

2006 Annual Report



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Purple Majesty
Zach P., Age 10
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Freedom Undisturbed
Jonathan W., age 12 (in 1996)
Ft. Myers, Florida
© River of Words 1996

Free to Go!
Gloria M., Age 8
© River of Words 2006

Catching
Justin N., age 6
West Lafayette, Indiana
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Sisters Toni A., Age 12 Baton Rouge, Louisiana © River of Words 2002

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River of Words © (ROW) is an educational non-profit organization that promotes environmental literacy and watershed awareness through the arts and cultural exchange. ROW conducts an annual international poetry and art contest for youth, in affiliation with The Library of Congress Center for the Book. Through its workshops, curriculum materials, exhibitions and publications, ROW encourages students around the world to explore their own communities and imaginations—weaving in natural and cultural history—and then to synthesize what they've learned and observed into line and verse.

River of Words worked with OWOW to create two patches: the Water Drop Patch (with the Girl Scouts of the USA) and the Watershed Patch.

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Office of Wetlands, Oceans and Watersheds 2006 Annual Report

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Regulation Drafted to Improve Aquatic Resource Compensation under Clean Water Act §404

In March 2006, EPA and the U.S. Army Corps of Engineers (Corps) took strong steps to improve compensation for permitted impacts to wetlands and streams by proposing a set of standards that will effectively carry out the President's commitment to "no net loss" of wetlands. This proposed rule responds to recommendations of the National Research Council to improve the success of wetland restoration and replacement projects by setting clear science-based and results-oriented standards nationwide while allowing for regional variations.

By focusing on results and accountability, the proposed standards would improve both the quality and effectiveness of aquatic resource replacement projects, and the speed and predictability of regulatory review. Most importantly, the proposal would establish a "level playing field" — ensuring that all forms of wetlands compensation satisfy the same high environmental standards.

The proposed rule's standards for all compensatory mitigation are similar to the provisions that have been in place for mitigation banks since the 1995 banking guidance, and include real estate instruments to protect the site; financial assurances for near- and long-term site stewardship; monitoring and contingency planning; and identification of parties responsible for project tasks.

OWOW has analyzed and summarized more than 12,000 public comments received on the draft rule, which included 900 unique letters, and is currently working with the Corps to make necessary revisions. A final rule is expected by late spring. For more information, visit the Compensatory Mitigation Web site: www.epa.gov/wetlandsmitigation/. (Contact: Palmer Hough, 202-566-1374)

OWOW Supports All Steps in Mitigation Sequencing

CWA §404(b)(1) Guidelines establish a three-step mitigation sequence to be followed in the review of proposed impacts to wetlands, streams, and other aquatic resources. Proposed impacts must be avoided to the maximum extent practicable; remaining unavoidable impacts must then be minimized, and finally compensated for to the extent appropriate and practicable. Over the past fifteen years, there has been much focus on improving the effectiveness of the third



step in the mitigation sequence, compensation. However, there is a lack of data evidencing that all appropriate and practicable steps have been taken in the permit process to first avoid, and then to minimize, impacts to aquatic resources.

In 2006, OWOW developed an annotated on-line compendium of technical and policy resources related to aquatic resource impact avoidance and minimization. This Avoidance and Minimization (AMP) Intranet Web site is intended to serve as a repository for valuable programmatic and policy documents and as a training tool for EPA staff. The Web site, http://intranet.epa.gov/owow/wetlands/AMP, contains a wide range of scholarly articles, Federal guidance, and legal materials, as well as a nearly complete set of reference documents on past CWA §404(c) "veto" actions and §404(q) elevations. (Contact: Palmer Hough, 202-566-1374)

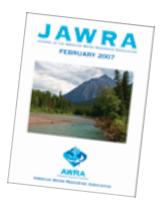
Over the past year, OWOW provided technical, scientific, and programmatic support for defending the federal government's position in Rapanos vs. United States, both pretrial and post-decision, and for implementing the Supreme Court's decision governing Clean Water Act (CWA) jurisdiction.

Before oral arguments, OWOW assisted the government attorneys in responding to questions on scientific issues regarding headwater, intermittent, and ephemeral streams, and headwater wetlands. The division assisted attorneys at U.S. Department of Justice (DOJ) and the Solicitor General's (SG) office in brief and oral argument preparation, including participating in moot court trials with the SG. The staff continues to review DOJ briefs for post-Rapanos jurisdictional cases.

OWOW also facilitated an analysis of the extent of certain categories of aquatic resources that are at issue in the Rapanos case, shedding light on how their inclusion or exclusion from the CWA would affect Federal water programs. This "Vulnerable Waters" study used Geographic Information System (GIS) analyses of USGS data combined with source water protection area data.

In addition, OWOW assisted in the publication of a special issue of the Journal of the American Water Resources Association (JAWRA), dealing with chemical, physical, and biological connections of headwater streams to downstream waters. (Contact: Tracie Nadeau, 503-326-3685). OWOW continues to work jointly with the Corps on post-Rapanos guidance and implementation documents. These include the EPA/Corps memo outlining the process for interagency cooperation and the process for determining Jurisdictional Determinations (JDs), the revised JD form for use in the field, and the JD Instructional Guidebook.

And finally, OWOW participated in presentations at Duke University, state bar associations, several conferences, EPA-sponsored trainings (Water Quality Standards Academy), and the Wetlands National Meeting. To assist field and regional staff, OWOW continues to chair a biweekly Geographic Jurisdiction Workgroup conference call with participants from OWM, OSWER, OGC, OECA, OPEI, ORD, DOJ, EPA Regional offices, and a Corps district office. (Contact: Donna Downing, 202-566-1367)



Dr. Tracie Nadeau authored the lead paper in the JAWRA special issue on the connectivity of headwater streams to downstream waters and edited the special issue, which includes articles by some of the nation's foremost experts. http://www.blackwell-synergy.com/toc/jawr/43/1

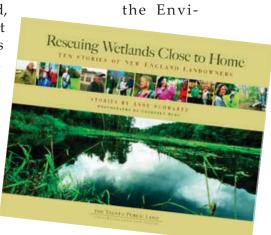
New OWOW Tool Assists States and Tribes in CWA §404 Assumption

A CWA §404 assumption tool for states and tribes was developed to provide a cross-walk between the statutory and regulatory requirements a state/tribe must meet to assume the CWA §404 program. The tool allows a state/tribe to insert their authorities and program descriptions into a table in a side-by-side format. This enables them to assess which programmatic areas they may need to develop or enhance prior to submitting their request for assumption. The tool has already been used by three states and one tribe (KY, WI, VA, and Fond du Lac) and should minimize the need for returning an assumption request package to a state or tribe as incomplete. (Contact: Kathy Hurld, 202-566-1269)



