Office of Wastewater Management

2012 Annual Report

EPA United States Environmental Protection Agency

Message from the Acting Director

This year has been one of big achievements and big changes for EPA's Office of Wastewater Management (OWM). The year marked the 40th anniversary of the Clean Water Act. The Act has served as a comprehensive, national strategy for dealing with water pollution, helping to eliminate unchecked pollution, keeping billions of pounds of sewage, chemicals, and trash out of our waterways, and providing substantial federal assistance to state and local governments to provide and assure adequate clean water infrastructure. The Act serves as a foundation for many of OWM's programs.

Throughout fiscal year (FY) 2012, OWM continued its work, in partnership with states, local governments, and the private sector, to implement Clean Water Act protections, helping to safeguard and maintain our nation's waterways. In FY 2012, OWM worked with its partners to limit pollution from stormwater and reduce overflows from sewer systems. In coordination with EPA's Office of Enforcement and Compliance Assurance (OECA), OWM outlined new flexibilities as a part of its *Integrated Municipal Stormwater and Wastewater Planning Approach Framework*, to help communities prioritize wastewater and stormwater infrastructure investments and take advantage of innovative, cost-saving solutions. OWM also continued to champion green infrastructure approaches, allocating $950,000 to provide technical assistance to communities across the country to expand green infrastructure use and, in September 2012, hosting a conference with the White House Council on Environmental Quality to explore pathways to more broadly implement green infrastructure.

This year, OWM continued to provide national direction for financial assistance programs that support wastewater treatment and nonpoint source control, water quality management, and wastewater infrastructure for communities across the country, including small and disadvantaged communities. Through these programs, including the Clean Water State Revolving Fund Program, Section 106 Grant Program, Clean Water Indian Set Aside Program, Alaska Native Villages Grant Program, and U.S.-Mexico Border Water Infrastructure Program, EPA awarded more than $1.9 billion to state and tribal governments in FY 2012 alone.

Also in FY 2012, OWM's National Pollutant Discharge Elimination System (NPDES) permit program continued to implement a number of important Clean Water Act protections and worked to improve the management and oversight of state programs. In FY 2012, the NPDES program issued its first-ever Pesticide General Permit, a revised Construction General Permit, and draft Vessel General Permits. OWM also transitioned the NPDES permit quality review (PQR) process from EPA headquarters to the Regions and launched an effort to combine the PQR process with OECA's State Review Framework process into a single, integrated process for oversight of state NPDES programs.

Moving forward, OWM will continue to focus its energy and resources on effective implementation of its clean water programs in order to:

- Promote green and sustainable water infrastructure,
- Champion water conservation and effective utility management,
- Assist small, underserved communities with targeted technical and financial assistance to support infrastructure development,
- Promote environmental justice, and
- Produce results that support EPA's mission to protect human health and the environment.

As we close out 2012, I also want to recognize the retirement, in May 2012, of James Hanlon after 39 years of dedicated federal service, the last 10 of those as OWM's director. Jim's tenure in OWM led to the success of many of its key programs, including the implementation of the Clean Water State Revolving Fund, the establishment of EPA's WaterSense program, and the maturation of the NPDES program. All of us in OWM thank him for his service to the American public.

Randolph L. Hill, Acting Director
Office of Wastewater Management

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About the Office of Wastewater Management

Clean Water is the goal of all OWM programs. Through its programs and initiatives, OWM promotes compliance with the requirements of the Clean Water Act. Overall, OWM's programs are designed to ensure 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, 25 years ago, the **Clean Water State Revolving Fund** programs have provided more than $95 billion in funding to support nearly 31,900 low-interest loans for wastewater treatment, control of nonpoint source pollution, and estuary protection.
- Through **WaterSense**, OWM is helping to raise national awareness of water as a valuable 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. To date, the WaterSense program has helped save consumers more than 287 billion gallons of water and over $4.7 billion in water and energy bills.
- Under its **Sustainable Infrastructure Program**, OWM is promoting widespread adoption of better utility management practices, water efficiency practices, effective energy management, full-cost pricing, and watershed approaches to reduce costs and increase system investments.
- Through its **Sustainable Communities Program**, OWM is targeting technical and financial assistance with its partners to support infrastructure development that will reduce health risks and increase economic opportunity for small, underserved communities that face a disproportionate lack of access to adequate and sustainable wastewater treatment.
- The **National Pollutant Discharge Elimination System Program** controls water pollution by regulating point sources that discharge pollutants into our surface waters. In FY 2012, under EPA's NPDES program, permits that implemented Clean Water Act requirements for industrial sources, municipal treatment plants, and stormwater management prevented the discharge of an estimated 205 billion pounds of pollutants into U.S. waterways.
- OWM's **Green Infrastructure** initiative focuses attention on an approach to wet weather management that 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 Office of Wastewater Management 's **mission** is 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. OWM 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.

In FY 2012, OWM's programs, including state and tribal assistance, accounted for almost $1.7 billion, or more than 20 percent of EPA's budget.

The **Office of Wastewater Management** comprises 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. MSD works to promote sustainable wastewater infrastructure and improve wastewater management. The division also 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, the division promotes 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 NPDES permit, pretreatment, and sewage sludge management programs under the Clean Water Act. WPD develops regulations, policy, guidance, and national strategies related to NPDES permits, manages national implementation of the NPDES program, and oversees Regional and state operations. The division also coordinates with the Office of Enforcement and Compliance Assurance to promote compliance with NPDES requirements, and with the Office of Science and Technology in the development of national standards for point sources and indirect dischargers.

