



# Watershed Events



A Bulletin on Sustaining Water Resources and Ecosystems

## In This Issue...

This issue of *Watershed Events* highlights several major education and outreach campaigns. At the National Watershed Forum, delegates strongly recommended a national media campaign focused on watersheds. This issue describes innovative efforts under way by EPA and some of our partners to better educate the American public about the importance of watershed protection.

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## "Year of Clean Water" Celebration Continues

On October 18, 2002, President Bush issued a proclamation declaring 2002–2003 the "Year of Clean Water." In the proclamation, issued on the Clean Water Act's 30<sup>th</sup> anniversary, the President credits the landmark 1972 Clean Water Act for dramatically improving the overall health of our marine waters, lakes, rivers, streams, and wetlands, and he recommends empowering Americans to be good stewards of our water resources.

This year EPA's Office of Water will renew its commitment to clean water and will seek to involve more Americans in clean water activities by featuring different water programs each month. "The Environmental Protection Agency has so much information that can improve the daily life of the American people, and we want to get these messages out," said G. Tracy Mehan, Assistant Administrator. "By informing people of new ideas to solve environmental challenges, we believe this campaign will further our efforts in meeting the Clean Water Act's goals."

Brochures, feature articles, commentaries, posters, and other materials will be developed and distributed widely through the media and EPA regional offices. Materials will also be posted on the Internet at <http://www.epa.gov/water/yearofcleanwater/month.html>.

As in 2002, EPA's Office of Water will join with a host of public and private partners in sponsoring nationwide events, celebrations, and activities honoring the 30<sup>th</sup> Anniversary of the Clean Water Act and its commitment to achieving the Act's goals.

## Feedback

We'd really appreciate any comments you have on how to improve *Watershed Events*. We'd like to know if there is still a need for this newsletter and if so, whether it should be printed as a "hard copy," distributed electronically, or just made available on the EPA Web site. Let us know what you think so that we can continue to support your watershed efforts! E-mail your thoughts to [scott.patricia@epa.gov](mailto:scott.patricia@epa.gov) or fax them to 202-566-1544.



## National Water Monitoring Day

On October 18 thousands took part in the first National Water Monitoring Day to mark the 30th birthday of the Clean Water Act.

Spearheaded by America's Clean Water Foundation (ACWF) and organized by a variety of federal, state, and volunteer organizations, National Water Monitoring Day encouraged experienced volunteer monitors, citizens, school kids, and EPA staff to monitor four key water characteristics (dissolved oxygen, temperature, pH, and turbidity) and to learn—and teach others—about water quality and water pollution. Another key goal was to foster partnerships between established volunteer monitoring groups and water quality agencies.

Initial estimates show that 75,000 to 80,000 participants collected information at about 4,000 sites around the country. They entered their findings into a special database on ACWF's Year of Clean Water Web site at [www.yearofcleanwater.org](http://www.yearofcleanwater.org).

Once all information is gathered and assessed, America's Clean Water Foundation will develop and distribute a national summary report. Event organizers now intend to build on the momentum of last year's success and establish Monitoring Day as an annual event. Monitoring groups interested in planning for this year are invited to contact Ed Moyer of America's Clean Water Foundation at [e.moyer@acwf.org](mailto:e.moyer@acwf.org).



*EPA Administrator Christine Todd Whitman participated in monitoring events with students from New Jersey.*

### Some highlights from the first National Monitoring Day:

- EPA Administrator Christine Todd Whitman and Region 2 Administrator Jane Kenny participated in monitoring events with students from Alexander D. Sullivan School at Liberty State Park in New Jersey. Students took tours aboard the Regional Survey Vessel *Clean Waters* and sampled water quality at four stations in Upper New York Harbor.
- In Kansas City, a Metro Week of Water celebration included many events sponsored by a consortium of federal, state, and local water quality agencies. Activities included canoeing the Missouri River, measuring the Missouri River using the latest technology as well as technology available during the time of Lewis and Clark, stream sampling by students, visits to local wastewater treatment plants, helicopter trips to view environmentally friendly development, educational forums, marsh restoration activities, and hands-on workshops.
- The Monterey Bay Sanctuary Foundation, in collaboration with the California Coastal Commission and the Coastal Watershed Council, organized a series of monitoring events that involved 2,370 people at 280 sites within the coastal watersheds of California, from the Oregon border to Mexico.
- At the Middle Rio Grande Children's Water Festival in Albuquerque, New Mexico, 1,000 fourth graders learned about water quality and quantity issues.
- In Alexandria, VA, EPA Deputy Administrator Linda Fisher joined Marymount University students on a dory boat trip to test the waters of the Potomac.

