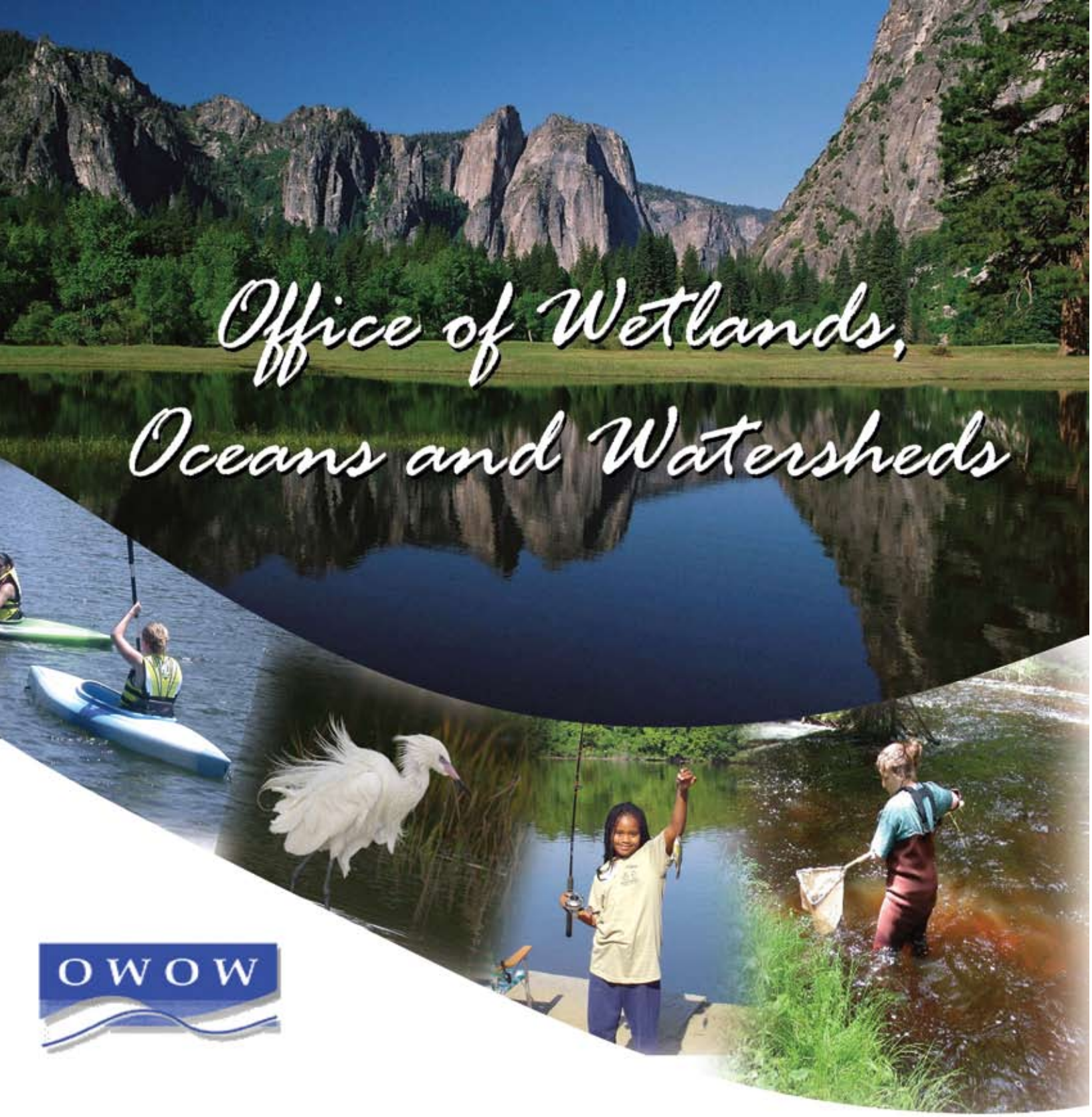

Office of Wetlands, Oceans and Watersheds

OWOW

2007 Annual Report

United States Environmental Protection Agency

Dear Colleagues, Friends, and Partners:

The Office of Wetlands, Oceans and Watersheds (OWOW) 2007 Annual Report provides a snapshot of OWOW's notable accomplishments in calendar year 2007. I want to thank our partners from other federal agencies, state, tribal and local governments, the private sector, and academia who contributed to these milestones.

Among our accomplishments, OWOW and its partners continued to make significant progress toward the President's 2004 Earth Day pledge to protect 3 million acres of wetlands by 2009. In fact, our interagency effort is not only on track to meet this ambitious goal, but will surpass it. Through our National Estuary Program, Nonpoint Source Program, Five-Star Challenge Grants and Superfund Program, EPA (with significant contributions from OWOW) restored more than 25,000 wetland acres and protected more than 100,000 acres since 2004. In November, the agency and its partners celebrated the 20th Anniversary of the National Estuary Program (NEP) during a wonderful open house at EPA headquarters, where we recognized the outstanding accomplishments of the NEPs.

As of 2007, more than 32,000 Total Maximum Daily Loads (TMDLs or pollutant clean-up budgets) were completed for impaired waterbodies, including more than 4,000 in 2007 alone. This past year, the TMDL program also took major steps to address mercury—the cause of impairment in more than 8,700 waterbodies—by encouraging more comprehensive state and regional mercury control programs.

OWOW and its partners continue to make significant advances in our water quality monitoring and assessment programs. In 2007, we released our first-ever National Estuary Program Coastal Condition Report and made headway on our National Lakes Survey. These ambitious national assessments, along with our upcoming Rivers and Streams Survey and Wetlands Survey, will help us to better measure environmental progress as well as guide future management decisions. And finally, the year 2007 marked the completion of a reassessment of the 2001 Gulf Hypoxia Action Plan—setting the stage for a new Action Plan to be released this spring.

We need to be innovative and to explore ways to leverage the great work that we do. Our cross office teams on sustainable finance, communications, and smart growth continue to lead the way by reaching out to new partners and taking advantage of the latest tools and innovations on cross-cutting issues.

I look forward to working with each of you as we strive together to achieve our goals for clean water and healthy ecosystems in 2008.