OWM Leadership
October 2012

Randolph L. Hill, Acting Director
Sheila Frace, Acting Deputy Director

Planning, Information & Resources Management Staff
Sarita Hoyt, Acting Director

Municipal Support Division
Bill Anderson, Acting Director
Bonnie Gitlin, Acting Deputy Director

Sustainable Communities Branch
Kellie Kubena, Chief
Sustainable Management Branch
Gary Hudiburgh, Acting Chief
State Revolving Fund Branch
George Ames, Chief
WaterSense Branch
Veronica Blette, Chief

Water Permits Division
Deborah Nagle, Director
Brian Frazer, Deputy Director

State and Regional Branch
Tom Laverty, Chief
Ross Brennan, Assoc. Chief
Municipal Branch
Connie Bosma, Chief
Rural Branch
George Utting, Acting Chief
Industrial Branch
Marcus Zobrist, Chief

2012 Program Highlights

Promoting Consistency and Transparency in State NPDES Program Oversight — OWM continued its work to enhance the effectiveness of its oversight of state NPDES permitting programs. It transitioned the permit quality review (PQR) process from EPA Headquarters to EPA Regions and launched an effort to combine the PQR process (housed in OWM) with the State Review Framework process (housed in EPA's Office of Enforcement and Compliance Assistance) into a single, "integrated" process for oversight of state programs. Working with OECA and the Regions, it developed tools and a management framework to standardize the process of review and enhancement of memoranda of agreement for state NPDES programs.

Using Integrated Planning to Manage Stormwater Releases — To help local governments develop stormwater and wastewater management plans to reduce overflows and keep raw sewage and pollutants out of the nation's waters, OWM issued a new *Integrated Municipal Stormwater and Wastewater Planning Approach Framework*. The framework provides EPA, states, and local governments with guidance on how to develop and implement effective integrated planning approaches for municipal stormwater and wastewater management. Once developed, the plans will help communities prioritize their investments in stormwater and wastewater infrastructure while improving the flexibility to pursue innovative, cost-savings solutions, like green infrastructure.

Promoting Sustainability Planning — To help address the ongoing challenge of sustaining our water infrastructure, OWM released a comprehensive handbook, *Planning for Sustainability: A Handbook for Water and Wastewater Utilities*, to help water sector utilities build sustainability considerations into their planning. The handbook will help utilities ensure that water infrastructure projects across the nation, including those funded through the State Revolving Fund programs, are sustainable and support the long-term sustainability of the communities these utilities serve.

Connecting Veterans with Water Sector Jobs — To help connect veterans with disabilities to career opportunities in the water and wastewater sectors, EPA and the U.S. Department of Veterans Affairs (VA) Vocational Rehabilitation and Employment Program signed a memorandum of understanding (MOU) as part of EPA's Water Sector Workforce Initiative. The agreement demonstrates EPA's and the VA's commitment to connect qualified veteran employees with staffing needs at water and wastewater utilities.

Challenging Students to Seek Innovative Approaches to Stormwater Management — To help raise awareness of green design and planning approaches at colleges and universities and train the next generation of landscape architects, planners, and engineers in green infrastructure principles and design, OWM launched a new design competition, the Campus Rainworks Challenge, to encourage student teams on college and university campuses across the country to develop innovative approaches to stormwater management.

Promoting Responsible Water Reuse — To help facilitate the use of reclaimed water as an alternative source to conventional water supplies, EPA's Office of Research and Development and Office of Water issued EPA's *2012 Guidelines for Water Reuse*. These reuse guidelines update and build on the Agency's previous reuse guidelines issued in 2004, incorporating information on water reuse that has been developed since the 2004 document was issued.

Enabling Apartments & Condominium Units to Earn the WaterSense Label — OWM modified its specification for new homes to enable apartment and condominium units to earn the WaterSense label, update product requirements, and adjust landscape criteria. WaterSense labeled new homes allow residents to save water and energy inside and out by using WaterSense labeled plumbing fixtures, efficient hot water systems, and low-maintenance, water-smart landscapes. Compared to traditional homes, WaterSense labeled new homes can save a family of four up to 50,000 gallons of water and as much as $600 in water and energy bills annually.

Clean Water State Revolving Fund Program

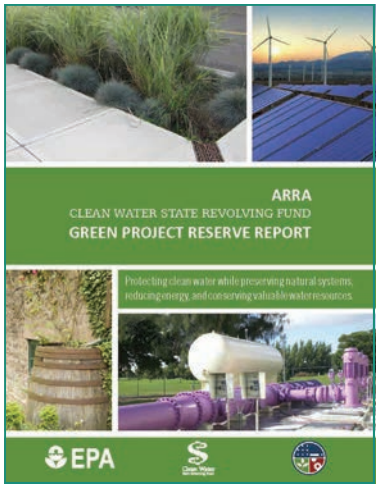
Since the inception of the Clean Water State Revolving Fund (CWSRF) in 1987, the fund has provided more than $95 billion in financing for important water quality protection projects through nearly 31,900 assistance agreements. These projects include wastewater treatment, nonpoint source pollution control, and watershed and estuary management. In 2012 alone, CWSRFs provided low interest rates, flexible terms, and assistance through 1,947 assistance agreements. CWSRF-funded projects have helped communities meet environmental standards, protect valuable resources, and ensure public health.

American Reinvestment and Recovery Act (ARRA): Management & Oversight – In 2010, the EPA allocated $4 billion in ARRA funding to the CWSRF. More than 1,870 loans were executed with these funds. By the end of FY 2012, more than 96 percent of these funds were expended to fund efforts improving our nation's wastewater systems, public health, and the quality of the environment while also creating and saving jobs. From FY 2009 to FY 2012, the CWSRF team has conducted continuous management and oversight of the ARRA funds in all 50 states and Puerto Rico.