Partnerships with Land Trust Community Strengthens Wetlands Protection

OWOW partnered with the Land Trust Alliance, Trust for Public Land, ronmental Law Institute, and Center for Natural Lands Management to provide land trusts and local decision makers with various trainings and technical information on potential roles for land trusts in wetland protection. Specific accomplishments include partnering with the Trust for Public Land to develop a guidance brochure that focused on land owners in the Northeastern US. This document, *Rescuing Wetlands Close to Home*, celebrates numerous successful efforts to protect wetlands and provides up-to-date information on benefits gained by the landowner when engaging in wetland protection and various funding mechanisms. It also provides "how-to-information" on navigating the wide range of land-owner assistance programs at the state and federal level. This document was distributed to attendees at the annual Land Trust Alliance Rally, which hosts over 2000 land trusts.



The Environmental Law Institute (ELI), in partnership with the Center for Natural Lands Management and OWOW, developed a two-day technical training designed to improve the capacity of local and regional land trusts to manage wetland mitigation sites and meet the requirements of the Clean Water Act §404 program. The first, in an on-going series, was conducted in January 2006. This session focused on land trusts in the South East. OWOW and its partners will continue to conduct these trainings in the Pacific North West and to conduct national Webcasts. (Contact: Rebecca Dils, 202-566-1378)

Wetlands Monitoring Takes Major Step Forward

In 2006, OWOW had two major accomplishments that helped advance wetlands monitoring and assessment across the country. In early 2006, OWOW released a document entitled *Elements of a State Monitoring and Assessment Program for Wetlands*. This technical guidance outlines the major components of a comprehensive wetlands monitoring program, and serves the basis for working with states and tribes to develop effective implementation strategies. In addition, OWOW re-chartered the National Wetlands Monitoring and Assessment Work Group to take on the mission of building state and tribal wetland monitoring capacity. Work group members include states, tribes, and EPA Regions. In the coming year the group will develop implementation strategies for state and tribal wetlands monitoring programs, consider how wetlands assessment data informs decision making, and inform design of the 2011 National Wetlands Condition Assessment. (Contact: Michael Scozzafava, 202-566-1376)

OWOW Leadership Advances Tribal Programs

OWOW played a leadership role on the Agency technical evaluation panel for the Tribal Water Program Council solicitation. This achievement resulted in an award for the formation and coordination of a new national Tribal Water Program Council. The Council is intended to facilitate interaction among tribal water program professionals and improve the National Water Program's ability to communicate with Indian country on water protection efforts that may affect tribes — ultimately leading to an extension of the successes of our national water protection programs. OWOW also played a leadership role on the workgroup, which ultimately provided recommendations regarding a centralized training structure for Tribal water programs (RFP developed). The Intra-Agency Fish Consumption Work-

group was charged with developing a response to the National Environmental Justice Advisory Council's (NEJAC) six recommendations on Fish Consumption and the Environment. OWOW contributed to report development, including the determination of which recommendations were appropriate for OWOW support. Finally, OWOW reviewed, scored, and presented recommendation analyses of 2007 National Tribal Conference on Environmental Management co-host competitors and successfully participated in two National Tribal Caucus meetings. (Contact: Kathleen Kutschenreuter, 202-566-1383)



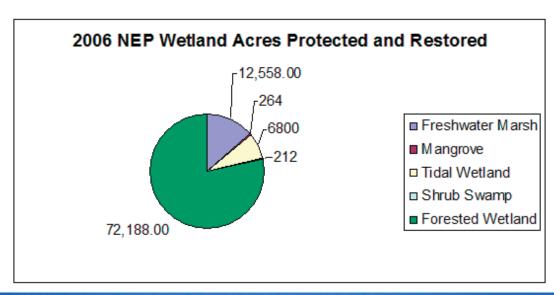
National Estuary Programs Meet Strategic Plan Habitat Goals

EPA 's 28 National Estuary Programs around the country bring together local stakeholders such as citizens, educators, government representatives, watershed organizations, business leaders, scientists, and landowners to work together to identify and prioritize problems in their estuaries. Specific implementation actions are then developed to address these challenges. Examples of these actions include:

- * acquire or preserve open space,
- * develop conservation easements for riparian buffer areas,
- * restore or create wetland habitats,
- * dam removal,
- * mapping of critical areas, and
- * public outreach and education activities.

All of these efforts are carried out through partnerships between federal, state, and local agencies with assistance from private and nonprofit sectors and citizens. The NEPs have identified habitat loss as one of the primary threats to the health of their estuaries and are implementing specific actions to address this issue. To show progress and to evaluate their effectiveness, the NEPs report to EPA annually the number of habitat acres protected and restored, which are now collected in a new reporting database. EPA is meeting its established goal with respect to habitat in the Strategic Plan. The goal states, "By 2008, working with NEP partners, protect and restore an additional 250,000 acres of habitat within the study areas for the 28 estuaries that are part of the NEP."

In 2006, the National Estuary Program and their partners protected and/or restored a total of 140,033 acres of habitat. Forested wetland (72,188 acres) was the largest habitat type protected and/or restored in 2006. (Contact: Nancy Laurson, 202-566-1247)



Last year the National Estuary Program and their partners restored and/or protected 92,023 acres of wetlands.

National Estuary Programs Leverage \$1.4 Billion

The 28 NEPs receive federal funding each year under §320 of the Clean Water Act. They use these funds to implement Comprehensive Conservation and Management Plans (CCMPs) and as leverage to obtain additional in-kind resources. By leveraging EPA money, the NEPs are able to accomplish much more and give their organizations a more stable financial foundation.

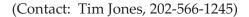
EPA defines leveraging, a metric to track NEP performance, as the dollar value of resources dedicated to implementing the CCMP above the funding provided by EPA. Each year, EPA reviews and evalu-

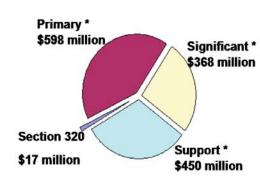
ates leveraging data to determine factors associated with higher amounts of leveraging in certain NEPs and to identify NEPs requiring assistance in developing their funding capabilities. Using \$17 million in EPA funding, the 28 NEPs:

 Played a primary role* in generating nearly \$600 million (36:1 ratio)

– Played some role in generating more than \$1.4 billion

* Indicates role of NEP (rather than NEP partners) in obtaining the resources.