Craig E. Hooks, Director
Office of Wetlands, Oceans and Watersheds

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Cover photo of Yosemite by John H. McShane

U.S. Environmental Protection Agency

Office of Water

Office of Ground Water and Drinking Water	Office of Science and Technology	American Indian Envornmental Office	Office of Wastewater Management	Office of Wetlands, Oceans and Watersheds

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2007 Highlights

Wetland Protection and Restoration: OWOW and its partners protected and/or restored tens of thousands of acres of wetlands in 2007. Major contributions came from the *National Estuary Program*, §*319 Nonpoint Source Program*, and the *Five-Star Restoration Program.*

Hypoxia Action Plan: A complete reassessment of the 2001 Hypoxia Action Plan set the stage for the release of a new Action Plan in 2008 to combat the "dead zone" in the Gulf of Mexico.

Ocean Dumping: In 2007, EPA submitted to Congress a package of legislative changes to the Marine Protection, Research, and Sanctuaries Act to support ratification of the London Protocol, an international ocean dumping treaty.

Total Maximum Daily Loads: More than 4,000 watershed cleanup plans were completed in 2007, along with a multi-pronged strategy to accelerate the cleanup of mercury-impaired waters.

National Aquatic Surveys: The year 2007 marked the completion of field sampling for the *National Lakes Survey*, along with the selection of indicators and testing protocols for the *Rivers and Streams Survey*. These surveys will provide accurate scientific assessments of the condition of the nation's waters and guide future management decisions.

Wetlands Guidance: OWOW provided exceptional policy and legal support following the Supreme Court's *Rapanos* decision regarding the scope of "waters of the U.S." Joint guidance by EPA and the U.S. Army Corps of Engineers issued in 2007 implements the court's decision.

Economic Benefits of Low Impact Development (LID): A new report published by OWOW highlights the economic viability of LID practices through 17 case studies that show how these practices and strategies can save money and protect water quality.

Nonpoint Source Outreach Toolbox: OWOW released an on-line repository of watershed outreach materials, including nearly 800 public service announcements, radio, TV and print ads, and other materials that can be customized for other watersheds.

The Office of Wetlands, Oceans and Watersheds (OWOW)

OWOW is one of five offices in the Office of Water at EPA Headquarters in Washington, D.C. The office provides leadership, policy direction, and financial support to our 10 regional offices and to the states, tribes, and territories that implement our programs. We also work collaboratively with other federal agencies, as well as local governments, the private sector, and nonprofit organizations to carry out our mission to protect and restore the aquatic ecosystems of our marine and fresh waters.

In addition to our Clean Water Act authorities, the office has authorities under the Marine Protection, Research, and Sanctuaries Act (Ocean Dumping), Coastal Zone Management Act, National Environmental Policy Act and several other environmental statutes.

OWOW Programs and Initiatives

- National Estuary Program
- Dredged Material Management
- Ocean Dumping
- National Water Quality Inventory
- National Aquatic Resource Surveys
- Nonpoint Source Program
- Wetlands Permitting
- Total Maximum Daily Loads (TMDLs)
- Five Star Restoration Program
- Wetland Program Development Grants
- Targeted Watershed Grants
- Volunteer Monitoring Program

For more information about OWOW, visit epa.gov/owow

National Estuary Program Celebrates 20th Anniversary

The year 2007 marked the 20th Anniversary of EPA's National Estuary Program (NEP), passed as part of the 1987 Amendments to the Clean Water Act to help protect and restore estuaries threatened by pollution, development, or overuse. In November 2007, EPA celebrated this milestone at an open house attended by more than 275 well-wishers and Assistant Administrator for Water Benjamin H. Grumbles. The event commemorated two decades of work by community stakeholders to protect water quality and the living resources of 28 estuaries of national significance.

Major NEP Accomplishments

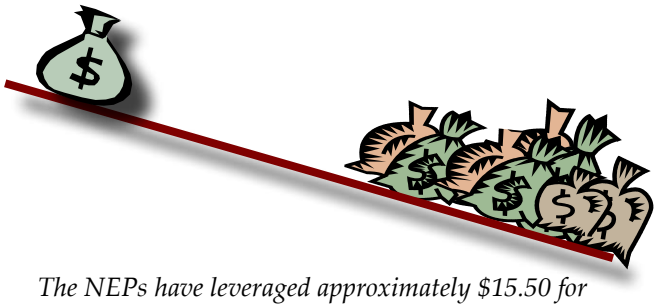
Each of the 28 National Estuary Programs works in collaboration with the private sector, non-profit organizations, government agencies, academia, and citizens to develop and implement comprehensive watershed plans that address priority natural resource concerns.

- Since 2000, the NEPs collectively have protected and restored nearly one million acres of habitat. Wetlands have constituted almost half of those acres.
- Since 2003, the NEPs have obtained nearly $4 billion of public and private funding by developing alliances with implementing partners.

For more information, visit: www.epa.gov/owow/estuaries/openhouse.html. (Contact: Nancy Laurson, 202-566-1247). More information on leveraged funding is available at: www.epa.gov/owow/estuaries/fund.htm. (Contact: Tim Jones, 202-566-1245)

NEPs and EPA Programs Recognized at the Open House

- *Coastal Bend Bays and Estuaries — for its achievements in environmental enforcement, including a determination that led to the aquisition of more than 500 acres of Nueces Delta wetland habitat.*
- *The Massachusetts Bays Wetlands Program — for its role in developing methods to assess wetland condition and for creating an assessment manual that will help evaluate restoration and mitigation success*
- *Delaware Inland Bays — for its support of the Center for Inland Bay's Poultry Integrators' Nutrient Effort project and the development of model farms in the watershed.*
- *Maryland Coastal Bays — for promoting smart growth, including comprehensive planning, zoning and alternative futures.*
- *The Office of Research and Development – for assisting the Albemarle-Pamlico Sound NEP with scientific assessments related to long-term watershed sustainability.*
- *EPA's Drinking Water Protection Program — for supporting the Partnership for the Delaware Estuary NEP in improving water quality for 1.5 million surface/drinking water users in the Schuykill Watershed.*
- *The Office of Wastewater Management — for managing wet weather with green infrastructure efforts, particularly in the Buzzards Bay NEP.*



The NEPs have leveraged approximately $15.50 for every $1 of EPA funding

Economic Model Helps Estimate Impacts from Aquatic Invasive Species

EPA's Ocean and Coastal Protection Division (OCPD) collaborated with EPA's National Center for Environmental Economics (NCEE) and the National Oceanic and Atmospheric Administration (NOAA) to develop and pilot test a first-ever model to provide estimates of the economic impacts of a single aquatic invasive species (AIS)—the European green crab. With NCEE staff in the lead technical role, OWOW co-funded and provided policy support to develop and test the model. OWOW staff delivered presentations about the model at national and international research conferences. Options for using the model to develop estimates for other species' economic impacts are now under development. For additional information, visit www.epa.gov/owow/invasive_species/. (Contact: Marilyn Katz, 202-566-1246)