## Watershed Events

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*Watershed Events* provides updated and timely information to professionals and others interested in the development and implementation of the watershed approach and in achieving watershed goals. The watershed approach focuses on mitigating the primary threats to ecosystem and human health and involving stakeholders to take action in an integrated, holistic manner. Please direct any questions or comments to:

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# "What Is an Estuary?"—A National Estuary Outreach Campaign

**E**stuary (es' choo er' e) is an unusual word and unlike other waterbody terms such as *stream*, *river*, *lake*, *bay*, and *ocean*, it's not typically used in our daily vocabulary. People outside the field of estuary management, science, or education don't talk about "going to the estuary" to fish or boat or swim. This lack of familiarity with the word *estuary* translates into a lack of both understanding of what estuaries are and appreciation of why estuaries are important.

To make the word *estuary* part of everyone's vocabulary, EPA's National Estuary Program (NEP) and NOAA's National Estuarine Research Reserves (NERR) are intensifying their outreach efforts. They focused much of their efforts on last year's National Estuary Day, which was held on the first Saturday in October. In addition, they plan to support a new national multimedia *What Is an Estuary?* campaign.

## Estuary Live!

On October 3–4, 2002, EPA and NOAA kicked off National Estuary Day by coproducing *Estuary Live!* as the showcase event. *Estuary Live!* used wireless video transmission and Internet technology to provide some 2 million students and citizens around the world the opportunity to take live interactive tours of some of the nation's most valued estuaries. Naturalists guided students through

the various estuary ecosystems, stopping to point out snakes, birds, plants, and other wildlife along the way. Students also learned about the cultural and historical importance of estuaries and the importance of coastal stewardship. Students around the country e-mailed their questions



*Students received live answers to their estuary-related questions from scientific experts.*

and received live answers from scientific experts at the estuary sites. At least two states, South Carolina and Florida, downlinked *Estuary Live!* to their public school cable TV stations, which feed into all their public schools statewide.

Also, as part of the celebration, Deputy Secretary of Commerce Sam Bodman, EPA Administrator Christine Todd Whitman, and Deputy Undersecretary for Oceans and Atmosphere Scott B. Gudes joined agency employees and 150 area schoolchildren in Washington, D.C. for

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**See Estuary page 4**

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**Estuary, from page 3**


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an interactive field trip of the Chesapeake Bay estuary. Because this event was such a huge success, plans are already underway for *Estuary Live! 2003*.



*EPA Administrator Christine Todd Whitman applauded the cooperation between EPA's National Estuary Program and NOAA's National Estuarine Research Reserves to raise awareness about estuaries.*

## Local National Estuaries Day Events

This year NOAA's 25 National Estuarine Research Reserves and EPA's 28 National Estuary Programs will target events between mid-September and October in an effort to build on the excitement and enthusiasm generated around National Estuaries Day. NOAA's new Web site, <http://www.estuaries.gov>, will also raise help awareness about estuaries and allow citizens to find out where they can participate in events.

## "What Is an Estuary?" Advertising Campaign

The Association of National Estuary Programs is developing a national *What Is an Estuary?* outreach campaign to educate the public about estuaries and to encourage citizens to take specific actions to protect and restore estuaries. Advertising will include:

- Television (cable/direct TV)—30-second spots
- Web search engines—Campaign site with links to all partners
- Radio stations—complementary campaign for local NEPs
- Outdoor advertising—busses, trains, subways, airports, etc.
- Print—newspapers, magazines, sponsor-related materials

The *What Is an Estuary?* campaign will place message-oriented news stories on the local, regional, and national levels to educate the public about why estuaries are important;



*Wireless video transmissions allowed thousands of students to take part in interactive estuary tours.*

what NEPs, NERRs, and others are doing to protect them; and what people can do to make a difference.