Promoting Sustainability Planning – To further promote sustainability within the state revolving fund community, EPA also released *Sustainability and the Clean Water State Revolving Fund: A Best Practices Guide*. This document compiles existing policies and practices that support EPA's *Clean Water and Drinking Water Infrastructure Sustainability Policy*, and highlights innovative projects and financing mechanisms not widespread among the states.

In addition, EPA released two reports detailing pilot efforts in California and Maryland, exploring opportunities for their SRF programs to further support sustainable, livable communities.

CWSRF Green Project Reserve – Through the Green Project Reserve (GPR), all CWSRF programs are required to direct a portion of their capitalization grant toward projects that address green infrastructure, water efficiency improvements, energy efficiency improvements, or other environmentally innovative activities. While these types of projects have always been eligible for CWSRF funding, the GPR originated with ARRA. With the success of the GPR implemented under ARRA—approximately 30 percent of total ARRA funding for CWSRF projects went to GPR projects—the Green Project Reserve has been required by CWSRF appropriations every year since FY 2010. The CWSRF program, through GPR, is helping achieve innovative solutions to wastewater infrastructure needs, achieving economic and environmental benefits that will continue to accrue for years to come.



In FY 2012, OWM developed a new website (http://water.epa.gov/grants_funding/cwsrf/Green-Project-Reserve.cfm) to share information about the CWSRF program, providing state revolving fund programs and other stakeholders with guidance, case studies, and other resources to assist in implementing the program. In addition, OWM released a suite of new materials highlighting the innovative approaches that states have used to successfully implement "green" projects using the CWSRF GPR. These included: the *ARRA Clean Water State Revolving Fund Green Project Reserve Report*, which examines the performance of the CWSRF ARRA GPR and highlights a number of innovative state approaches to successfully implement the GPR, as well as eight case studies and two videos highlighting specific projects funded by the CWSRF GPR.

WaterSense Program

WaterSense is a national symbol for water efficiency among utilities, plumbing manufacturers, retailers, and consumers. WaterSense labeled products and new homes have helped consumers save billions of gallons of water. As of the end of September 2012, more than 3,500 bathroom sink faucets and faucet accessories, 1,100 tank-type toilets, 140 flushing urinal fixtures and valves, and 600 showerhead models had earned the WaterSense label, which helps consumers make informed decisions when buying water-efficient products.

First Community in Nation Where All New Homes Earn WaterSense Label — In January 2012, zHome, an ultra-sustainable, 10-unit townhome development in Issaquah, Washington, became the first community in the nation in which every home has earned the WaterSense label for new homes. zHome was designed to push the limits of sustainable, production housing. It is the first zero-energy, carbon-neutral townhome community in the U.S., and also received the Forest Stewardship Council's 2011 award for the best residential project in North America. In addition, zHome strove to demonstrate a multitude of water-efficient technologies, with a net reduction of 70 percent in potable water use compared to a typical King County, Washington home.

Program Updates —

- In November 2011, OWM released a final specification for weather-based irrigation controllers, the first outdoor product category to become eligible to earn the WaterSense label. In May 2012, the first weather-based irrigation controllers earned the WaterSense label. WaterSense labeled irrigation controllers operate like a thermostat for your sprinkler system, telling it when to turn on and off based on local weather conditions. Experts estimate that up to 50 percent of commercial and residential irrigation water use goes to waste due to inefficient irrigation methods and systems.
- In September 2012, OWM modified its specification for new homes to enable apartment and condominium units to earn the WaterSense label, update product requirements, and adjust landscape criteria. Compared to traditional homes, WaterSense labeled new homes can save a family of four up to 50,000 gallons of water and as much as $600 in water and energy bills annually. Homes labeled after January 1, 2013, must meet the criteria of the revised specification. Highlights include: individual apartment and condominium units can earn the WaterSense label; WaterSense now requires builders of WaterSense labeled homes to use EPA's Water Budget Tool to inform their landscape design; if an irrigation system with a weather-based irrigation controller is used to water the lawn, the controller must be a WaterSense labeled model; and showerheads must be WaterSense labeled models using 2.0 gallons per minute or less.

Fourth Annual Fix-A-Leak Week — OWM's WaterSense program held its fourth annual Fix-a-Leak Week, March 12 to 18, 2012, to educate Americans about the importance of fixing leaks around the home. Numerous events were held by WaterSense partners around the country. One of the highlights was the campaign during Fix-a-Leak week, organized by Delta Faucet, in partnership with EPA, GreenPlumbers USA, United Way, Ronald McDonald House, and various local water utilities and governments, to fix leaks in more than 1,000 low-income households and community facilities in Boston, Philadelphia, Atlanta, Indianapolis, Chicago, Dallas, Denver, San Francisco, and Seattle. Delta helped fix leaky toilets and faucets and to install WaterSense labeled showerheads in each location, helping to save millions of gallons of water this year alone.