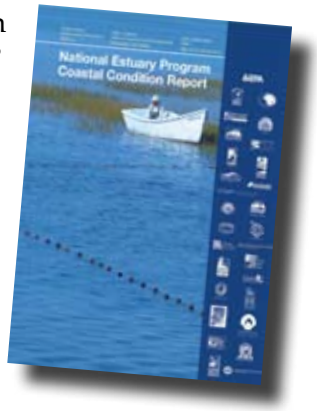
Improved management of ballast water, one of the major vectors for introduction of AIS, can reduce the potential for introduction of invasive species by ships. OCPD worked with the U.S. Coast Guard to develop national ballast water standards and international standards under the International Convention for the Prevention of Pollution from Ships (MARPOL). (Contact: John Lishman, 202-566-1364)

EPA Completes Draft Cruise Ship Discharge Assessment Report

As the cruise industry continues to expand, there is growing concern over the potential environmental impacts. Vessels, literally floating cities that can carry as many as 3,000 passengers, often operate in pristine coastal waters.

In December 2007, OWOW released for public comment a draft report assessing five major waste streams from cruise ships: sewage, graywater, oily bilge water, solid waste, and hazardous waste. For each waste stream, the draft report discusses its nature and volume, existing federal regulations, environmental management, potential adverse environmental impacts, and actions by the federal government. After EPA completes a review of public comments, including options, alternatives, and recommendations on whether and how to better control and regulate these waste streams, the agency intends to issue a final report in 2008. OWOW also has completed a comprehensive, multi-year evaluation of cruise ship sewage and graywater. Complete results of that evaluation will be made public in 2008, and are summarized in the draft assessment report. More information is available at: www.epa.gov/owow/oceans/cruise_ships/. (Contacts: Elizabeth Kim, 202-566-1270 and Laura Johnson, 202-566-1273)

National Estuary Program Coastal Condition Report Provides Assessment of Ecological Conditions



In June 2007, EPA released the National Estuary Program (NEP) Coastal Condition Report (NEP CCR), the first assessment of the overall ecological condition of NEP estuaries. The report, which provides a snapshot of the condition of ecological resources in the 28 estuaries of the NEPs, rated the overall condition of the NEPs as fair. This report rates the NEP estuaries individually, regionally, and nationally using four primary indicators of estuarine condition: water quality; sediment quality; benthic community condition; and fish tissue contaminants. The findings of the NEP CCR will serve as a benchmark for analyzing the progress of the NEPs and offer insights on what additional actions are needed to better protect, manage, and restore coastal ecosystems. For more information, visit: www.epa.gov/owow/oceans/nepccr/index.html. (Contact: Greg Colianni 202-566-1249)

EPA Strengthens Ocean Dumping Management

EEPA took a number of major steps in 2007 to improve ocean dumping management. In November, EPA submitted to Congress a package of legislative changes to the Marine Protection, Research, and Sanctuaries Act to support ratification of the *London Protocol*, an international ocean dumping treaty. As co-chair of the National Dredging Team (NDT), EPA undertook a review of the National Dredging Policy and the NDT's 2003 Action Agenda. The review included an assessment of the Marine Transportation System and the federal response to priority dredging issues. EPA and U.S. Army Corps of Engineers held a meeting of the National and Regional Dredging Teams and a national meeting of Dredged Material Managers to facilitate continued coordination among the leading stakeholders in dredging and dredged material management.

In 2007, EPA released two guidance documents on the beneficial use of dredged material, drafted an emergency permit template to assist EPA regions in cases of emergency dumping requests, and began a major revision to EPA's open water dredged material disposal guidance documents. Finally, in 2007, EPA's Ocean Survey Vessel Bold monitored 13 ocean disposal sites to ensure compliance with environmental requirements. More information is available at: www.epa.gov/owow/oceans/regulatory/dumpdredged/dumpdredged.html. (Contacts: Elizabeth Kim, 202-566-1270 and Molly Madden, 202-566-1279)

EPA Continues Leadership Role in U.S. Ocean Action Plan

Since issuance of the Ocean Action Plan (OAP) in 2004, state-led regional collaborations have made progress in identifying and addressing state ocean and coastal priority issues. As of 2007, the Subcommittee on Integrated Management of Ocean Resources (SIMOR), co-chaired by EPA, NOAA, Council on Environmental Quality, and the Department of the Interior has helped facilitate the establishment of three federal interagency teams at the regional level to coordinate with and support, respectively, the Gulf of Mexico Alliance (GMA), the Northeast Regional Oceans Council (NROC), and the West Coast Governors' Agreement on Ocean Health. EPA serves as a co-lead on each of these interagency regional teams.

Recent OAP Activities

- *In August 2007, at a meeting of the GMA, Gulf State governors and federal agencies renewed a commitment to enhance the economic and environmental health of the Gulf. Since the release of the GMA's Action Plan in March 2006, more than 90 percent of the plan's 70+ actions have either been completed or are in progress.*
- *In 2007, the federal/regional team of the West Coast Governors' Agreement on Ocean Health completed a draft Action Plan that focuses on beaches, ocean and coastal habitat, and ocean and coastal monitoring, among other priority issues. The release of the final Action Plan, anticipated in early 2008, reflects commitments by the states (CA, WA, and OR) comprising the Agreement.*
- *At a Northeast Ocean Congress in May 2007, NROC identified future directions for four core ocean management areas: ocean energy resource planning and management; ocean and coastal ecosystem health; maritime security; and coastal hazard response and resiliency.*

More information is available at: http://ocean.ceq.gov/. (Contacts: Hazel Groman, 202-566-1219 and Lucinda P. Power, 202-566-2129)

EPA Assists in Challenges and Policy Questions Arising from Rapanos Supreme Court Decision

On June 5, 2007, EPA and the Corps of Engineers issued joint guidance on the scope of "waters of the US" protected under the Clean Water Act §404 program after the 2006 U.S. Supreme Court decision in *Rapanos* vs. U.S. , which addressed the authority of the Corps of Engineers' to regulate wetlands not immediately adjacent to navigable waterbodies.