The campaign is scheduled to launch on September 27, 2003, in conjunction with National Estuaries Day celebrations. Although the campaign is being initiated with seed money from EPA, it is expected to be financed primarily through sponsorships.

For more information, please contact Betsy Salter, EPA, at 202-566-1244 or Becky Weidman, NOAA, at 301-713-3155, x145.

## EPA Issues New Rule on Concentrated Animal Feeding Operations

On December 16, EPA announced a new rule covering large livestock operations — also known as concentrated animal feeding operations (CAFOs). Implementation of this rule means that all large operations must apply for National Pollutant Discharge Elimination System (NPDES) permit coverage. EPA expects that approximately 11,000 facilities will apply by 2006. Currently, about 4,500 facilities are permitted. The rule will control runoff from agricultural feeding operations, preventing billions of pounds of pollutants from entering America's waters. For more information, please see EPA's CAFO rule site: <http://www.epa.gov/npdes/caforule>



To help these livestock operations with additional costs, Congress included funding in last year's Farm Bill. For more information, visit EPA's website at [www.epa.gov/npdes/caforule](http://www.epa.gov/npdes/caforule).



## RiverSmart Helps People Make “Smart” Behavior Changes

In June 2002 River Network, the nation's leader in supporting community-based river and watershed groups, and Swiss Re, a global reinsurance company, launched a national public education campaign called *RiverSmart*. By employing TV, print, and radio PSAs, an interactive Web site, and extensive grassroots outreach, the *RiverSmart* campaign is helping to raise public awareness of the issues that threaten the nation's rivers and drinking water supply. The initial goal of the multiyear campaign is to help people make some simple and “smart” changes to their everyday behavior.

For the past 15 years, River Network has worked with people and organizations that care about their rivers and communities. Today they support close to 4,000 river and watershed groups, including local, statewide, and regional conservation groups, public agencies, and tribal governments. All of these entities face the challenge of dealing with nonpoint source pollution, yet smaller organizations rarely have the budget to create TV or radio ads that can make an impact. By providing a ready-made “campaign in a box” that links to an existing educational Web site, *RiverSmart* allows nonprofit groups as well as public entities to insert their own logo onto materials and take part in a nationwide campaign.



*The RiverSmart team is making a difference*

The *RiverSmart* campaign would not have been possible without the generous support of Swiss Re. Swiss Re, which prides itself as a socially responsible company, partners with leading organizations, such as River Network, to share knowledge, intellectual capital, and expertise to find long-term, sustainable solutions. According to Adrienne Atwell, the company's environmental liability manager, “Swiss Re is a dedicated and committed stakeholder in the dialogue on sustainable water issues. We're proud to play an instrumental role in *RiverSmart*, underscoring our heightened awareness for clean drinking water.”

In its first year, *RiverSmart* has already generated millions of viewer impressions thanks to early coverage by CNN and the outreach work of River Network partner groups nationwide. This year River Network will continue to work closely with its community-based river groups as well as explore new partnerships. Municipalities and others that are seeking to raise public awareness about stormwater or nonpoint source issues may want to consider the *River Smart* campaign for their community. If you are interested in joining the campaign or learning more, visit <http://www.riversmart.org> or contact Glin Varco, River Network, 503-241-3506, x41. To learn more about Swiss Re, visit <http://www.swissre.com>.

### Federal Agencies Further Goal of No Net Loss of Wetlands

On Dec. 27, the U.S. Army Corps of Engineers and EPA, in conjunction with the Departments of Agriculture, Commerce, Interior, and Transportation, released the National Wetlands Mitigation Action Plan. The action plan's 17 items will ensure effective, scientifically-based decisions about protecting and restoring wetlands and also expand access to information on these activities. Wetlands (e.g., marshes, bogs, and similar areas) are invaluable for ecosystem health, filtering drinking water supplies, retaining flood waters, and supporting many types of wildlife. For a copy of the Plan, visit the EPA wetlands web site at <http://www.epa.gov/owow/wetlands/> or call (202) 564-9828.