2012 Partner of the Year Awards — OWM's WaterSense program has partnered with more than 2,600 partners—manufacturers, retailers and distributors, local and state governments, utilities, water districts, trade associations, nonprofits, certified irrigation professionals, professional certifying organizations, licensed certification providers, and builders—to encourage water-efficient behaviors and the purchase of quality products that use less water. In 2012, WaterSense recognized five Partners of the Year for their water-saving initiatives:

- Promotional Partner of the Year: Colorado Springs Utilities
- Manufacturer Partners of the Year: American Standard Brands and Kohler Co.
- Retailer Partner of the Year: Lowes Corporation, Inc.
- Builder Partner of the Year: KB Home

In 2012, OWM's WaterSense program also presented five Excellence Awards, which recognize additional organizations and individuals whose WaterSense support stood out in one or more of the following evaluation categories:

- For Excellence in Fix a Leak Week Activities: Arizona Municipal Water Users Association and the New Mexico Office of the State Engineer
- For Excellence in Education and Outreach: American Water
- For Excellence in Strategic Collaboration: Alliance for Water Efficiency
- For Excellence in Employee Education: The Home Depot

Stormwater Program

Urban wet weather sources remain an important EPA priority because of the potential impacts on human health and the environment. Stormwater is a source of water quality impairment for over 22,000 miles of river and streams, over 700,000 acres of lakes, and over 800 square miles of estuaries. Stormwater runoff is generated when precipitation does not percolate into the ground. As it flows, the runoff collects debris, chemicals, and other pollutants and is discharged, often untreated, into the nation's waters. Urban wet weather sources are among the most significant sources of water pollution today that EPA can address through the Clean Water Act.

Integrated Planning to Manage Stormwater Releases — In June 2012, OWM and OECA issued the *Integrated Municipal Stormwater and Wastewater Planning Approach Framework* to help local governments develop stormwater and wastewater management plans to reduce overflows and keep raw sewage and pollutants out of the nation's waters. The framework provides EPA, states, and local governments with guidance on how to develop and implement effective integrated planning approaches for municipal stormwater and wastewater management. Once developed, the plans will help communities prioritize their investments in stormwater and wastewater infrastructure. The framework provides the flexibility to pursue innovative, cost-savings solutions, like green infrastructure, which improve water quality while helping advance the vitality of communities.

Final 2012 Construction General Permit (CGP) — In February 2012, EPA issued its final 2012 CGP to help provide streamlined permitting to thousands of construction operators, while protecting our nation's waterways from discharges of polluted stormwater from construction sites. The 2012 CGP is required under the Clean Water Act and replaced the existing 2008 CGP, which expired on February 15, 2012. The new permit includes a number of enhanced protections for surface waters, including provisions to protect impaired and sensitive waterways. The permit also provides new flexibilities for operators, allowing for emergency projects (e.g., restoration following a flood or other natural disaster) to begin immediately without permit authorization, while still retaining full authority of EPA to ensure that the project proceeds in an environmentally responsible manner.

Strengthening Stormwater Regulations — EPA has initiated rulemaking to develop a stormwater regulation to 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. EPA is considering establishing performance standards for newly developed and redeveloped sites that meet a certain size threshold. These standards would encourage the use of green infrastructure to manage stormwater. The proposed rule and cost/benefit analyses are under development. EPA is also considering extending the municipal separate storm sewer systems, or MS4s, stormwater management program to rapidly growing municipalities above a certain population threshold where improved stormwater management is needed. EPA anticipates that it will issue the proposed stormwater rule in June 2013.

Forest and Logging Roads — On May 23, 2012, EPA issued a Notice of Intent describing its plans to amend the Phase I stormwater regulations to clarify that logging road discharges do not need an NPDES permit and requesting comment on approaches for addressing water quality impacts from forest road discharges. In September, EPA proposed revisions to its stormwater regulations to specify that an NPDES permit is not required for stormwater discharges from logging roads. EPA took this action in response to *Northwest Environmental Defense Center v. Brown*, in which the court held, contrary to EPA's intent, that stormwater runoff from certain logging roads is a point source discharge of industrial stormwater that requires an NPDES permit. EPA anticipates that it will issue a final rule in fall 2012.

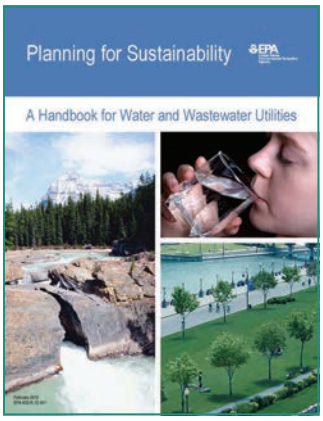
Green Infrastructure — Green Infrastructure (GI) uses vegetation and soil to manage rainwater where it falls, keeping polluted stormwater from entering sewer systems and waterways in local communities. Communities are increasingly using GI to supplement or substitute for single-purpose "gray" infrastructure investments. EPA is a strong supporter of such practices.

- In February, OWM launched a new website (www.epa.gov/greeninfrastructure) to better communicate the "what, why, and how" of GI. The site contains publications and tools developed by EPA, state and local governments, the private sector, nonprofit organizations, and academic institutions as well as access to the latest research by EPA's Office of Research and Development.
- In May, OWM launched the Campus RainWorks Challenge, a new design competition to encourage student teams on college and university campuses across the country to develop innovative approaches to stormwater management. The competition will help raise awareness of green design and planning approaches at colleges and universities across and train the next generation of landscape architects, planners, and engineers.
- In June, OWM released a series of factsheets on incorporating GI measures into NPDES wet weather programs. The Green Infrastructure Permitting and Enforcement Series builds on existing EPA authority, guidance, and agreements to describe how EPA and states can work with permittees to include GI measures as part of control programs.
- In July, OWM announced that it is allocating $950,000 to provide technical assistance to 17 communities throughout the nation to expand GI use to improve water quality and people's health and benefit communities. EPA is currently using these funds to complete various projects for these communities.
- In September, the White House Council on Environmental Quality and EPA hosted a conference to explore pathways to more broadly implement green infrastructure. Invited experts and stakeholders discussed the benefits of GI practices, barriers to implementation, options and opportunities for funding and valuing GI, and practical actions to promote GI implementation.

