). Additionally, OWM continues to support the Regions in reviewing state programs to ensure their compliance with the 2008 rule requirements.

Photo Credit: USDA/NRCS Image Gallery

OWM is also providing direct support to farmers. Through an $8 million grant, technical assistance is being provided to livestock operators, offering both environmental assessments and NPMs for operators that are confidential and free of charge. In addition, OWM, through a grant from the U.S. Department of Agriculture (USDA) and EPA to Purdue University, is making available a Manure Management Planner software program, which provides permitting authorities and producers assistance with NMP development. EPA continues to work with Purdue and USDA to refine the software to ensure that the NMPs produced comply with the 2008 rule.

Photo Credit: USDA/NRCS Image Gallery

EPA has also developed and conducted a five-day training course to educate permit writers and compliance staff about how to review NMPs to ensure they are accurate prior to permit issuance. To date, 85 individuals have participated in the course, including NPDES permit writers from all 10 EPA Regions and 20 states, compliance and enforcement staff, state-level Natural Resources Conservation Service staff, cooperative extension faculty and staff from several leading land grant universities, and field technical service providers. In addition to classroom instruction, a visit to a dairy and turkey farm was conducted to provide participants real world training regarding NMP implementation.

Reducing Impacts from CAFOs— The Chesapeake Bay executive order calls for reductions of nutrients and sediment from all sources in the Chesapeake Bay, including CAFOs. In response, EPA will develop regulations that address the following:

- Expanding the universe of permitted CAFOs,
- Adding more stringent requirements for nutrient management plans,
- Addressing off-site manure transfer, and
- Streamlining the designation process.

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.

Mountaintop Mining — In August 2010, EPA issued a report, "*Review of Clean Water Act Section 402 Permitting for Surface Coal Mines by Appalachian States: Findings and Recommendations*," providing findings from Permit Quality Reviews (PQRs) performed to assess NPDES permitting of Appalachian surface coal mining operations in Tennessee, Ohio, Kentucky, and West Virginia.

Climate Change — Building upon the 2008 National Water Program's Climate Change Strategy, OWM continued developing a white paper assessing how climate change may affect the NPDES permit program and evaluating how best to adapt the current NPDES program to address any impacts of climate change. OWM also developed an internal draft checklist to be used for considering climate change during rulemaking activities.

Urban Waters — In March 2009, EPA introduced the Urban Waters Initiative to help underserved communities reconnect with and revitalize their water environments. OWM continues to support the Office of Water's (OW's) workgroups and is developing workplans for integrating green infrastructure into stormwater management plans, reducing combined sewer overflows, and promoting wastewater operation certification training.

Clean Water Act Action Plan — OWM continued to play a key role (with the Office of Enforcement and Compliance Assurance) in implementing the Clean Water Act Action Plan. In FY 2010, OWM led OW's efforts to develop a set of draft new approaches to target permitting in waterbodies with critical water quality problems, strengthen permits and oversight, and increase transparency. In June 2010, EPA issued a memo to initiate *Interim Guidance to Strengthen Performance in the National Pollutant Discharge Elimination System Program*.

TMDL Offset Requirements – OWM continues to take an active role in developing key sections of the report titled, "*The Next Generation of Tools and Actions to Restore Water Quality in the Chesapeake Bay, the Draft Strategy for Protecting and Restoring the Bay*"; the 202(a) Report. For new and expanding discharges into the Chesapeake Bay watershed, EPA prepared an appendix to the Total Maximum Daily Load (TMDL) for nutrients and sediments, setting forth requirements for offsets and potentially a net improvement offset for increased loads not accounted for in the TMDL.

NPDES Tools, Training, and Clarifications —

- **Proposed Sufficiently Sensitive Test Methods Requirement:** In June 2010, OWM proposed amendments to CWA regulations to codify that under the NPDES program, only "sufficiently sensitive" analytical test methods—those that are capable of detecting and measuring the pollutants at, or below, the respective water quality criteria or permit limits—can be used when completing an NPDES permit application and when performing sampling and analysis pursuant to monitoring requirements in an NPDES permit.
- **New Whole Effluent Toxicity (WET) Statistical Approach:** On June 18, 2010, OWM issued an additional statistical approach for analyzing WET test data used for determining reasonable potential to exceed water quality standards and the need for WET limits in permits and permit compliance.
- **NPDES Permit Writers Manual:** On September 30, 2010, OWM issued the second edition of the NPDES Permit Writers Manual, providing updates to this key NPDES program guidance document.
- **Traditional Classroom and Web-based NPDES Permit Writers Training:** In FY 2010, five NPDES Permit Writers Training sessions were held throughout the country. The course provided basic NPDES training to approximately 190 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. In FY 2010, the Agency also worked to convert the classroom version of the NPDES Permit Writers Training into a narrated, Web-based training format, completing 6 of 12 modules.