## Groundwater: The Forgotten Element of Watershed Protection

Thanks to a dynamic agenda and a unique theme, the 18th Annual Groundwater Foundation Conference in the scenic Willamette River watershed in Oregon enlightened many seasoned watershed leaders. The November 2002 conference focused on the essential, but often forgotten, contribution that groundwater makes to all watersheds and highlighted ways that watershed practitioners can incorporate groundwater into watershed protection efforts.

Kim Stokely, leader of the renowned Adopt-A-Watershed environmental education program, opened the conference by asking participants to construct watershed/groundwater models using paper napkins, paper, markers, and spray bottles. This interactive activity helped participants understand how important groundwater protection is to maintaining watershed health. Stokely stressed that success begins by using the local environment as a context for integrated learning. Successful watershed protection, she explained, also requires regular monitoring, restoration, and ongoing community education.

Building on Stokely's opening, Adam Coulter offered a community watershed perspective through his work with the Watershed Committee of the Ozarks in Springfield, Missouri. Coulter lives in a watershed that depends on groundwater for its drinking water. Groundwater is also an important source of replenishment for

area lakes that enhance the local economy through recreation and tourism. Coulter explained that because several of the groundwater sources in the area are located in karst or fractured rock geology—a type of aquifer that is especially vulnerable to contamination—groundwater protection is a critical part of his community's watershed protection efforts.

Other conference highlights included a panel discussion featuring community leaders participating in The Groundwater Foundation's ACTT (Applying Community Technology Today) project. Representing communities with fewer than 15,000 residents, panelists explained how global positioning systems (GPS) and geographic information systems (GIS) helped their communities complete contaminant source inventories for local water supplies. Panelists identified the challenges and benefits associated with the process and concluded with advice about achieving community goals.

### Tips from the Panelists:

- Take time to learn about community water resources and their respective contributions to the local watershed,
- Nurture partnerships between diverse community groups,
- Keep a long-term perspective,
- Show courage to learn and try new approaches to old problems.

Christopher Hallowell, well-known environmental journalist and author of *Holding Back the Sea: The Struggle for America's Natural Legacy on the Gulf Coast*, contributed a wider perspective through his research and writing about the Mississippi Delta.

Conference proceedings are now available. To order a copy, contact The Groundwater Foundation at [info@groundwater.org](mailto:info@groundwater.org) or call 800-858-4844.

### Watershed Radio

Watershed Radio, a unique program created by the Smithsonian Environmental Research Center and the Sierra Club, uses daily 1-minute radio spots that highlight the natural environment and the connection between natural processes and human activities in the Chesapeake Bay watershed.

From the latest scientific research findings to an interesting personality or place in the Chesapeake Bay watershed, Watershed Radio brings news and information to the attention of thousands of listeners throughout the watershed. A watershed is so much more than "the area of land that drains into a particular body of water," and by bringing attention to not only people and places but also scientific research, natural history, watershed organizations, and animals and their habitats, Watershed Radio brings the watershed—a community of people interacting with their natural environment—alive.

A new Watershed Radio spot is available for every day of the week. The program's Web site, <http://www.watershedradio.org>, provides the text, audio file, and background information for each program and refers listeners and readers to other resources on the Internet. Thirteen radio stations throughout the watershed are broadcasting the programs, and the Web site has grown into a widely used resource for information about environmental issues in the Chesapeake Bay watershed.



## San Diego's Think Blue Campaign Improves Water Quality and Quality of Life

One of the keys to cleaner ocean waters, bays, beaches, and watersheds is public education. That's why the City of San Diego's Storm Water Pollution Prevention Program created *Think Blue*. *Think Blue* is a bilingual (English and Spanish) campaign that seeks to educate residents, business, and industry about the causes of storm water pollution and the behaviors people can adopt to help improve both water quality and the quality of life in San Diego.

Using a random telephone survey, the city learned how much San Diego residents understood about the causes of urban runoff and their existing behaviors and habits that contribute to the problem. The data helped the city identify its key messages.

The four main components of the campaign are: 1) employee training; 2) a regional media campaign; 3) a speakers bureau; and 4) a Web site. The program is also working with San Diego City Schools to include water quality concepts in the science curriculum.