Sustainable Management Program

Our nation's water infrastructure systems are aging, and many will be reaching the end of their useful life span in the next 20 to 40 years. To address the mounting needs, OWM is collaborating with the Office of Ground Water and Drinking Water and other EPA offices and across the infrastructure industry to change the way the country views, values, and manages its water infrastructure and to ensure that this infrastructure also supports sustainable communities.

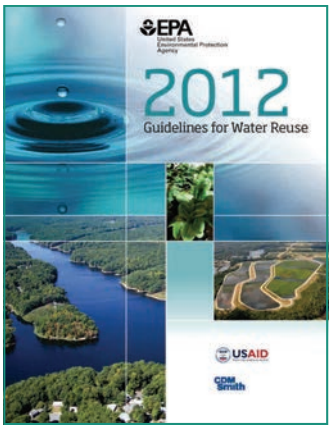
Sustainability Planning — To help address the ongoing challenge of sustaining our water infrastructure, in February 2012, OWM released a comprehensive handbook to help water sector utilities build sustainability considerations into their planning. The handbook, *Planning for Sustainability: A Handbook for Water and Wastewater Utilities*, will help utilities ensure that water infrastructure projects across the nation, including those funded through the state revolving fund programs, are sustainable and support the long-term sustainability of the communities these utilities serve. The handbook represents an important milestone in EPA's ongoing efforts to help ensure the sustainability of the nation's water infrastructure based on the agency's *Clean Water and Safe Drinking Water Infrastructure Sustainability Policy*, which was issued in September, 2010. In developing the handbook, OWM worked closely with a number of utility and state program managers around the country. In 2012, OWM launched a series of webinars for water and wastewater utilities built around the core elements of the handbook.



Energy Management — Improving energy efficiency is an ongoing challenge for water sector utilities. While energy costs often represent 25-30 percent of a plant's total operation and maintenance costs, they also represent the largest controllable cost of providing water and wastewater services. In FY 2012, EPA launched a webinar series on energy efficiency for water and wastewater utilities. The first webinar in the series, in May 2012, focused on innovative energy conservation measures, based on EPA's 2010 *Evaluation of Energy Conservation Measures* document. The second webinar, held in October 2012, assisted water sector utilities in understanding how solar energy can be used effectively at their facilities. Additional webinars in the series are planned.

Water Sector Sustainability Workshop — In September 2012, EPA sponsored a two-day workshop with thought leaders from leading utilities and states to identify ways for utilities to move toward more sustainable operations over time, building on the past work of the utilities, states, and EPA. The initial result of the workshop was the development of two separate business models, conventional and emergent, in five different practice areas. Participants also identified a number of potential actions to further the use of these practices across the sector, which EPA is now evaluating. EPA is continuing to work with utilities across the sector to develop and implement additional useful tools.

Water Reuse — Increasingly, water reclamation and reuse have taken on importance in the water supply of communities in the U.S. and around the world to achieve efficient resource use, ensure protection of environmental and human health, and improve water management. EPA's Office of Research and Development and Office of Water have released the Agency's *2012 Guidelines for Water Reuse*. The 2012 reuse guidelines update and build on the Agency's previous reuse guidelines issued in 2004. In addition to summarizing the existing regulations in the U.S., the document includes water reuse practices outside of the U.S., case studies, information on planning for future water reuse systems, and information on indirect potable reuse and industrial reuse.



Clean Watersheds Needs Survey — The FY 2012 Clean Watersheds Needs Survey is the 16th national survey on publicly owned treatment works. Conducted every four years, the report estimates nationwide wastewater and stormwater pollution control capital investment needs, wastewater treatment and collection system stability, and various parameters of America's watersheds. In preparation for the 2012 survey, OWM revised its methodology to reflect current data and research. OWM continues to work with the states, territories and Regions to provide an easier, faster, and more efficient method for data entry. This assessment and documentation of future needs is critical in the effort to sustainably manage and fund our nation's wastewater infrastructure, which is essential to meet the water quality goals of the Clean Water Act—swimmable and fishable waters for everyone. OWM's goal is to issue the report in FY 2013.

Asset Management — In FY 2012, OWM conducted eight asset management training courses across the country. The course presents a framework to achieve sustainable infrastructure by managing the costs of owning and operating a utility at the desired level of service. In addition, one advanced course in conjunction with University of Wisconsin was held. This completes a nine-year cycle of asset management workshops at over 60 locations with slightly over 5,000 attendees. The training materials have been picked up by at least one university for the base course and two universities (University of Wisconsin and Virginia Tech) for the advanced program.

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. In addition, the program focuses on innovative approaches for working with the agricultural community.

Permit Writer's Manual for Concentrated Animal Feeding Operations (CAFOs) — To provide technical assistance to states and producers to help them better understand and comply with the 2008 CAFO Rule, in February 2012, OWM released a technical manual for CAFOs to provide general information on Clean Water Act and NPDES permit program requirements for CAFOs, information to explain CAFO permitting requirements under the Clean Water Act, and technical information to help states and producers understand options for nutrient management planning.

In addition, OWM is developing a guidance document to assist CAFOs in evaluating whether they should seek permit coverage and EPA and states with CAFO program implementation. The guidance reflects the 2011 court decision in *National Pork Producers Council v. EPA* related to what is commonly referred to as the "duty to apply" component of the NPDES CAFO regulations. The guidance document is currently under interagency review.