Total 2006 Leveraging: \$1.42 billion

Implementation Reviews Improve NEP Performance

In 2006, OWOW conducted seven intensive Implementation Reviews (IR) to assess effectiveness of the NEPs. All seven NEPs "passed" the review. Some of the lessons learned from this process are as follows: 1) the NEPs are using feedback from the implementation review to make improvements or refinements in their programs, 2) the NEPs actively share success stories and approaches with each other and with community-based watershed groups, 3) the NEPs provide effective outreach and technical assistance to local and state governments, as well as to other stakeholder groups, and 4) EPA uses these reviews to develop new activities that address the NEP challenges. (Contact: Noemi Mercado, 202-566-1251)

Community Culture and Environment Workshops Build Local Capacity

Four workshops were held to help local watershed groups develop actions and partnerships to solve local environmental problems. The workshops were held in the Chesapeake Bay Watershed (March '06); Florida's Charlotte Harbor National Estuary Program (May '06), the National Nonpoint Source Coordinators' Meeting (June '06); and the Arkansas Watershed Advisory Group 2006 Watershed Conference (November '06). (Contact: Theresa Trainor, 202-566-1250)

Estuary Live! Reaches Estimated 700,000 Viewers

EstuaryLive! brings estuaries into classrooms, providing an opportunity for students and others to take a virtual "trip" to places many might never have a chance to see. It's an innovative, web-based program that provides an opportunity to experience the hidden treasures of our Nation's estuaries via the Internet. 2006 marked the sixth year that EPA has co-sponsored the broadcast with NOAA. To date, over twenty different estuaries around the Nation have been featured.

EstuaryLive! continues to grow in popularity. In 2006, an estimated 25,000 "requests" came in via the internet to view the broadcast — up from 20,958 last year (a request could be one individual, an entire classroom, or a full auditorium). The

program was also broadcast by Comcast of Delaware, at the Oregon Aquarium, and by all South Carolina school districts via educational television — thus raising the viewership even higher. An estimated 700,000 viewers in 28 States and Aruba watched the broadcast over the internet and via satellite! 1,398 questions were submitted during the broadcast - up from 1,150 last year. *EstuaryLive!* represents an important partnership between EPA and NOAA as it helps foster a better working relationship between the National Estuarine Research Reserves, the NEPs, and the many federal, state and local stakeholders that participate in the broadcasts. (Contact: Nancy Laurson, 202-566-1247)



EPA's Survey Vessel, OSV Bold, Completes Critical Ocean Surveys

In 2006, EPA's Ocean Survey Vessel Bold (OSV *Bold*), successfully performed more than 260 sea days. The ship supported EPA regional studies on Ocean Dredged Material Disposal Sites, Gulf of Mexico Hypoxia, and critical habitat studies for coral reefs in Florida, Puerto Rico and the U.S. Virgin Islands. Numerous public open house events were held, including two with EPA Administrator Steve Johnson. The ship is now into the second year of service and numerous improvements have made the vessel

a more functional platform for EPA scientists to conduct operations. A new state-of-the-art sidescan sonar unit, for mapping the ocean bottom, replaced an older model. The ship also received a new sampling array to sample the water column. The biggest enhancement was the addition of a stern A-Frame to deploy and retrieve heavy equipment. In addition, OWOW conducted a chief scientist training session on the ship, focusing on the new side scan sonar, safety, survey planning and management, and tech transfer among the chief scientists. (Contact: Ken Potts, 202-566-1267)



OWOW Plays Lead Role In Ocean Action Plan



OWOW continues to play a leadership role on the Sub-committee on Integrated Management of Ocean Resources (SIMOR), which EPA co-chairs along with NOAA, the Council on Environmental Quality, and Department of the Interior. During 2006, SIMOR focused

on implementing the actions in its work plan. Promoting regional and local collaborations is both a SIMOR and Office of Water priority.

The Gulf of Mexico Alliance, a state/federal collaboration made up of the Governors of the five Gulf states working in partnership with a federal workgroup co-chaired by EPA and NOAA, issued the Governors' Action Plan in March 2006 to address critical ocean and coastal issues in the Gulf region. Work is underway to implement the Action Plan, with continued support to the Gulf states from the federal workgroup. In addition, this workgroup, working with state partners and guided by Action Plan priorities, will develop a Lessons Learned/Best Practices document, an action item in the SIMOR Work Plan. SIMOR is also working with several other regional collaborations, including the Northeast Regional Ocean Council and the West Coast Governors Initiative, to determine how best to support those efforts.

Facilitating use of ocean science in ocean and coastal resource management is another SIMOR priority. During 2006, the Federal-State Task Team (FSTT), a group of resource managers formed by SIMOR, participated in the development of the Ocean Research Priorities Plan, part of the Ocean Action Plan and released in January 2007. The FSTT played a crucial role by ensuring that the needs and perspectives of resource managers were considered in the plan's development. http://ocean.ceq.gov/. (Contact: Hazel Groman, 202-566-1219)

OWOW Strengthen International Efforts on Ballast Waters

OWOW continues to work with the US Coast Guard (USCG) on their new rulemaking for ballast water standards, and with the US Government delegation to the International Maritime Organization meetings to strengthen international guidelines on ballast water treatment. OWOW reviewed and commented on the draft USCG Programmatic Environmental Impact Statement (PEIS) for a Ballast Water standards rule in accordance with USCG timelines and obtained input from and coordinated with ORD on technical issues. In addition, OWOW obtained technical support for the Ballast Water treaty activities from ORD and the FIFRA office. (Contact: John Lishman, 202-566-1364).