### Employee Training

Since October 2001 the Program has trained all 13,000 city employees on general storm water principles in a 1.5-hour mandatory workshop. The workshop includes a video, "Storm



Water and You"; a *Think Blue Easy Solutions* brochure; a "Be a Clean Water Leader" card; an illegal discharge report pad; and various incentive items. This training component won a Savvy Award from the City, County, Communications Association (3CMA) for best employee training video at the 2002 conference.

### Regional Media Campaign

In Year One (FY 2002), *Think Blue* captured the attention and concern of residents through a series of PSAs about beach pollution, its causes, and how the storm drain system operates. The PSAs were aired on television and radio for both English- and Spanish-speaking audiences and won two Telly Awards in May 2002 and local EMMY Awards in June 2002. The total cost for producing the PSA package was \$175,000.

The City also purchased \$253,615 in airtime on 32 local broadcast entities. *Think Blue* commercials were aired more than 2,050 times. Through the donation of in-kind advertising and publicity services, including free airings of PSAs, web pages, newsletter articles, traffic and weather sponsorship promos, community events that featured *Think Blue* informational booths, concert program advertisements, and bumper-stickers, in-kind contributions totaled more than \$160,286. The contributions and

### Nonpoint Source Outreach Toolbox

In April 2000, the states (under the Association of State and Interstate Water Pollution Control Administrators) and EPA formed the Nonpoint Source Outreach Workgroup. The Workgroup's mission is to raise public awareness and to foster behavior changes to reduce nonpoint source pollution. After conducting focus groups and consulting with behavior change experts, the Workgroup concluded that the most effective way of reaching the public is to provide state and local agencies and organizations with the tools necessary to launch their own location-specific outreach campaigns.

The Workgroup will create an expandable "toolbox" of strategies and sample materials, initially geared toward changing personal behaviors in and around the home (e.g., personal stewardship). The toolbox will contain two major parts: (1) a how-to guide for launching a local outreach campaign and (2) sample materials or templates that could be easily tailored to the community's local problems and barriers to adopting better habits.

The how-to guide expands upon an existing outreach guide, *Getting in Step: A Guide to Effective Outreach in Your Watershed* (available at <http://www.epa.gov/owow/watershed/outreach/documents/>). The expanded guide will provide tips on applying community-based social marketing techniques, using mass media, and developing other outreach methods (such as watershed fairs, contests, water bill inserts, hotlines, and discount cards). A video version of the *Getting in Step* manual is also being produced, which will showcase four community events around the country.

The updated guide and video are scheduled to be completed by early 2003. The Workgroup also plans to start work on the second part of the toolbox (creating sample materials or templates).

Distribution information is available at <http://www.epa.gov/owow/nps/outreach.html>. For more information, contact Jack Wilbur, Utah Department of Agriculture and Food, e-mail: [jackwilbur@utah.gov](mailto:jackwilbur@utah.gov), phone 801-538-7098; or Don Waye, EPA headquarters, e-mail [waye.don@epa.gov](mailto:waye.don@epa.gov), phone 202-566-1170.



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support from the local broadcast companies were unprecedented. Because the electronic media campaign was so visible, storm water pollution and the *Think Blue* campaign received unanticipated coverage in local newspapers, magazines, and trade publications. More than 20 articles were published locally.

## Speakers Bureau

The Program is working in partnership with various industry and business associations to create tailored storm water presentations for their members. Speakers bureau representatives attend numerous community group and service organization meetings and other public forums across the jurisdiction to share information about this issue. In Year One staff gave more than 77 storm water presentations and attended 40 community events.

## Regional Web Site

The <http://www.Thinkbluesd.org> Web site provides interested parties access to literature, fact sheets with best management practices, the City's Jurisdictional Urban Runoff Management Plan (JURMP), the City Municipal Code, press releases, program developments, educational videos, and the PSAs. Since September 2001, the site has had more than 190,000 visitors.

The results of FY 2002 efforts have been tremendous. The PSAs have received critical and national acclaim, and storm water pollution as a quality of life issue has resonated with local residents and the

media. The *Think Blue* campaign is being looked upon as a model storm water education and outreach program at the national level. More important, San Diego residents are paying attention to the message and beginning to change their behaviors to benefit the area's beaches, bays, and recreational waters.