The guidance implements *Rapanos* by defining which waters maintain Clean Water Act protection (i.e., jurisdictional waters) subsequent to the Supreme Court ruling. The guidance explains that jurisdictional waters include traditional navigable waters and their adjacent wetlands, "relatively permanent" waters and immediately abutting wetlands, and other streams and adjacent wetlands that have a "significant nexus" to the physical, chemical, or biological integrity of a traditional navigable water. The *Rapanos* Guidance focuses on those waters at issue in the decision and does not address all categories of potentially jurisdictional waters, such as "isolated" waters.

Several supporting additional documents were issued jointly with the guidance, including the Jurisdiction Form, Instructional Guidebook, and Interagency Coordination Memorandum, to help ensure that EPA and the Corps coordinate closely, particularly for determinations that require a "significant nexus" finding or involve "isolated" waters. The memorandum establishes a process with specific time frames for reaching joint jurisdictional decisions. EPA and the Corps continue to assert in post-*Rapanos* litigation that a water is jurisdictional under the CWA when it is either "relatively permanent" or has a "significant nexus" to a traditional navigable water. (Contact: Donna Downing, 202-566-1367)

EPA Weighs-in on Proposed Stream Buffer Zone Rule

On August 24, 2007, the Office of Surface Mining (OSM) published in the Federal Register a *Proposed Rule on Excess Spoil, Coal Mine Waste, and Buffers for Waters of the United States*, commonly referred to as the "Stream Buffer Zone" rule. The purpose of the proposed rule is to improve regulatory stability by clarifying the requirements for mining in and around streams. The proposed rule also strengthens requirements for addressing adverse environmental effects of spoil disposal, particularly impacts on streams, from the construction of excess spoil fills (e.g., "valley fills").

Photo: John H. McShane

EPA is required under the Surface Mining Control and Reclamation Act of 1977 to concur before the rule is finalized. Wetlands staff proposed language that would require mining activities avoid and minimize potential adverse environmental impacts to streams whenever possible. In December 2007, the Wetlands Division submitted formal agency comments on the proposed rule and supporting Draft Environmental Impact Statement. EPA will continue to work with OSM as they finalize the rule. (Contact: Tanya Code, 202-566-1063)

New Data Management Systems Help Track Wetland Permits, Weigh Wetland Mitigation Decisions in a Geospatial Context

EPA's Wetlands Division is working closely with the Army Corps of Engineers to improve access to §404 permitting data and to better track wetlands mitigation efforts. EPA assisted in the development of the Corps' new nationwide regulatory data management system known as ORM2. Deployment of ORM2 into all 38 Corps Districts was completed in 2007, thereby, allowing greater tracking of all §404 wetland permit decisions. Also, EPA supported the integration of ORM2 into a second Corps database known as RIBITS. RIBITS, a spatially-enabled, Internet-based tracking tool, allows the Corps as well as other natural resource agency staff to efficiently manage all information related to mitigation banks. Soon all Corps Districts will be able to take advantage of the benefits offered by RIBITS and ORM2.

These databases will enable the Corps to expand the quality and quantity of permit program data collected and tracked, manage decisions regarding impacts and compensatory mitigation in a geospatial context, and ensure datasharing with EPA, states and the public. Improved data collection will help federal agencies, states and others more effectively track wetlands losses and better measure the effectiveness of mitigation efforts. Since 2001, the agencies have been working to address weakness raised by the National Academy of Sciences, the General Accounting Office, and others on the effectiveness of compensatory mitigation. (Contact: Palmer Hough, 202-566-1374)

Federal Geospatial Data Committee Proposes New National Wetland Mapping Standard

In 2007 OWOW continued to lead a multi-agency effort through the Federal Geospatial Data Committee to develop a *National Wetland Mapping Standard*. When finalized, the standard will greatly streamline and standardize wetlands data collection, documentation and management procedures and will help to accelerate the update and completion of the wetlands data layer, including future "real-time" updates.

This collaborative effort will enable federal, state, tribal, local agencies and others to collect and provide digitally mapped data in a consistent format for inclusion in the National Wetlands Inventory and for uploading into the wetlands data layer of the National Spatial Data Infrastructure. The draft standard is being revised to reflect public comments received in 2007, with a goal to finalize the standard in 2008. Better geographical data will strengthen efforts to protect valuable aquatic resources and incorporate wetlands protection goals into larger watershed planning and management efforts. (Contact: Margarete Heber, 202-566-1189)

Program Evaluation Identifies Improvements to Wetland Grants

In 2007, the Wetlands program completed an evaluation of the *Wetland Program Development Grants* (WPDGs) to assess their effectiveness in building state/tribal wetland programs between the years 2001- 2006. The evaluation used interviews with state and tribal program staff, grant records, and selected grantee products to determine the role of WPDGs in helping states and tribes build three core elements of their wetland programs: monitoring and assessment, regulation, and restoration. The report found that the WPDGs play an important role in supporting state/tribal wetland programs, especially for smaller programs. Grantees were generally pleased with the overall process used for soliciting and administering grants.

Photo: Elinor Osborn

The report also highlighted the gap between small and large programs (as measured by the number of full-time employees): smaller programs, especially, had a hard time doing effective work in those years in which they did not receive WPDGs. The evaluation made several recommendations for EPA, including how to bridge the gap between small and large programs. Results of the evaluation are informing a new *Enhanced State and Tribal Programs Initiative* – an effort now underway. This initiative will examine ways to make WPDGs more effective as well as look at ways to help states and tribes build their programs through other forms of EPA assistance. (Contact: Romell Nandi, 202-566-1203)

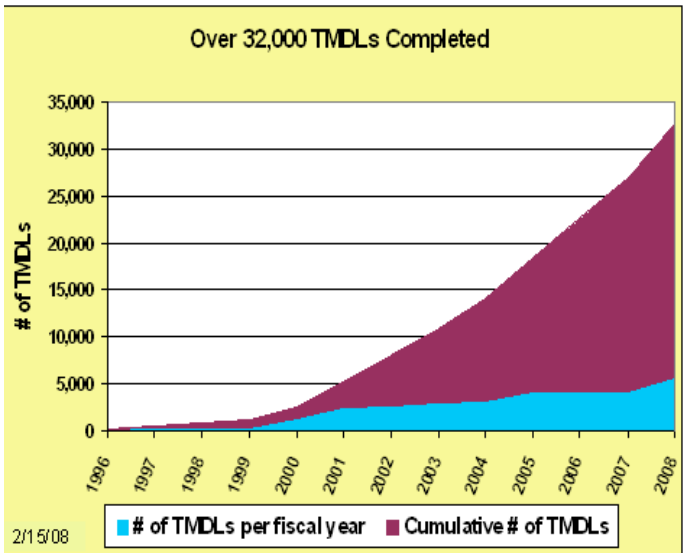
Wetlands Demonstration Pilot Grants Show the Value of Program Implementation

EPA continues to pursue numerous tools to help states and tribes build the capacity of their wetlands programs. As part of our commitment to make the most effective use of grant resources, EPA set aside $18.6 million of its Clean Water Act §104(b)3 funds for competitive, three-year Wetlands Demonstration Pilot Grants that states and tribes could use to implement aspects of their wetlands programs. These pilot grants differ from EPA's established *Wetland Program Development Grants*, which finance the development but not the implementation of wetlands programs. The focus of the effort is to demonstrate whether implementation activities produce environmental results.