National Dredging Team Advances Watershed Management

In August 2006, OWOW played a key role in helping the National Dredging Team (NDT) and Subcommittee on Integrated Management of Ocean Resources (SIMOR) host the conference Managing Sediments in the Watershed: Bringing Dredged Material and Watershed Managers Together. The conference successfully brought together watershed and sediment managers to develop better communication and coordination for a broader watershed perspective in dredged material management planning. (Contact: Molly Madden, 202-566-1279)

Sampling Analysis on Cruise Ship Discharges Completed

In 2006, OWOW and the Office of Science and Technology continued to collect and analyze data from cruise ships to assess the need for additional standards for sewage and graywater discharges from large cruise ships operating in Alaska. This crossoffice team completed the first round engineering, economic, and environmental analyses, including comparison to all relevant water quality standards; identification of potential environmental concerns; and evaluation of potential treatment technologies, their costs and their impacts. In addition, the team published its 2004 sampling reports and drafted its 2005 sampling report. (Contact: Elizabeth Kim, 202-566-1270)



Ocean Dumping Database Initiated

In 2006, OWOW's Ocean Dumping Program worked effectively with the Regions to successfully develop and launch a database for the Regions to compile data regarding vessels that are ocean dumped under the Marine Protection, Research, and Sanctuaries Act (MPRSA). The program also completed a delegation package giving authority to sign Site Management and Monitoring Plans under the MPRSA to the Regional Administrators. In addition, the program completed and distributed Ocean Dumping Siting Guidance and reviewed Region 10's ocean dumping program. (Contact: Elizabeth Kim, 202-566-1270)

OWOW completes National Guidance on Artificial Reef Creation

During 2006, OWOW completed the *National Guidance*: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs (BMP guidance document). This final guidance addresses the public comments received on the draft guidance (69 FR 46141). The first of its kind, this guidance offers a consistent, national approach for preparing obsolete and decommissioned military and commercial vessels for use as artificial reefs. This guidance satisfies the mandate of Section 3516 of the National Defense Authorization Act for Fiscal Year 2004. The BMP Guidance document will be used as the basis for international guidance being developed by UNEP and the London Convention.

In addition, OWOW actively worked with the PCB program from Region IV and HQ on the scientific workgroup that issued the PCB disposal approval for the ex-Oriskany vessel-to-reef project. The completion of the BMP Guidance and PCB disposal approval, as well as the response to comments for each, were expedited to meet the Navy sink schedule – May 17, 2006. OWOW also participated in the final walkthrough of the ship upon completion of the vessel's clean-up and diver preparation, prior to its sinking. Under 10 U.S.C. 7306b(c), the Secretary of the Navy must ensure that the preparation of a vessel (that is stricken from the Naval Vessel Register) for use as an artificial reef is conducted in accordance with the BMPs.

In June 2006, OWOW successfully executed a time-critical delegation from the Administrator to Region VI to issue a Liberty Ship Act certificate for the ex-USS Texas Clipper. This one-time, vessel-specific delegation was expedited due to the vulnerability of the vessel hull and the threat of the vessel sinking prematurely. OWOW also

successfully developed a permanent delegation package that was signed by the Administrator on November 9, delegating authority under the Liberty Ship Act to the Regional Administrators. Our timely completion of this delegation allowed for MARAD to transfer title of the ex-USS Vandenberg to the State of Florida on schedule. (Contact: Laura Johnson, 202-566-1273)



The Navy's ex-USS Oriskany, a vessel-to-reef project, provided valuable lessons learned.

OWOW Advances Work on Uniform Discharge Standards with DoD

During 2006, OWOW continued to work with the Department of the Navy and the U.S. Coast Guard on efforts to minimize pollution from vessels of the Armed Forces. A 1996 Amendment to the Clean Water Act requires that a nationally uniform set of discharge standards be issued jointly by DoD and EPA. These regulations would preempt state regulation of wastewater discharges from Armed Forces vessels. The Phase I rulemaking determined that 25 discharges from Armed Service Vessels require control devices. A Cumulative Impact Assessment has been completed, and the Phase II rulemaking is proceeding to address the first of five batches of discharges to be regulated. More specifically, OWOW and the Navy collected samples and began to analyze discharge data from diesel-powered small boats to determine the nature of the substances in wet exhaust. Once the analysis is complete, the agencies will determine an appropriate standard for the discharge. (Contact: Brian Rappoli, 202-566-1548)



OWOW Helps Plan for Future of U.S. Marine Transportation System

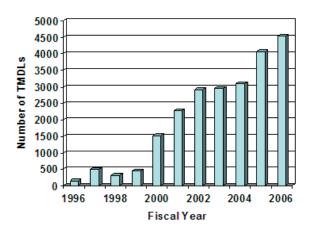
During 2006, OWOW actively participated in numerous meetings related to the Cabinet-level Committee on the Marine Transportation System (CMTS), including the CMTS workshop to develop a national strategy to improve and integrate the marine transportation system in an environmentally sound, safe, secure and efficient manner to meet the nation's needs into the future. OWOW is the Agency lead and supports the Administrator and OW Assistant Administrator at high-level CMTS meetings. OWOW represents EPA in various interagency action teams and work groups to develop the CMTS national strategy and other reports. (Contact: Virginia Fox-Norse, 202-566-1266)

Total Maximum Daily Load Development Continues at Record Pace

OWOW continues to work with states and tribes to implement total maximum daily loads (TMDLs) for restoring impaired waterbodies. Over 4,500 TMDLs were completed in FY 2006; over 23,000 TMDLs have been approved to date. (Contact: Sarah Furtak, 202-566-1167)

Dedicated TMDL funding is committed and obligated efficiently in support of this success, with Headquarters and the Regions on pace to obligate all \$8.5M of FY 2006 TMDL dedicated funds by January 31, 2007. These funds continue to provide necessary technical and programmatic support to the Regions and states in meeting TMDL technical needs and legally mandated schedules. (Contact: Tim Icke, 202-566-1211)

TMDLs Completed: Fiscal Year 1996 - 2006



Key Guidance to States Drives Better Impaired Water Lists and TMDLs

OWOW worked in conjunction with the states and other stakeholders to develop and issue key technical and policy guidance, best practices, and other documents to facilitate the timely submittal of accurate state impaired water lists and TMDLs that are consistent with sound science and court decisions. Impaired water listing guidance for 2008 was issued in Oct. 2006, giving states the longest lead time to date in developing their integrated reports. Technical guidance on dealing with important court cases regarding daily pollutant loads, phased TMDLs, and load duration curves was also developed for broad review and use. (Contact: Michael Haire, 202-566-1224)



\$14 million to be awarded in 4^{th} Round of Targeted Watersheds Grant Program

The Targeted Watersheds Grant (TWG) program continues to be an integral part of the Agency's watershed approach to clean water by providing assistance to state and local community partnerships to protect inland and coastal watersheds. In 2006 two Requests for Proposals were released. For only the second time since its inception, proposals were submitted for Capacity Building Grants, as well as for the annual Implementation Grants. Special emphasis was placed on capacity building projects focused on underserved areas,

including Appalachia, the Great Plains, and the Arid West. In its first three years, the Agency awarded Implementation grants totaling over \$37 million to 46 watershed organizations in 34 states. For more information, visit www.epa.

gov/twg. (Contact: Erin Collard, 202-566-2655)