Final Action on the Proposed NPDES CAFO Reporting Rule — In July 2012, EPA announced that it was withdrawing a proposed rule that would have required information to be submitted to the EPA about CAFOs. EPA will instead use existing federal, state, and local sources of information to gather data about CAFOs and help ensure that CAFOs are implementing practices that protect water quality.

State Coordination on CAFO Information Exchange — In July 2012, EPA signed an MOU with the Association of Clean Water Administrators (ACWA) to facilitate the exchange of information. This collaborative effort between the EPA and ACWA will focus on identifying CAFOs and obtaining pertinent information about CAFOs on a state-by-state basis for use by both ACWA members and the EPA.

2012 Final CAFO Rule to Remove 5th Circuit Court's Vacated Elements — In July 2012, EPA issued a final rule to revise its CAFO permit regulation to remove the requirement that CAFOs that "propose to discharge" must seek NPDES permit coverage. This rule revision is in response to a 2011 U.S. Court of Appeals for the Fifth Circuit decision in *National Pork Producers Council v. EPA*, which vacated portions of the Agency's 2008 CAFO rule. In addition, this action removed from the CAFO permit regulation the option to voluntarily certify that a CAFO does not discharge or propose to discharge, as the voluntary certification provision is unnecessary because the "propose to discharge" requirement is being removed.

Implementing the 2011 Pesticide General Permit (PGP) — In FY 2012, OWM worked to implement its NPDES Pesticide General Permit for point source discharges from the application of pesticides to the waters of the United States, which it issued in October 2011. The permit requires operators to minimize discharges through the use of pest management measures and to monitor for and report any adverse incidents.

To assist operators in applying for the PGP, in January 2012, OWM launched a free, online Electronic Notice of Intent (NOI) system for pesticide operators that need to submit an NOI for coverage under EPA's PGP. In addition, OWM conducted a number of outreach efforts to help educate and inform the pesticide user community about the new PGP. OWM developed and published a number of fact sheets explaining the permitting requirements, which were targeted at key stakeholder groups (e.g., for-hire applicators and agricultural stakeholders). In addition, OWM held a total of seven workshops and five webcasts, to help explain the permitting and NOI requirements and answer questions about the permit.

Developing EPA's Agricultural Strategy — OWM worked cooperatively with internal and external stakeholders to identify approaches that will improve the environmental performance of animal agriculture through voluntary initiatives and improved regulatory programs. These initiatives will complement and enhance the permitting, compliance assistance, and enforcement programs of EPA and the states. The planning process identified opportunities for collaborative problem solving with the livestock and poultry industry and other interested agricultural stakeholders. Initiatives under development include: training, data gathering, partnership building, and assessment of animal waste management technologies.

Environmental Markets — OWM supported the work of other EPA and U.S. Department of Agriculture programs to develop and advance water quality trading and related environmental markets. The focus of this effort was on the development of markets that involve the participation of agricultural producers, providing a financial incentive for improved environmental performance beyond regulatory compliance.

State and Regional Program

The State and Regional Branch provides technical and policy support to help implement the NPDES permit program. Through coordination with states and EPA Regions, the program guides the 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 NPDES program implementation while working cooperatively to produce efficient processes and measurable results.

Strengthening NPDES Permit Program — OWM continued to collaborate with the Office of Enforcement and Compliance Assurance to implement the Clean Water Act Action Plan and to improve NPDES processes. In August 2012, EPA released a set of tools to help EPA Regions and authorized states review existing EPA-state memoranda of agreement (MOAs) to ensure they reflect current program requirements and facilitate effective implementation.

Such MOAs help govern how the EPA and each authorized state interact together to implement the state's NPDES program. Some of these MOAs date from the mid-1970s and may not be consistent with current NPDES program requirements and/or may lack important components that have been added to the national NPDES program, or may have provisions that may restrict EPA or state actions in some way. These tools (criteria, checklist, and model MOA) were developed in coordination with the states.

In FY 2012, OWM also continued to work with the EPA Regions and states to address petitions for withdrawal of state NPDES programs. To foster more efficient resolution of the issues raised in these petitions, OWM worked to developed an EPA tracking system to promote information sharing between EPA Headquarters and Regions and developed a public website to improve the transparency of EPA's management of withdrawal petitions.

Reinventing EPA's Process for State Oversight — To streamline evaluation of the NPDES program and minimize burden to state program offices, EPA's NPDES permitting and enforcement programs have consolidated their approaches to state program oversight. An essential element of this process was transitioning permit quality reviews (PQRs) to the EPA Regions from Headquarters. To ensure that the assessment process was consistent across the Regions, OWM formed a PQR workgroup with representation from all Regions to revise and update the standardized materials and guidance to be used for conducting these reviews. With Regional permitting and enforcement programs working together, the integrated oversight effort intends to provide a periodic, standardized method of more effectively managing oversight of the permitting and compliance elements of the NPDES program.

Electronic Applications and Reporting — OWM and OECA continued their close collaboration on the transition from paper to electronic reporting for NPDES permittees. This included support for OECA's proposed rule on electronic reporting, which is currently undergoing interagency review.

Providing Robust NPDES Tools, Training, and Technical Assistance — In FY 2012, OWM provided a spreadsheet tool to streamline the analysis of whole effluent toxicity (WET) data, supporting more efficient identification of water quality permitting needs and NPDES compliance. OWM continued its close collaboration with the Office of Science and Technology to ensure that the criteria, standards, and guidance they developed (e.g., bioassessment guidance, recreational water quality criteria) could be implemented through water quality-based requirements in NPDES permits.