EPA awarded funds to projects in 22 states and one tribe from FY 2005 to FY 2007. The 26 projects cover a variety of wetland program activities including restoration, protection, inventorying, mapping, monitoring, assessment, and regulation of wetlands resources. In order to evaluate the effectiveness of the pilots, EPA is working with grantees to analyze the resulting programmatic and environmental outcomes. Now in the second year of collecting results, EPA has streamlined the reporting process so that the 26 projects can be organized into nine activity areas that facilitate more consistent and quantitative reporting. This approach allows EPA to evaluate changes in wetlands programs and to track expected long-term environmental benefits more effectively. Final results of the 3-year pilot will be available in 2009. (Contact: Katherine Antos, 202-566-0620)

Memorandum on Listing Waters Impaired by Atmospheric Mercury Under Clean Water Act Section 303(d)

Over 8,700 waterbodies are listed under Clean Water Act (CWA) §303(d) as impaired due to mercury, often originating from atmospheric sources. EPA has developed a voluntary approach that recognizes the challenges in addressing mercury-impaired waters through CWA programs alone. Under this approach, states, territories and tribes with multi-media mercury reduction programs may defer the development of atmospheric mercury TMDLs (pollutant clean-up budgets) and may include such waters in a subcategory of their impaired waters lists. Using this new approach, EPA is encouraging states to take early action to address their mercury sources and more quickly achieve environmental results.



As of 2007, more than 32,000 CWA Total Maximum Daily Loads for all types of pollutants have been completed, including more than 4,000/year over the last three years. EPA is providing leadership to states on the recommended elements for TMDLs, including those relevant to our multi-pronged strategy for mercury-impaired waters. More information is available at: www.epa.gov/owow/tmdl/mercury5m/. (Contact: Ruth Chemerys, 202-566-1216)

Total Maximum Daily Loads (TMDLs) with Stormwater Sources: A Summary of 17 TMDLs

Stormwater runoff from developing and urbanized areas is a significant contributor to water quality impairments. Currently, there are thousands of Clean Water Act §303(d) listed waters impaired by stormwater-source pollutants such as pathogens, nutrients, sediments and metals. Stormwater-source TMDLs are a challenge to develop because of the variety and number of sources, the variability of the pollutants, the limited monitoring data available, and the complexity of the mechanisms by which pollutants in stormwater discharges affect ambient water quality. In 2007, EPA issued a new report summarizing 17 TMDLs with stormwater sources. The report highlights a number of TMDLs that address a range of pollutants, use different models, different allocation and implementation methods—and that have been developed for stormwater sources in 16 states throughout the country during the past eight years.

This report is intended to aid states, EPA regions, and other TMDL practitioners to develop more accurate pollutant allocations that can be better implemented in permits and other local programs, while at the same time helping to maintain TMDL pace and improve the rate at which impaired waters are restored nationwide to meet water quality standards. This new report is available at: www.epa.gov/owow/tmdl/17_TMDLs_Stormwater_Sources.pdf. (Contact: Christine Ruf, 202-566-1220)

EPA Documents Cost Savings by Using Low Impact Development Practices

EPA released a new report entitled "Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices," which contains 17 case studies that show the economic viability of LID practices. The report shows that using these practices in construction projects can lower costs while improving environmental results. LID practices are innovative stormwater management practices to manage urban stormwater runoff. The goal is to mimic the way water moves through an area before it is developed by using design techniques that infiltrate, evapotranspirate, and reuse runoff. Common LID practices include rain gardens, grassed swales, cisterns, rain barrels, permeable pavements and green roofs. LID practices increasingly are used by communities across the country to help protect and restore water quality.

The report highlights examples that, in most cases, reduce project costs while improving environmental performance. Total capital savings ranged from 15 to 80 percent, with a few exceptions in which LID project costs were higher than conventional stormwater management costs. As LID practices become more common, it is likely that they will become cheaper to use. The report is available at www.epa.gov/owow/nps/lid/costs07. (Contacts: Anne Weinberg, 202-566-1217 and Robert Goo, 202-566-1201)

EPA Releases Nonpoint Source Outreach Toolbox

In 2007, EPA released the *Nonpoint Source Outreach Toolbox*, a user-friendly and highly acclaimed set of Web-based resources designed to assist communities across the U.S. conduct locally effective watershed education and outreach activities. The Toolbox, online at www.epa.gov/nps/toolbox, includes a searchable catalog of nearly 800 print, radio, and TV ads and outreach materials in the following categories: lawn and garden care, motor vehicle care, pet care, septic system care, household chemicals and waste, and general stormwater awareness. Many of the campaign materials were funded by Clean Water Act §319 funds.

This repository of audience-tested materials is designed to meet the needs of stormwater professionals who might be strapped for ideas, money, time or staff to develop messages and products for their own communities. The Toolbox also provides EPA's publication "Getting in Step - A Guide to Conducting Watershed Outreach Campaigns," as well as an ample collection of surveys and evaluations of outreach programs from around the country and a collection of logos, slogans, and mascots to help unify a community's campaign. A version of the Toolbox has also been released on CD, meaning that Internet access is not required to take advantage of these resources. (Contact: Don Waye, 202-566-1170)
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Work Continues on the National Aquatic Resource Surveys; Lakes Field Sampling Season a Success

Statistically-representative surveys of the aquatic resources of the U.S. have begun providing the agency with the information it needs to identify national priorities and to evaluate the effectiveness of water quality protection efforts. The surveys are designed to yield unbiased estimates of the condition of a whole resource, based on a representative sample of waters.