Water Quality Trading Training and Awards Program Promotes Excellence

In 2006, EPA launched a new training course to educate people about how trading programs allow point source facilities facing higher pollution control costs to meet their regulatory obligations by purchasing environmentally equivalent (or superior) pollution reductions from another source at lower cost, thus achieving the same water quality improvement at lower overall cost. EPA also initiated a Blue Ribbon Water Quality Trading Awards Program in 2006, to provide national recognition to outstanding trading programs and policies. (Contact: Chris Lewicki, 202-566-1293)



Innovative Approaches Provide Incentive for Restoration

In 2006, OWOW advanced a number of approaches to emphasize implementation of measures that accelerate attainment of water quality standards. Among these approaches was supporting TMDL alternatives that involve immediate implementation, known as "Category 4b." Over 100 Category 4b rationales (representing 14 states in 8 EPA regions) were reviewed. EPA also continued with a programmatic collaboration on Category 4b with the Forest Service that will lead to pilot projects in 2007 (Contact: Eric Monschein, 202-566-1547)

Additionally, OWOW supported the use of TMDL surrogates to address pollutant impairments caused by stormwater, as well as provided training and information to drive pathogen TMDL development in ways that will more readily bring about water quality standard attainment. (Contact: Christine Ruf, 202-566-1220)

EPA Completes Ariel Rios Phase of Low Impact Development Project

EPA promotes the use of Low Impact Development (LID), an emerging set of practices to reduce the amount of pollution entering the nation's waterways. To encourage wider adoption of LID, OWOW has taken the lead role to showcase several LID techniques at EPA's Headquarters in Washington, DC. The demonstration project, spread across three sites—Ariel Rios South Courtyard, Constitution Avenue, and West Building Parking Garage—illustrates what LID practices can accomplish and shows their visual appeal. In 2006, the Ariel Rios South Courtyard project was completed, and it includes a short walking tour of sustainable LID practices.



This plan serves as a model for the federal community and demonstrates many of the practices that can be employed to mitigate the effects of stormwater runoff and reduce combined sewer overflows into our waterways. It also demonstrates that sustainable design and LID can be utilized in high profile urban sites that must pass through rigorous aesthetic design reviews. More information is available at: www.epa.gov/owow/nps/lid/stormwater-hq/ (Contact: Robert Goo, 202-566-1201)

Draft Guidance Helps Reduce Nonpoint Source Impacts from Hydromodification

In 2006, OWOW developed draft guidance that provides technical assistance to states, territories, tribes, and municipalities for managing hydromodification and reducing nonpoint source (NPS) pollution of surface and ground water. The document describes examples of practices that can be used to reduce NPS pollution from activities associated with channelization and channel modification, dams, and streambank and shoreline erosion. Implementation of the guidance will result in increased use of scientifically sound, cost-effective hydromodification management measures, and will support states in their efforts to implement their NPS control programs. Based upon comments received through a Federal Register notice, OWOW is updating the draft guidance and will publish a final version of the document during Spring 2007. More information is available at: www.epa.gov/nps/hydromod. (Contact: Chris Solloway, 202-566-1202)



Oracle-Based Grant Reporting System Tracks NPS Load Reductions

(GRTS) is used by grant recipients (state agencies) held in 2006 to provide training for compliance to supply information about nonpoint source (NPS) with section 319 of the Clean Water Act. The management. GRTS includes information on NPS workshops included training to develop waterload reductions to waterbodies of nitrogen, phos- shed plans that will result in measurable water phorus and sediments achieved as a result of Best quality improvements. As a result of recent Management Practices (BMPs) implemented under competitive section 319 grant awards, 17 Tribes §319-funded watershed projects. Conversion to committed to developing robust watershed-Oracle allows GRTS to seamlessly connect to other based plans with intentions to implement them EPA Office of Water data systems, e.g., Web-RIT, to restore impaired waters. Funded proposals STORET, NTTS, WQSDB – all systems under the also include implementation of various best WATERS framework, as well as potential linkages to a management practices for road improvements, variety of other Federal and State databases, models, riparian restoration, streambank stabilization and watershed planning and accountability tools. In and revegetation projects, and pretreatment of the new framework, Oracle-based GRTS will greatly irrigation return flows. Tribal §319 proposals improve reporting capabilities for all end users, and have become more sophisticated over time as answer questions for stakeholders, such as, where a result of training, funding, and the desire of are watershed projects being developed and imple- Tribal Nations to protect their valuable water mented? Are projects synchronized with impaired resources. (Contact: Andrea Matzke, waters and established TMDLs? Do they pursue 202-566-1150) actions needed to reduce pollutant loads and attain water quality standards? (Contact: Don Kunkoski, 301-694-7329)

OWOW Builds Tribal Capacity to Address Nonpoint Source

The §319 Grant Reporting and Tracking System Four Tribal nonpoint source workshops were

Restored Waterbody Success Stories Double Through Use of 319 Funds

The Nonpoint Source Success Stories Web site (<u>www.epa.gov/nps/</u> Success319) features waterbodies identified by states as being primarily nonpoint source-impaired and having achieved documented water quality improvements. This Web site expanded from 26 stories in 2005 to 39 stories in 2006. The number of stories highlighting partially or fully restored waterbodies doubled from 14 to 28. The State of Vermont added four new stories, while Pennsylvania, Alabama, New Hampshire, Texas, Nevada, Connecticut, Michigan, and American Samoa all contributed their first success stories to this Web site. Also noteworthy are three stories which highlight successes across two waterbodies each. (Contact: Andrea Matzke, 202-566-1150)



Outreach to Counties on TMDLs Invites Collaboration

EPA worked with the National Association of Counties (NACo) to create an issue brief to inform and educate local governments on what TMDLs are, how counties benefit from TMDLs, and how counties can get involved in TMDL development and implementation. This water quality planning publication raises awareness of TMDLs among local governments. Follow-up participation by EPA in National meetings and conferences helped ensure that counties are now better equipped to inform and educate watershed groups on the ground about watershed planning. (Contact: Sarah Furtak, 202-566-1167)



OWOW Leads Development of Capacity-Building Strategy for Local Watershed Groups

In 2006, OWOW drafted and got broad OW program and Regional support on a national strategy for building the capacity of local governments and watershed groups which will support the development and implementation of TMDLs and watershed plans, and leverage support to help us meet our broad strategic planning goals. The strategy identifies three priorities on which OW and Regions will focus to accelerate local watershed protection efforts:

- 1) Target training and tools to areas where existing groups can deliver environmental results;
- 2) Enhance support to local watershed organizations through third party providers (e.g., federal partners, EPA assistance agreement recipients); and
- 3) Share best watershed approach management practices.