In FY 2012, OWM also conducted a total of five week-long **NPDES Permit Writers Courses** throughout the country. The course provided basic NPDES training to approximately 219 students. This popular 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.

Additionally in FY 2012, OWM developed and held two specialty NPDES permit writing courses that addressed the unique permitting issues related to coal mining. These three-day courses were held in Morgantown, West Virginia, and Frankfort, Kentucky, and were attended by approximately 80 students from various state and federal agencies. OWM also worked with EPA Region 2 to develop and conduct NPDES permit writer training for approximately 60 students from Region 2.

Supplemental to the in-person training, OWM continues to offer a web-based version of the full permit writer's training course, affording greater access and lower cost for both federal and industry stakeholders. In FY 2012, online students from state and federal agencies and the public completed over 380 NPDES course modules.

State and 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 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 Total Maximum Daily Load (TMDL) development, NPDES permitting and enforcement, advice and assistance to local agencies, training, and public information. In FY 2012, EPA provided more than $238 million in Section 106 funding to states, interstate agencies, and tribes to prevent and control water pollution.

State and Interstate 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 2012, EPA provided more than $193 million in Section 106 grant funding to states and interstate agencies to help protect and restore 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 prevent, control, 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 $27 million, in FY 2012.

Of the 562 federally recognized tribes, approximately 350 meet the criteria to receive Section 106 funding, and 74 percent (262) of these tribes were eligible to receive grants in FY 2012. Tribes across the country are using Section 106 grants to identify and proactively address water quality priorities and concerns.

In November 2011, OWM partnered with the Office of Wetlands, Oceans and Watersheds (OWOW), Region 6, and Pojoaque Pueblo of New Mexico to hold a four-day conference on Clean Water Act Section 106 and 319 National Tribal Water Quality at the Pojoaque Pueblo in New Mexico. The first national conference of its kind, the conference enabled approximately 300 tribal professionals funded by Clean Water Act Section 106 and Section 319 and their federal partners to gather and share goals, knowledge, and lessons applicable to enhancing the quality of tribal waters. This forum focused on tribal water quality by addressing monitoring and assessment, watershed-based planning, restoration efforts, and best management practices and included two opportunities for hands-on field activities to determine water quality and implement best management practices.

State and Tribal Water 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. In FY 2012, states and tribes conducted sampling and reported water quality monitoring data for the lakes 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.

State Water Quality Management Resource Analysis — OWM is partnering with the Environmental Council of States and the Association of Clean Water Administrators to update and quantify current and future expenditures and resources for the management of state water quality programs, and to quantify the resources needed to fully implement the Clean Water Act. The new EPA/state task force is updating the 1998 Resource Analysis based on recommendations from a third-party review by the National Academy of Public Administrators, which concluded that the effort was well designed and executed. With the results of the review, the task force is moving forward to improve collaboration and cultural learning, fine-tune tools and methods for estimating state resource needs, and improve the effectiveness of water quality programs. The resource analysis will provide critical information on state expenditures and needs for Clean Water Act programs.

Industrial Program

Industrial wastewater discharges may contain pollutants that affect the quality of receiving waters. The industrial program works to protect and improve water quality through technology and water quality based permitting of direct discharging industrial sources such as manufacturing facilities, vessels, coal mines, shale gas extraction operations, and steam electric power plans. These efforts also include the National Pretreatment Program, which regulates thousands of industrial operations that discharge into municipal sewers that flow to sewage treatment works.

Draft Vessel General Permits – In November 2011, EPA issued two draft vessel general permits—a draft Vessel General Permit (VGP) and a draft small Vessel General Permit (sVGP)—that would regulate discharges from commercial vessels, excluding military and recreational vessels. The proposed permits would help protect the nation's waters from ship-borne pollutants and reduce the risk of introduction of invasive species from ballast water discharges.

The draft VGP, which covers commercial vessels greater than 79 feet in length, would replace the current 2008 Vessel General Permit when it expires in December 2013.

The updated permit would reduce the administrative burden for vessel owners and operators, eliminating duplicative reporting requirements, clarifying that electronic recordkeeping may be used instead of paper records, and streamlining self-inspection requirements for vessels that are out of service for extended periods. The permit would continue to regulate the 26 specific discharge categories that were contained in the 2008 permit and, for the first time, manage the discharge of fish hold effluent.

A key new provision of the permit is a proposed numeric standard to control the release of non-indigenous invasive species in ballast water discharges. The new ballast water discharge standard addressing invasive species is based upon results from independent EPA Science Advisory Board and National Research Council National Academy of Sciences studies. These limits are generally consistent with those contained in the International Maritime Organization's 2004 Ballast Water Convention. The new standard is expected to substantially reduce the risk of introduction and establishment of non-indigenous invasive species in U.S. waters.

The draft VGP also contains updated conditions for mechanical systems that may leak lubricants into the water and exhaust gas scrubber washwater, which would reduce the amount of oil and other pollutants that enter U.S. waters.

The new draft sVGP would cover vessels smaller than 79 feet in length and would provide such vessels with the Clean Water Act permit coverage they will be required to have as of December 2013. The sVGP would be the first under the Clean Water Act to address discharges incidental to the normal operation of commercial vessels less than 79 feet in length. Recognizing that small commercial vessels are substantially different in how they operate than their larger counterparts, the draft sVGP is shorter and simpler. The draft permit specifies best management practices for several broad discharge management categories including fuel management, engine and oil control, solid and liquid maintenance, graywater management, fish hold effluent management and ballast water management, which consists of common sense management measures to reduce the risk of spreading invasive species.