EPA and its partners in the states have successfully completed the field season for the first assessment of the condition of the nation's lakes, ponds, and reservoirs. Early in 2007, EPA held ten sessions around the country training over 80 field crews who then sampled 909 lakes, ponds, and reservoirs in the course of the summer. Field crews collected data for indicators of regional and national ecological integrity, such as sediment diatoms, phytoplankton, zooplankton, and shoreline physical habitat conditions; indicators of trophic status, such as nutrients, chlorophyll a, and transparency; and pathogens and algal toxins as recreational indicators. A report on the *Survey of the Nation's Lakes* is planned for 2009.

The year 2007 was also the planning year for the survey of the nation's rivers and streams; indicators and sampling protocols were selected. Field sampling for rivers and small streams will be conducted in 2008 and 2009. Also in 2007, OWOW led research efforts and initial discussions in preparation for the 2011 survey of the condition of the nation's wetlands. For more information on the *National Aquatic Resource Surveys,* visit www.epa.gov/owow/monitoring/reporting.html. (Contact: Susan Holdsworth at 202-566-1187)

Release of the Water Quality Exchange Improves Data Sharing

In 2007, EPA's STORET program released the Water Quality Exchange (WQX), a new data transfer system that makes it easier for states, tribes, and others to submit and share water quality monitoring data over the Internet. With WQX, groups who collect water quality data no longer need to use EPA's STORET database to submit their monitoring results to the National STORET Data Warehouse, the national repository of water quality information. WQX, in essence, uses new Web technology to bring data sharing into the 21st century.

EPA also released new services for users of the STORET Warehouse, including a new Web-based Watershed Summary tool designed to help water quality managers and the public quickly review the type and sources of data available for any watershed. The Watershed Summary tool produces a list of number of stations, the types of data (such as metals, nutrients, or pesticides data), who has entered the data, the period of record for the data, and how much data are available. The user can then download specific data for that watershed. Another feature created for more sophisticated users is a series of Web-services that allow large volume data analysts to retrieve data directly from the warehouse without using the Web-based download tool. For more information on WQX, visit www.epa.gov/STORET/WQX. (Contact: Kristen Gunthardt, 202-566-1194)

$16 Million Awarded to new Capacity Building and Implementation Grantees under Targeted Watersheds

In 2007 the Targeted Watersheds Grants (TWG) program awarded 15 implementation grants to watershed organizations, local governments and universities for on-the-ground watershed projects. Awards totaling over $13 million will support a variety of activities, including stream channel and wetland restorations; educating local officials on smart growth and Low Impact Development techniques; implementing agricultural best management practices; reducing toxics in marine sediments through a "living cap" of oyster reefs; improving water quality at orphaned acid mine drainage sites; and developing a sustainable agricultural and forest product branding program. Over $3 million was awarded to six capacity building organizations to develop the organizational and technical capacity of watershed organizations throughout the country. Areas of greater need—Appalachia, the Great Plains and the Arid West— were a special focus of the grants. Under the capacity building grants, project activities include:

- holding regional watershed roundtables,
- training watershed organizations in Appalachian coal country in water quality monitoring and fiscal sustainability,
- growing state watershed councils and tribal water quality entities in the west,
- establishing a national clearinghouse for watershed information,
- offering training and technical assistance in the acquisition of water rights and dedication of these rights to instream flow needs, and
- building a Regional Water Quality Assistance Network that provides watershed organizations with practical tools (such as model ordinances and public process facilitation and sustainable financing mechanisms).

For more information, visit: www.epa.gov/twg. (Contact: Aileen Molloy, 202-566-1424)

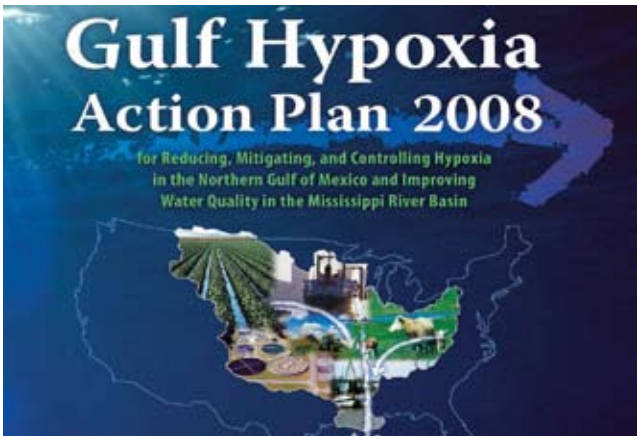
Earth Gauge™ Delivers Environmental Information to the Public via the TV Weather Report

Television and radio weathercasts are the most popular news item in any media market – nearly 80 percent of viewers report that the weather is the primary reason they watch local news. Because broadcast meteorologists routinely convey complex scientific information, the weather report provides a unique opportunity to bridge the environmental information gap.

To foster the dissemination of environmental information to the public, OWOW is one of several partners funding Earth Gauge™, a free environmental newsletter produced by the National Environmental Education Foundation targeted at television and radio weathercasters in 90 media markets, including 130 broadcast meteorologists. Earth Gauge™ is designed to make it easy for weathercasters to explain the environmental implications of weather events and what viewers can do to help protect their watersheds. For more information, visit www.epa/gov/owow/watershed/weather. (Contact: Patty Scott, 202-566-1292)

Gulf Hypoxia Action Plan Increases Accountability

The complex interaction of excess nutrients carried to the Gulf of Mexico by the Mississippi and Atchafalaya Rivers, physical changes within the river basin, and stratification of the Gulf waters contributes to hypoxia— a "Dead Zone" — with oxygen levels too low to sustain marine life. In 2007, the hypoxic zone was the third largest on record - bigger than the State of Massachusetts.



This year brings to a close a multi-year comprehensive reassessment of the *2001 Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico*. The inter-governmental Mississippi River/ Gulf of Mexico Watershed Nutrient Task Force, chaired by Assistant Administrator Benjamin Grumbles, will release a revised Action Plan in Spring 2008. The 2008 Action Plan will increase accountability and specificity, incorporate emerging science, include an Annual Operating Plan and Annual Report to maintain and track progress, shift the lead for nutrient reduction strategies to the states while adding complementary federal strategies, and include a communication/ outreach plan to engage stakeholders.

To reduce the size of the Dead Zone, the Coordinating Committee for the Task Force, chaired by OWOW Director Craig Hooks, along with the Gulf Hypoxia Team, are bringing federal agencies and states together to build strong partnerships, develop voluntary and regulatory approaches, and increase national awareness. For more information, visit: www.epa.gov.msbasin. (Contact: Kristen Goodrich, 202-566-1284)

The Hypoxia Website can be accessed at: www.epa.gov/msbasin/.