Permit Program Integrity

- **Priority Permits:** In FY 2010, EPA and authorized states issued 1,094 priority permits, exceeding the national commitment of 788 permits.
- **Permit Backlog Reduction:** For the fourth 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 conducting PQRs for Regions 1 and 8 and Regional Program Reviews and PQRs for Regions 4 and 8.
- **Action Items:** Since 2005, Regions, states, and territories have committed to 372 action items to help improve NPDES program integrity and effectiveness; 282 of these action items were identified during the 2004 Permitting for Environmental Results review of state and Regional NPDES permitting programs. By the end of FY 2010, 234 of these original action items (83 percent) were completed. In FY 2010, another 41 were added as a result of the most recent PQRs.
- **Petitions to Withdraw State NPDES Programs**—The Petition Response Team manages an EPA-wide effort to resolve petitions asking EPA to withdraw the authority of states that administer the NPDES permit program. Since 2001, 23 withdrawn petitions have been resolved. In FY 2010, OWM worked with the Regions and other HQ offices on 17 withdrawal petitions for 13 states.

State and Tribal Water Pollution Control Grants

Section 106 of the CWA authorizes EPA to provide federal assistance to states (including territories and the District of Columbia), interstate agencies, and eligible tribes to establish and implement ongoing water pollution control programs. Prevention and control measures supported by water pollution control programs include ambient water quality monitoring, water quality standards and TMDL development, NPDES permitting and enforcement, advice and assistance to local agencies, training, and public information. In FY 2010, more than $229 million in Section 106 funding was provided to states, interstate agencies, and tribes to prevent and control water pollution.

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 FY 2010, more than $180 million in Section 106 grant funding was provided to states and interstate agencies to help restore impaired water bodies. OWM, working with the Environmental Council of States and the Association of State and Interstate Water Pollution Control Administrators, formed a task force to update the 1998 Resource Analysis. This analysis will provide critical information on state expenditures and needs for Clean Water Act programs.

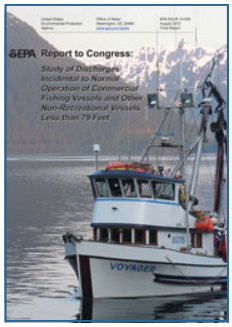
Tribal Water Pollution Control Grants — For tribes, Section 106 grants are a crucial, dedicated source of funding for developing, maintaining, and expanding programs designed to control, prevent, and eliminate water pollution. Tribes began receiving Section 106 funds in 1989. Since then, the tribal set-aside has grown from less than $1 million to approximately $26 million, in FY 2010. Of the 562 federally recognized tribes, approximately 350 meet the criteria to receive Section 106 funding, and 67 percent (252) of these tribes were eligible to receive grants in FY 2010. Tribes across the country are using Section 106 grants to identify and proactively address water quality priorities and concerns.

Permitting and Enforcement Funding — Issuing and ensuring compliance with NPDES permits is a key tool in meeting water quality goals. In FY 2010, Congress directed EPA to provide $10.7 million in Section 106 funding to states and tribes to conduct additional permitting and enforcement activities. OWM developed supplemental guidance on the use and tracking of these funds.

State and Tribal Water Monitoring Initiative — In FY 2010, OWM continued its work with EPA's Office of Wetlands, Oceans and Watersheds (OWOW) on the monitoring initiative. Using approximately $18.5 million per year, OWM and OWOW are working with states and tribes to enhance their water quality monitoring programs and implement a multi-year statistically valid survey of the nation's waters. This year, states and tribes conducted sampling and reported water quality monitoring data for the coastal survey. The monitoring initiative allows 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.