(Contact: Sarah Furtak, 202-566-1167)

Improving Monitoring and Assessment

First-Ever Assessment of the Nation's Wadeable Streams Completed

In 2006, EPA released a first-ever, baseline study of the biological condition of the nation's streams. This Wadeable Streams Assessment finds that 28% of stream miles are in good condition comparable to the best available sites in their ecological regions. Twenty-five percent are in fair or intermediate condition, and 42% are in poor condition. An additional 5% of stream miles were not assessed. The most widespread stressors include nutrients (phosphorus and nitrogen), riparian disturbance, and streambed sediments. These stressors can degrade stream condition such that fish and other aquatic life may not be able to survive. The study finds that streams are twice as likely to have degraded biological communities when they have high levels of nutrients or excess sedimentation.

This study, one of a series of national statistically-based surveys of water resources, for the first time describes the condition of all streams of the U.S. (except for Alaska and Hawaii, where programs are underway). It applies modern statistical survey techniques as a cost-effective alternative to sampling every mile of stream. The survey establishes a national baseline of conditions that will be compared to results from future studies, and helps managers evaluate the success of national efforts to protect and restore water quality. The study also suggests that the Agency's current focus on understanding and reducing levels of nutrients and sediments in the nation's waters should yield important gains in water quality in coming years. The Wadeable Streams Assessment (EPA 841-B-06-002) is available on the Web at http://www.epa.gov/owow/streamsurvey/. (Contact: Susan Holdsworth, 202-566-1187)





Improving Monitoring and Assessment

EPA, States and Tribal Partners Launch Work on the Survey of the Nation's Lakes

EPA co-sponsored a series of workshops in 2006 with lake managers from around the country to develop the scope of a national survey of the nation's lakes and to select indicators and field protocols to be used in the survey. This is another of a series of water surveys being conducted by states, tribes, the EPA, and other partners using consistent methods and modern survey techniques. The Lakes Survey will report on key indicators of ecological integrity, trophic status, and recreational quality of lakes of the U.S. This partnership aims to promote collaboration across jurisdictional boundaries; build state and tribal capacity for monitoring and analysis; gather a statistically-valid dataset of lake data for better management of lakes; and develop baseline information to evaluate pollution control progress. The design of the Lakes Survey has now been established, and training and sample collection will occur in 2007. A national report is scheduled for 2009. For more information on the Lakes Survey, visit <u>www.epa.gov/owow/lakes/lakessurvey/</u>. (Contact: Carol Peterson, 202-566-1304)

NHDPlus Offers New Geospatial Tools for Water Quality Managers

Survey (USGS), and other federal, state and local agencies collaborated to produce the National Hydrography Dataset (NHD), a comprehensive set of digital geospatial data about surface water features such as streams, rivers and lakes. These data can be used by water quality managers to make maps, perform upstream/downstream queries, and link other water-related information to the NHD network.

In 2006, this interagency collaboration produced NHDPlus, a suite of application-ready geospatial products that build upon, and extend, the capabilities of the NHD. NHDplus integrates the NHD with the National Elevation Dataset and the National Watershed Boundary Dataset. It includes an enhanced NHD stream network with improved names, value-added attributes (such as stream order), incremental drainage areas with landscape characteristics, and flow volume and

Between 1996 and 2000, EPA, the U.S. Geological velocity estimates for pollutant dilution modeling. EPA and USGS have linked many water quality databases to NHDplus, including stream gauging stations, water quality monitoring sites, and impaired waters, enabling these databases to be queried and analyzed in upstream/downstream order. NHDplus greatly enhances the ability of researchers and water quality managers to analyze and model water quality data. For more information on NHDplus, visit <u>www.epa.gov/waters</u>. (Contact: Tommy Dewald, 202-566-1178)



Improving Monitoring and Assessment

Workshops Around the Country Reach Out to STORET Users

During the spring and summer of 2006, OWOW's STORET team held a series of meetings on the future of STORET. The distributed STORET database is transitioning to the Water Quality Exchange, or WQX, a new data transfer system that makes it easier to submit and share water quality monitoring data over the Internet. With WQX, States, tribes, and others who collect water quality data no longer need to use EPA's STORET database in order to submit their information to the National STORET Data Warehouse. WQX, in essence, uses new Web technology to bring data sharing into the 21st century.



Five EPA Regional offices, Denver, Philadelphia, Atlanta, San Francisco, and Chicago, hosted meetings. The audience included state, regional and tribal water quality program specialists, water quality data managers, and information technology specialists. These outreach meetings helped the STORET team finalize the common data format for submitting data to EPA's National STORET Data Warehouse for chemical, physical and fish tissue data, and helped ensure that the format would meet the needs of the user community. The meetings also allowed the STORET team to help the STORET users determine the best ways of transitioning to WQX. For more information on WQX, visit www.epa.gov/STORET/WQX. (Contact Kristen Gunthardt, 202-566-1194)



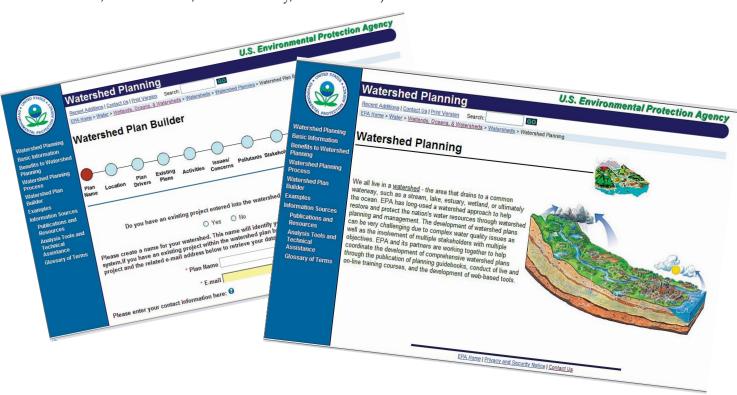
Promoting Watershed Planning

Draft Version of Watershed Plan Builder Completed

After more than two years in the making, in 2006, the Watershed Planning Team completed a draft version of an internet-based Watershed Plan Builder. On April 18, 2007, the tool was officially announced on the EPA homepage and launched on the OWOW Web site at: www.epa.gov/owow/watershedplanning The tool is designed to promote the development and implementation of comprehensive watershed plans that protect and restore the chemical, physical and biological integrity of the nation's waters. It will help organizations develop watershed 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 Watershed Planning Team is working to implement a broad outreach and communications strategy to ensure watershed partners are aware of the tool and able to use it effectively. The Plan Builder has already been rolled out at EPA Headquarters and in the Regions through a series of Webcasts, and a Watershed Academy Webcast is planned for May 2, 2007 for a broad external audience. A training session will also be held for watershed partners at River Network's River Rally in May 2007. During the next six months, the Plan Builder will be available to watershed organizations, federal and state agencies, tribes, universities and local governments to beta test the application and provide feedback.