Watershed Plan Builder Completed; Watershed Central Project Commences

In March of 2007, OWOW released a final version of the Internet-based Watershed Plan Builder Tool. The tool promotes the development of comprehensive watershed plans that protect and restore the chemical, physical and biological integrity of the nation's waters. It helps organizations develop plans that are tailored to the concerns and issues specific to their watersheds, thus helping them achieve state water quality standards and other environmental objectives. The Plan Builder is available on-line at: www.epa.gov/owow/watershedplanning.

In 2007 OWOW, the Office of Environmental Information and the Office of Research and Development initiated work on *Watershed Central*, an integrated watershed Web site. The portal-like site will serve as a clearinghouse of information for watershed practitioners and will contain a *Wiki* (a user-developed on-line encyclopedia) to share information across agencies and among watershed organizations. The agency hosted a series of stakeholder meetings to solicit input on this collaborative undertaking. (Contact: Stuart Lehman, 202-566-1205)

Tribal Water Protection Efforts Advanced

Throughout the year, OWOW provided critical leadership toward the advancement of tribal water programs. OWOW's support for the National Tribal Water Council resulted in greater coordination among tribal water program professionals and an improvement in the Office of Water's ability to communicate with Indian Country. Notable was OWOW's performance at the Council's first official meeting in October where the full range of OWOW programs was presented. Also notable was the introduction of Tribes to the National Water Quality Monitoring Council and sustainable finance tools. OWOW's leadership resulted in the phasing-in of Structured Consolidated Training for Tribes under the Clean Water Act and selection to the newly established Tribal Training Implementation Work Group.

OWOW met with the Director of the Yukon River Inter-Tribal Watershed Council (conglomeration of 64 First Nations of Canada and Tribes from the US) and participated in National Tribal Caucus meetings. Finally, OWOW provided National Tribal Conference on Environmental Management planning and co-host support culminating in the promotion and oversight of conference presentation proposals, participation, and outreach. (Contact: Kathleen Kutschenreuter, 202-566-1383, and Andrea Matzke, 202-566-1150)

Smart Growth Team Helps Build Sustainable Communities

OWOW's Smart Growth Team focused on delivering training and technical assistance to communities in 2007, along with piloting and promoting Low Impact Development practices.

Delivering Smart Growth Training to Coastal Communities

Through an interagency agreement with NOAA, OWOW and EPA's Smart Growth Office collaborated to provide training in 10 coastal communities in 2007 – including the Charlotte Harbor National Estuary Program (NEP) in Florida. In February, 2008, the curricula was updated with case studies from the NEPs and delivered to 30 participants at the *New Partners for Smart Growth* conference in Washington, D.C.. This two-day course helps communities make better informed decisions about how and where growth will occur. The training is provided free of charge to communities.

Helping Reduce Combined Sewer Overflows Using Green Infrastructure

OWOW is collaborating with EPA's Smart Growth Office to deliver technical assistance that will help Northern Kentucky's Sanitation District No. 1 reduce combined sewer overflows using a range of regional, neighborhood, and site-scale green infrastructure. These approaches still allow for sustainable growth, while adequately protecting water resources.

Assisting the District of Columbia's Stormwater Management

The team is working with the District of Columbia's Stormwater Task Force and other stakeholders to come up with recommendations on stormwater policies, management, and funding mechanisms. The team's extensive case study research of innovative policies and practices is informing the District's decisions. At the same time, the process of applying nationwide research in a local context helps package case studies for a wider audience of municipal decision makers.

Low Impact Development on Historic Federal Buildings

In 2007, OWOW overcame an unanticipated hurdle in efforts to install a demonstration green roof on EPA Headquarters in Northwest D.C.. Since the building is on the National Register of Historic Places, the initial reaction of the General Services Administration (GSA), which leases the building, was that a green roof retrofit was not possible. After continued negotiation and education about the benefits, GSA granted approval. Plans are underway to complete the installation in 2008. The team continues to undertake Low Impact Development (LID) projects in order to support the environmental benefits provided by LID and to better understand the barriers faced by others trying to implement these practices. EPA has expanded this effort through a new interagency agreement with the U.S. Botanic Garden that will facilitate both the design of a green roof on the U.S. Botanic Garden and coordinated education materials.

The team is working to install green roofs at EPA Headquarters and the U.S. Botanic Garden, much like the roof pictured here on Chicago's City Hall.

(Contacts: Jamal Kadri, 202-566-1248; Robert Goo, 202-566-1201; and Rebecca Dils 202-566-1378)

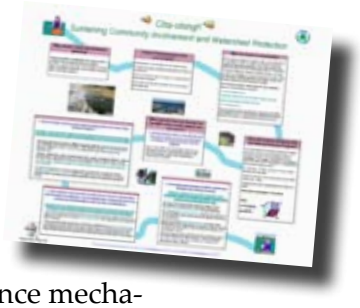
OWOW Finance Team Enhances Tools and Training to Help Build More Sustainable Watershed Organizations

In 2007, OWOW's Sustainable Finance Team (SFT) developed and refined tools and offered training to strengthen the long-term financial sustainability of watershed organizations.

Enhancement of Decision-Making Tool

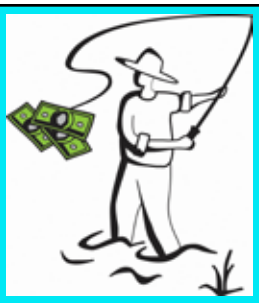
Plan2Fund Objective Prioritization Tool (OPT) helps stakeholders save time and energy when achieving consensus on top funding priorities and moving toward implementation of strategic plans. This free, Web-based tool helps groups determine rules to evaluate competing objectives or projects as well as a scoring system to rank those objectives or projects. This year, the team worked with Boise State University's Environmental Finance Center to make *Plan2Fund OPT* more user-friendly and easy to present to decision makers, funders, and constituents. For more information, visit: efc.boisestate.edu/efc/Tools/OPT/tabid/109/Default.aspx or contact Bill Jarocki at 208-426-4293 or bjarock@boisestate.edu.