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, vessels, 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.



Vessels Report to Congress – In August 2010, EPA issued its final report to Congress on incidental vessel discharges. The report provided the Agency's findings from its study of discharges incidental to normal operation of commercial fishing vessels and other non-recreational vessels less than 79 feet in length. The report found that discharges from the study vessels may have the potential to impact the aquatic environment and/or human health. Using the results obtained in this study, EPA modeled a large, hypothetical harbor to evaluate how the nine vessel discharge types EPA sampled may impact water quality. Based on this evaluation, EPA determined that the incidental discharges from study vessels to a relatively large water body are not likely to solely cause an exceedance of any National Recommended Water Quality Criteria (NRWQC). This finding suggests that these discharges are unlikely to pose acute or chronic exceedances of the NRWQC across an entire large water body. However, since many of the pollutants present in the vessel discharges were at end-of-pipe concentrations that exceeded an NRWQC, there is the potential for these discharges to contribute a water quality impact on a more localized scale. The report was developed in response to Public Law (P.L.) 110-299 (July 31, 2008). EPA announced the availability of its draft vessels report to Congress on March 8, 2010. After considering and addressing the comments received, EPA released the final report to Congress in August 2010.

BP Spill response – On April 20, 2010, the Deepwater Horizon drill vessel exploded and sank in the Gulf of Mexico, leading to the loss of 11 lives and a disastrous oil spill. In the aftermath of that accident, EPA received numerous questions about applicable CWA regulations, how to address potential discharges from the uncontrolled spill, and the potential for discharges from a variety of other vessels. Many of these questions raised significant technical and policy questions, and all required an immediate response. During the height of the incident response (April through August), many OWM staff responded to emergency questions, providing timely and accurate responses, and provided critical staffing and support to EPA's Emergency Operations Center.

Water Transfers – In June 2008, EPA published the Water Transfers Rule. EPA is currently considering re-evaluating this rule to better address water quality impacts for some transfers. EPA has established and chairs an interagency workgroup (with representatives from EPA, USDA, the U.S. Department of the Interior, the U.S. Department of Justice, and the U.S. Army Corps of Engineers) to explore options for addressing water transfers with the potential for significant harm.

Coal Combustion Residual Flue Gas Desulfurization (FGD) – On June 7, 2010, OWM issued guidance to assist state and federal permitting authorities in developing appropriate permit limits for several types of discharges from steam electric power plants. The guidance addresses how permit writers should develop technology-based permit limits for wastewater discharges from flue gas desulfurization. FGD discharges have become more prevalent and challenging for permit writers as more air emissions controls are added to plants and more pollutants are removed from the air and transferred to wastewater. EPA's Office of Science and Technology is developing national Effluent Limitations Guidelines (ELGs) that, when complete, will set national standards for technology-based permit limits. Those ELGs are expected to be finalized in 2013 and will replace the guidance at that time.

Vessel Ballast Water Studies – OWM is working to improve the scientific understanding of the effects of vessel ballast water discharges and the capabilities of ballast water treatment systems. In partnership with the U.S. Coast Guard, OWM, commissioned the National Academy of Sciences (NAS) to study the risk posed by living organisms in ballast water. This is believed to be the first study of its kind in. A white paper that EPA's Office of Research and Development developed at the request of OWM serves as a foundation for this study. In addition, OWM, in partnership with the U.S. Coast Guard, commissioned EPA's Science Advisory Board (SAB) to provide an assessment of available technologies to minimize the discharge of living organisms. The work by the NAS and the EPA SAB will help inform the development of EPA's next Vessel General Permit and potential future rulemaking by the U.S. Coast Guard.

Surface Coal Mining— Based in part on the results of Permit Quality Reviews of surface coal mining in some Appalachian states and emerging science, OWM worked with staff in Regions 3, 4, and 5; the Office of Wetlands, Oceans and Watersheds; and the Office of General Council to develop guidance to further clarify and strengthen environmental permitting requirements for Appalachian mountaintop removal and other surface coal mining projects, in coordination with federal and state regulatory agencies. The guidance document, *Improving EPA Review of Appalachian Surface Coal Mining Operations under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order*, issued in April 2010, provides comprehensive guidance to Regions with permitting responsibility in Appalachian states. The guidance clarifies existing requirements of the Section 402 and 404 CWA permitting programs that apply to pollution from surface coal mining operations in streams and wetlands. EPA expects this information will provide improved consistency and predictability in the CWA permitting process.