The team also completed a concept paper on Watershed Central, an integrated watershed portal site that is currently under evaluation across the Agency. (Contacts: Stuart Lehman, 202-566-1205; Tracie Nadeau, 503-326-3685; Aileen Molloy, 202-566-1424)



Advancing Smart Growth

The Smart Growth and Water Team worked with key OW managers and outside experts to refine the team's overall mission. In '06 and '07 the Team plans to focus on activities that "Integrate Smart Growth principles and watershed planning into land use decisions at the regional, neighborhood and site level scales." OWOW's Smart Growth Team plans to work with land use decision makers and watershed planners to achieve these goals and objectives. This strategic dialogue was a significant accomplishment in '06 and set the stage for several successful team projects:

OWOW's Role in Enhancing Neighborhood Design Awards for Smart Growth

OWOW provided extensive leadership to enhance efforts by the green building community to develop standards and award systems for neighborhood design. OWOW's partnership led to the incorporation of a more comprehensive approach to storm water management in the incentive program sponsored by the US Green Building Council. The team helped write the draft water resource credits for the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Neighborhood Development pilot program.

Success in Enhancing Decision Support Tools for Water Resource Planning, Protection and Community Design

The team provided technical assistance and funding to support efforts to incorporate Low Impact Development (LID) techniques into the widely used TR-55 based runoff models. This effort is a partnership with academia, EPA Region 5 and USDA. The team has also been working closely with OPEI and OWM to promote the implementation of LID and smart growth concepts into the NPDES Phase II stormwater permit program.

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

New Guide for Counties on Land Use Tools

OWOW's Smart Growth Team worked in partnership with the National Association of Counties (NACo) to produce a guide to decision support tools that link land use decisions to water resource protection. The "County Water Quality Issue Brief – Commonly Used Tools Available to Counties and County Best Practices" will be widely distributed to local governments and urban design networks.



Partnership with State Decision Makers

In 2006, recognizing the important role state political leadership plays in supporting watershed health as it relates to smart development, the team secured a partnership with the Governors Institute on Community Design. Through financial and technical support, water quality concerns were brought to the forefront in high-level discussions with various state leaders, including Rhode Island and Virginia.

Training for Coastal Communities

The team and the NEP program partnered with NOAA and state coastal resource managers to develop a training course to help those involved in the planning, growth and development of their coastal community learn more about alternative development. The first "live" training was offered in South Carolina at the ACE Basin National Estuarine Research Reserve with participants from planning commissions, planning agencies, regional council of governments, and citizen groups. Evaluation results showed that 95% of participants increased their knowledge of alternative planning and development. Furthermore, 100% of participants said they would recommend this course to another coastal professional. Several trainings are planned for 2007, including in Puerto Rico, Ohio, Alaska, and Texas.

Addressing Gulf Hypoxia

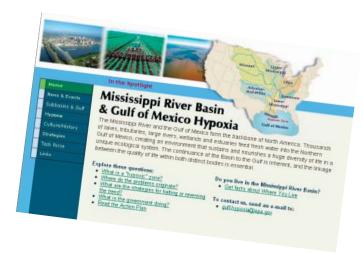
Gulf Hypoxia Team Sets the Stage for First Reassessment of Progress since 2001

Action Plan and Reassessment

2006 proved to be a very eventful year in organizing and executing efforts to reduce the Gulf of Mexico hypoxic zone. In their 2001 Action Plan, the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force agreed that the effects of nutrient reduction loads would be assessed in five years; 2006 served as an important year in the reassessment timeframe. The 12th Task Force Meeting in December of 2005 set the stage for a two-year process to ensure a comprehensive reevaluation of progress and the Action Plan strategy through key decisions and dialogue by the Task Force. Initiatives include review by EPA's Science Advisory Board (SAB) of the state of the science of Gulf hypoxia and management practices - the minutes from these meetings are posted on EPA's SAB webpage. Designated Task Force staff has met to spotlight specific issues including causes of hypoxia and nutrient sources, fate, and transport. Four scientific symposia were held, serving as a forum for scientific exchange; emerging research and technologies, modeling efforts, and management approaches in the context of policy implementation were addressed as key issues.

The Mississippi River Basin and Gulf of Mexico Hypoxia Website

The Web site has continued to be supplemented with current reassessment documents from Task Force Meetings and background information on hypoxia and its ecological and economic impacts. Interactive features highlight those who have been greatly affected by the changing landscape - the communities and regions that define the culture and traditions of the Mississippi River Basin. The Web site is slated for further development, to supplement ongoing education and outreach efforts to encourage public participation and awareness, in the upcoming year.



The Web site can be accessed at: www.epa.gov/msbasin/.

Commitment to Progress

The 2001 Action Plan called for Sub-basin Committees to further tailor the nutrient reduction activities to the needs of the different regions throughout the basin. These Sub-basin Committees, in the Upper Basin, Ohio Basin, and Lower Basin, have supported overall goals through implementation of regional initiatives that include working to establish connections with key stakeholders throughout the sub-basins. The expectations set forth by the Task Force in 2005 were met in 2006 and the goals that were developed at the 13th Task Force Meeting, conducted in early 2007, hold the same promise for future advancement. This work will provide a roadmap and secure completion of a new Action Plan, which reflects key reassessment decisions, on schedule. (Contact: Darrell Brown, 202-566-1256)

Improving Communications

Monthly Webcasts Provide Free Watershed Training for Thousands



OWOW continued to hold monthly Watershed Academy Webcasts in 2006 -- reaching more than 3,000 people around the U.S. and beyond. EPA staff, states, watershed groups and others tune into these free, two-hour Webcasts. Webcasts are also archived on the Watershed Academy Web site so thousands more are benefiting from this training 24-7. 2006 Webcasts covered a variety of watershed topics including the benefits of watershed-based permitting, integrating drinking water and watershed programs, the new Watershed Planning Handbook, and other topics. For more information on future Webcasts or to listen to past Webcasts visit: www.epa.gov/watershedwebcasts (Contacts: Anne Weinberg, 202-566-1217; Patty Scott, 202-566-