EPA anticipates that it will issue the final permits in early 2013, several months in advance, to allow vessel owners and operators time to prepare for new permit requirements.

Pretreatment Program Outreach – OWM continued its outreach and education to pretreatment stakeholders through its Pretreatment 101 webinar series in 2012. The webinar series has been providing significant outreach and training to pretreatment program managers, staff, regulated community and other interested parties across the country. The webinars are commonly attended by over 2,000 people (and many more have viewed the archived webinars online), and the feedback from participants has been very positive. The webinars, which are targeted at addressing the needs of new staff to the pretreatment program, are meeting a critical need, as the pretreatment program has seen a significant changeover in staffing due to retirements and layoffs.

In September 2012, OWM hosted a webinar for publicly owned treatment works personnel responsible for local pretreatment program implementation. The webcast introduced OWM's newly revised *Industrial User Permitting Guidance Manual* and provided an overview of the nondomestic user permitting process, including preparing effective and enforceable control mechanisms and recommendations and requirements for content and structure. It was the first of a series of webcasts OWM is planning on nondomestic user permitting.

Sustainable Communities Program

Many residents of small, rural communities, Indian reservations, and communities along the U.S./Mexico border have insufficient or no access to basic wastewater services and, as a result, face increased health risks and substantial economic challenges compared to the rest of the U.S. population. The Sustainable Communities Program provides financial and technical assistance so these communities can gain access to adequate and sustainable wastewater treatment, lower their risk of disease, and reap the associated economic benefits.

Supporting Workforce Development — In May, the EPA and U.S. Department of Veteran Affairs (VA) Vocational Rehabilitation and Employment Program announced a joint MOU to connect veterans with disabilities to career opportunities in the water sector. Through the MOU, the EPA and VA are working with water utilities, states, and local VA counselors to promote water sector careers and resources to support placing veterans in water jobs. EPA has sponsored two webinars for water sector professionals and utilities to share information on VA hiring and training programs and participated with the VA in a special session at the 2012 Water Environment Federation's Technical Exhibit and Conference.

OWM also continued its support for wastewater operator training by joining other EPA offices to support the Agency's Environmental Workforce Development and Job Training grant program. This support to increase the green workforce will allow the trainees to develop skills that will make them competitive in the redevelopment and environmental fields.

Water Infrastructure Sustainability: Operation & Maintenance Training — In FY 2012, EPA developed a web-based training series on maintaining and operating small wastewater and drinking water treatment systems. Operators and managers of small water or wastewater systems can learn the basics of operation and maintenance as well as management via the 10 training modules. The training series is based on the 11 in-person training workshops that EPA held across the country for tribes, Alaska Native Villages, and U.S. territories in 2011-2012.

Tribal Infrastructure Task Force (ITF) — EPA and the multi-agency Tribal ITF support improving access to safe drinking water and basic sanitation in American Indian and Alaska Native communities. In January 2012, the ITF published a summary of commonalities and best practices of sustainable tribal utilities, summarized from listening sessions with tribal authorities.

Sustainable Small and Rural System Workshops — Under EPA and USDA's Rural Development Rural Utilities Service MOA, *Promoting Sustainable Rural Water and Wastewater Systems*, the agencies co-sponsored two workshops in FY 2012 in California and Michigan for small system managers and operators. The workshops provided training in utility management principles, based on proven management approaches, including EPA's primer on effective utility management. In FY 2013, the agencies will hold two more workshops and work to develop tools specific to small and rural communities.

U.S.-Mexico Border Water Infrastructure Program — The U.S.-Mexico Border Water Infrastructure Program provides funding to improve access to safe drinking water and basic sanitation for communities along the border. Approximately 8.5 million of the 14.6 million border residents have benefited from this program. In FY 2012, 5,185 homes received first-time access to safe drinking water and 31,092 homes received first-time access to wastewater collection and treatment. Cumulatively, this program's accomplishments have prevented 118.9 million lbs/year of biological oxygen demand from being discharged directly into border watersheds.

The Border Infrastructure Program supports the Border 2020 U.S.-Mexico Environmental Program Agreement, a bi-national agreement to improve environmental quality and public health along the border. In August, EPA Administrator, Lisa Jackson, and her Mexican counterpart, Juan Elvira Quesada, signed the Border 2020 Agreement, renewing the commitment and strengthening the focus on regional needs.

Clean Water Indian Set Aside (CWISA) and Alaska Native Villages (ANV) Grant Programs — EPA's CWISA Grant Program, in partnership with the Indian Health Service, supports improved access to basic sanitation in Indian country. In FY 2012, EPA awarded $30 million to fund 87 wastewater treatment construction projects that will improve wastewater service to over 9,000 tribal homes, with 78 percent of the projects providing first-time access to safe wastewater services.

The ANV Grant Program supports increasing access to safe drinking water and basic sanitation in remote, rural, and tribal villages in Alaska. EPA awarded $10 million in FY 2012, with approximately 70 percent of funded homes receiving first-time water and/or wastewater services. The program funds infrastructure planning, design, and construction as well as training and technical assistance to ensure proper system maintenance and operation and to protect federal investment.

Improving Management of Decentralized Wastewater Treatment Systems— In late 2011, the Decentralized MOU Partnership to improve decentralized wastewater treatment in the U.S. renewed their partnership and added two new partners: the Centers for Disease Control and Prevention and the National Sanitation Foundation International. In 2012, the partners jointly published four papers on the uses and benefits of decentralized systems.

In October 2012, OWM launched a redesigned septic system website (www.epa.gov/owm/septic) to improve accessibility of information and technical assistance for homeowners, government officials, and industry professionals.

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