Building Capacity at EPA



The SFT worked to build the capacity of EPA employees to provide financial planning assistance to groups they serve. In June, the team presented a poster entitled *Cha-Ching!! Sustaining Community Involvement and Watershed Protection* at EPA's Community Involvement Conference to inform attendees about the links between finance planning, community involvement, and environmental results. During the year, the team also collaborated with the Office of Enforcement and Compliance Assistance, State Revolving Fund branch, and other agency program staff to share tools, explore innovative finance mechanisms, and foster partnerships. Finally, the SFT initiated an Office of Water finance network to promote better collaboration on watershed finance.

Delivering Finance Training to Target Groups



This past year, the team assisted with finance planning for three target groups:

Nonprofits and their service providers: *The SFT organized finance presentations at River Network's "River Rally," the largest gathering of watershed organizations and their service providers, and the National Center for Nonprofit Enterprise's "Your Money or Your Mission?" The team also conducted a tools workshop targeting nonprofits in the Washington, D.C. area. For more information, visit epa.gov/owow/funding/workshop_notes.htm.*

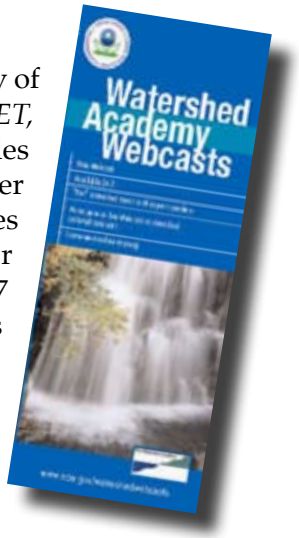
The National Estuary Programs (NEPs): *The team conducted a two-day finance training for San Juan Bay NEP. This workshop resulted in development of three finance mechanisms that have been proposed in a bill to the Puerto Rico legislature: cruise ship, license plate, and income tax check off contributions. For more information, visit epa.gov/owow/funding/SJBEP_workshop.htm.*

Remote Users: *The team worked with the University of Maryland Environmental Finance Center to develop "Moving Beyond Grants," a Webcast on effective finance tools and approaches. The Webcast, attended by 295 people, is archived at www.epa.gov/watershedwebcasts. The team also continued to update EPA's Watershed Funding Portal, which contains finance tools, resources, and searchable databases. The portal can be accessed at www.epa.gov/owow/funding.html.*

(Contacts: Tim Jones, 202-566-1245, and Rakhi Kasat, 202-566-1644)

Communications Team Continues Popular Webcast Series and Expands Watershed Tools Training

In 2007, OWOW's Cross Office Communications Team hosted 12 Watershed Academy Webcasts on a variety of watershed topics. These free, on-line seminars attracted more than 2,500 participants in 2007, including participants from all fifty states and several other countries. Almost 30 webcasts are now available covering topics such as social marketing, low impact development, pollutant trading, water quality monitoring, and watershed plan development.



The team also hosted numerous trainings on *Key EPA Internet Tools for Watershed Management*. This popular computer training course covers many of EPA's powerful tools for watershed management, including E*nviromapper, STORET, Adopt Your Watershed*, the *Watershed Plan Builder*, and others. The course includes an introductory overview in addition to a more in-depth, hands-on computer training session for more advanced users. The course has been taught 25 times and reached 654 people in six EPA regional offices, several states, and other venues. In addition, the training was presented as a Webcast in March 2007 and at the River Rally in May 2007. The curriculum is now available on-line as a self-paced tutorial at: www.epa.gov/owow/watershed/wacademy/epatools/, so that practitioners can learn anytime, anywhere.

(Contacts: Anne Weinberg, 202-566-1217; Patty Scott, 202-566-1292; Meghan Klasic, 202-566-1262)

2007 Webcast Seminars

- *Smart Growth and Green Infrastructure*
- *Watershed Financing – Moving Beyond Grants*
- *Water, Energy, and Climate Change*
- *Wetlands: Condition, Loss and Restoration*
- *Earth Gauge™: Conveying Environmental Information through the TV Weather Report*
- *Acid Mine Drainage (AMD) & ART*
- *Using STORET Data to Characterize Your Watershed*
- *Long-Term Stewardship of Wetlands Mitigation Sites*
- *The Watershed Plan Builder*
- *Key EPA Internet Tools for Watershed Management*
- *Implementing TMDLs and Trading Through the National Estuary Program*
- *Using NEMO- Nonpoint Source Education for Municipal Officials- to Advance Watershed Management*

All the seminars are archived (along with the audio) and can be accessed anytime at: www.epa.gov/watershedwebcasts. They can also be downloaded as a podcast from iTunes.

OWOW Diversity Action Team Spreads Awareness on Mental and Physical Disabilities

The theme for the Fiscal Year 2007 Diversity Action Plan was increasing awareness of disability issues and supporting ways to create a positive work environment to help persons with mental and physical disabilities overcome challenges to foster success both professionally and personally.

After watching the "Aviator," the National Alliance for Mental Illness led a facilitated discussion with staff.

OWOW staff selected *Lucky Man,* a Memoir by Michael J. Fox, for the OWOW Diversity Book Club discussion. *Lucky Man* discusses Fox's experiences in dealing with Parkinson's disease. The team also presented *The Aviator,* an Academy Award-winning biographical drama based on the book "Hughes" by Richard Hack, that illustrates Howard Hughes's struggle and descent into obsessive compulsiveness and reclusiveness. After the film, Katrina Gay from the National Alliance on Mental Illness facilitated a discussion to help raise awareness within EPA about mental disabilities. Ms. Gay provided insights as to how organizations can be more accommodating to persons with disabilities.

Sherry Duhon and Jean Bergey from Gallaudet University shared their experience with the deaf community and also reflected on deafness in America based on the documentary, "Through Deaf Eyes," which was attended by 50 EPA staff. William Haig, EPA's Reasonable Accommodations Officer, presented information on Reasonable Accommodation Procedures to managers and the diversity action team staff. And in June, OWOW staff participated and assisted people with disabilities at the EPA Career Job Fair. Throughout the year, OWOW's popular diversity newsletters broaden the staff's appreciation of cultural diversity and focus on activities that foster diversity. The theme for FY '08 is "Generations." (Contacts: Janice Winfield, 202-566-1151; Kathleen Kutschenreuter, 202-566-1383; and Abu Moulta-Ali, 202-566-1068)

Visit OWOW on the Web at:
www.epa.gov/owow

Photo: John H. McShane

We welcome your comments! OWOW welcomes suggestions on how to make this report more useful and informative for our readers. Please send comments to:

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Document Number: EPA 840R08001
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May 2008

www.epa.gov/owow