1292; and Meghan Klasic, 202-566-1162)

New Course on Key EPA Internet-based Tools for Watershed Management Developed

This new Watershed Academy Course was developed to help watershed groups and others become aware of and use our many Internet-based tools for watershed management. A pilot offering of the course was given at the River Rally in May 2006. A hands-on computer-based version of the training was given at the Chesapeake Bay Watershed Forum in Nov. 2006. Additional hands-on computer based training is scheduled for spring 2007 at EPA Regional offices using their computer labs. (Contacts: Anne Weinberg, 202-566-1217; Meghan Klasic, 202-566-1162)

Watershed Education and Training Hits the Airwaves

In 2006, OWOW funded the development of an interactive, on-line watershed training program for broadcast meteorologists under a cooperative agreement with the National Environmental Education

and Training Foundation (NEETF). The watershed course is accessible on the Cooperative Program for Operational Meteorology, Education & Training (COMET®)'s MetEd Web site at: www.meted.ucar.edu/broadcastmet/water-shed/. OWOW's grant also supports NEETF's weekly Earth Gauge newsletter. Earth Gauge includes tips and other environmental information tied to the local and regional broadcasts' forecasts that can readily be used by the meteorologists on-air, on-line or in their media blogs. For more information, visit: www.earthgauge.net/. (Contact: Patty Scott, 202-566-1292)



Watershed News

OWOW continues to produce monthly Watershed News announcements that are sent via a listserve with more than three thousand subscribers, including watershed groups, state and local agencies and other watershed practitioners. www.epa.gov/watershed/news.html. (Contact: Patty Scott, 202-566-1292)

Promoting Sustainable Financing

In May 2006, the OWOW Finance Team conducted a funders' forum at the River Rally with eight foundations, EPA's Grants Administration Division (GAD), and OWOW's Director participating. The team developed a report on foundation needs and possible pilot projects that provided guidance for its 2007 projects.

Watershed Funding Roundtable and EFAB Briefings

In March 2006, the team conducted a successful Watershed Funding Roundtable with public and private sector watershed stakeholders and funders. The team identified participants and developed questions for facilitator and breakout groups. They also reviewed the roundtable report and Environmental Financial Advisory Board's (EFAB) letter to EPA Administrator Steve Johnson.

In addition, the team organized an EFAB briefing for the Sustainable Infrastructure Steering Committee on the roundtable outcomes.



Plan2Fund Prioritization Tool

To improve the effectiveness of watershed finance efforts, the team enhanced the *Plan2Fund* tool by developing a new prioritization component. *Plan2Fund* is a watershed planning tool developed by the Environmental Finance Center (EFC) at Boise State University that helps organizations determine the amoung of funding they need to meet the goals and objectives of their watershed plan. *Plan2Fund* walks users through the process of estimating the costs of their watershed program plan's goals and objectives, assessing any local matches, and determining the amount of funding they need to meet users' goals and objectives. The prioritization enhancement in *Plan2Fund* will help watershed organizations set priorities, thereby,

empowering them to improve the effectiveness of their watershed finance efforts. In 2006, the team organized two popular Webcasts on *Plan2Fund* and sustainable funding strategies for local watershed groups. (www.epa.gov/watershedwebcasts)

New Finance Distance Learning Module

The team also oversaw the development of a finance distance learning module that will enable watershed organizations to develop more effective watershed finance strategies. In 2006, a beta version was posted on-line. The final training module will be made available through the EPA Watershed Academy in 2007. Other accomplishments include:

- Conducted outreach to educate key stakeholders regarding effective finance tools, watershed finance strategies, and National Estuary Program leveraging success.
- Presented a paper and a moderated panel at EPA Community Involvement Conference on OWOW watershed finance tools (June).
- Presented OWOW finance planning tools at America Water Resources Association conference (November).
- Convened a panel at the Council of Infrastructure Financing Administrators on funding and selected green infrastructure technologies (November)
- Presented overview of OWOW finance tools and NEP leveraging successes and strategies at Restore America's Estuaries National Conference (December).

(Contact: Tim Jones, 202-566-1245)

Fostering Diversity

OWOW Diversity Action Team Broadens Appreciation of Cultural Diversity

The FY 2006 Diversity Action Plan focused on various events to promote inclusion and equity in OWOW's workforce and to promote and understand different cultures. The theme for the FY 2006 Diversity Action Plan was Native American Indians. OWOW planned a variety of training sessions, field trips, and book club discussions. OWOW also has increased the number of Diversity Action Team (DAT) members.

FY 2006 Accomplishments include:

Monthly Diversity Action Team Book Club meetings. OWOW staff selected *Spirit and Reason* by Vine Deloria, Jr., for the OWOW Diversity Book Club. *Spirit and Reason* discusses many issues such as education and religion as they relate to Native Americans. The Book Club meeting participants offered their observations to contribute to a free-flowing discussion on how Vine's writings have broadened our appreciation for cultural diversity. A series of lunchtime brown bag discussions started in March 2006 through August 2006.

Kathy Hill and Joseph Dupris' presentation and discussion. Kathy and Joseph shared many of their experiences with over 60 OW and OWOW staff. They discussed tribal perspectives and EPA's relationships with tribes. The staff also shared their experiences in working with Indians and Tribes. Following the presentation, a smaller group met to discuss tribal efforts to protect tribal water rights. (Feb. 9, 2006)

Movies: Edge of America. This movie was featured in honor of African American History Month. Over 60 OW and OWOW staff attended *Edge of America*. The movie is about an American minority, living as minority, among another

American minority. It is the story of people coming together, realizing their cultural baggage and that assumptions can be wrong. (Feb. 23, 2006)

American Indian History Museum field trip. The managers and staff participated in a field trip to the American Indian Museum. Following the tour of the museum, Ella Mulford with the OW American Indian Office shared her personal ex-

periences growing up on the Navajo reservation. (June 2006)

Career Job Fair for persons with Disabilities.

OWOW staff participated and assisted people with disabilities at the EPA Career Job Fair. Two people with disabilities were interviewed for jobs in the Policy, Communication, and Resources Management Staff. (March 30, 2006)

Completion of FY 2007 Action Plan and Theme.

The Diversity Action Team selected a theme for the plan and also completed the OWOW FY 2007 Diversity Action Plan. (Sept. 2006)

(Contact: Janice Wingfield, 202-566-1151)



Bonne Thie receives award for her exceptional work to promote diversity at EPA.

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