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.

Alaska Native Village (ANV) Program — The ANV Program has coordinated with the Clean Water and Drinking 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 today. In FY 2010, the ANV Program awarded $13 million to develop and construct water and wastewater systems to improve health and sanitation conditions in more than 300 homes in smaller, rural Alaska communities. Program management has improved through successful implementation of a management control policy that identifies stalled projects and reallocates funds to ensure timely expenditure—a management model that other federal agencies that fund projects in rural Alaska have adopted.

Rural Community Assistance Partnership (RCAP) — In February 2010, Administrator Jackson praised the RCAP for the work that Ohio RCAP did in helping EPA get ARRA projects funded quickly. In FY 2010, 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 resolve water supply and waste disposal problems and needs. The organization sustained its extensive technical assistance, training, and coordination efforts with community leaders and outside agencies. As of June 2010, RCAP has held 31 training workshops for nearly 550 community leaders representing 294 different systems. To date, RCAP has served more than 145,500 people through 103 technical assistance projects in 107 communities.

Clean Water Indian Set-Aside (CWISA) Grant Program — The CWISA Program awarded $42 million for planning, design, and construction of wastewater treatment facilities in Indian Country in FY 2010, funding 87 projects that will serve approximately 10,470 tribal homes with basic wastewater services. Significant progress was made on ARRA-funded projects. Forty-two percent of the ARRA funds were expended in FY 2010, and seven projects were completed. The program continued work with the Inter-Agency Tribal Infrastructure Taskforce to address the United Nation's Millennium Development Goal to improve access to safe drinking water and basic sanitation in Indian Country, working closely with EPA staff as well as USDA, Indian Health Service, and HUD. The two tribal set aside programs also finalized a National Inter-agency Agreement template for consistent funding implementation across EPA Regions.

U.S./Mexico Border Program — EPA and its partners (the Border Environment Cooperation Commission, the North American Development Bank, CONAGUA – Mexico's Water Commission, and state and local governments) continue working on water infrastructure projects to reduce health risks to residents, including sensitive populations of children and elders who may currently lack access to safe drinking water and sanitation. Through FY 2010, EPA has awarded $644 million for the construction of high-priority drinking water and wastewater infrastructure projects. The program has funded 92 projects, 65 of which have been completed. Nearly five million people are benefiting from completed projects and more than eight million people will benefit once the 27 projects under construction are completed. Program investments through FY 2010 have provided an additional 75,175 homes with access to wastewater sanitation, exceeding the program's long-term commitment of connecting 172,681 homes by 2012 by 47 percent.

Partnerships to Improve Management of Septic Systems — In FY 2010, the decentralized program continued to encourage cooperation among stakeholders to promote better management and maintenance of septic systems. This year, the program launched a dedicated Wiki site for decentralized issues to allow partners and stakeholders to collaborate and share information on best practices, research, events, news, etc. In July, EPA and the 14 Decentralized MOU Partners held their annual meeting in Washington, DC, to discuss priorities for collaboration and research in the coming year.

2010 NOTC Conference — In June, the 2010 National Operator Trainers' Conference was held in Albany, NY. Over 45 participants attended this year's event, which helped educate participants about new, low-cost applications and processes available for operating small wastewater treatment facilities. The annual conference was well received by participants. The Water Environment Federation has agreed to take on sponsorship of the NOTC in 2011.

Model State Program to Reduce Nutrient Loadings for Onsite Systems — To address growing concerns regarding the contribution of nutrients from onsite (or decentralized) systems into the Chesapeake Bay watershed, OWM has initiated development of a model state program to assist state and local governments in reducing nitrogen loadings from onsite systems. Elements of the model program include: requiring installation and maintenance of nitrogen reduction systems by trained and certified professionals, using cluster systems for densely populated areas and new development, and connecting to sewers systems, where cost effective. EPA intends to communicate a clear expectation that the jurisdictions achieve the onsite system load reductions and will review the management plans developed by the states for consistency with the Bay TMDL and the state Watershed Implementation Plans.

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