For more information or to request a copy of the first year's report, *Think Blue—Year One in Review*, contact Deborah Castillo at 619-525-8649 or [dcastillo@sandiego.gov](mailto:dcastillo@sandiego.gov).

## Social Marketing Strategies Realizing Results in Maine

In 1995 the Maine Department of Environmental Protection's Nonpoint Source Pollution Program embarked on a new approach to education and outreach. It has been a slow change, with the program gradually incorporating standard market science techniques, but it is happening and the Department is seeing real results.

Recognizing that there are a science and a method to changing behaviors, and that present staffing did not have the needed expertise, the Program hired an advertising firm that helped develop the *Eight Simple Steps* campaign. (For more information on this effort, visit the Web site <http://www.state.me.us/dep/blwq/docwatershed/npscamp.htm>).

With the expertise gained from *Eight Simple Steps*, the Program implemented its second campaign on soil erosion, even more aligned with standard social marketing techniques. The Program had the advantage of starting the project with 4 years of professionally conducted market research. Armed with this information, they prepared a Request for Proposals for a pilot project and hired a team of two companies—one, a market research firm; the other, an advertising company.

Because existing data on the present views of the target audience were available, the Program jumped right into the issues. The advertising firm developed test logos and slogans, which the market research firm used when conducting focus groups. The focus groups provided invaluable insight into the target audience's perspective, values, and motivation. Without the focus groups, the campaign would not have been as successful.

Armed with the focus group results, Program staff developed the final outreach pieces. They included radio, newspaper, and direct mail post cards. Because this was a pilot project, the Program targeted a number of communities in central Maine that had a good representation of the state's demographics. Two of the towns received direct mail pieces; the others did not. This approach allowed for the comparison and evaluation of the effectiveness of the direct mail pieces compared to the other two marketing venues. After the 4-week campaign, the market research firm conducted a statistically valid phone



*Of the 23 percent who said they had done something to prevent soil erosion, 73 percent named a behavior Maine DEP had encouraged.*

survey of households in the targeted communities.

The results indicate that the pieces were effective at raising awareness by 12 percent. However, because of the short period of time, it was impossible to measure change in behavior. Analysts also determined that the way the Program used the direct mail pieces was not as effective as use of the radio and newspaper ads. It was determined that the direct mail pieces would be most effectively used in local grassroots efforts by local watershed or lake associations.

Equipped with these results, the Program had two choices: spend money on tweaking the materials, which had proven effective, or use them as is. At the recommendation of consultants, based on a limited budget and the proven effectiveness, the Program chose to use the existing materials.

In August 2002, with a limited budget, the Program conducted a targeted soil erosion campaign in communities with active Clean Water Act Section 319 projects,

Total Maximum Daily Loads (TMDLs), or active environmental associations. The Program again evaluated the campaign's effectiveness with a phone survey by a professional market research firm. The results indicate success in raising awareness. Of the 21 percent who remembered seeing or hearing the ads, 42 percent correctly identified a behavior (best management practice, or BMP) that was encouraged by the campaign. Of the 23 percent who said they had done something to prevent soil erosion, 73

percent named a behavior the Program had encouraged. Because the Program chose to track the effectiveness of its efforts, it can say with confidence that it is on the right track and that its pieces are effective in getting their messages out.

For information on Maine DEP's NPS Soil Campaign or other outreach efforts, contact Kathy Hoppe, Maine DEP, 1235 Central Drive Presque Isle, ME 04769, 207-764-0477 or [kathy.m.hoppe@state.me.us](mailto:kathy.m.hoppe@state.me.us).



*The campaign included development of posters notifying homeowners of how to protect water quality.*

## EPA Joins Forces with TV Weather Reporters

Educating the public is an important part of EPA's mission. Recognizing that television weather forecasters are very effective at explaining complex scientific issues, EPA's Office of Water recently joined with the National Environmental Education and Training Foundation (NEETF), the American Meteorological Society (AMS), Storm Center Communications, and the Center for Watershed Protection in an innovative partnership project to recruit broadcast meteorologists and train them to educate their viewers about watersheds.

Weather events like droughts, floods, and hurricanes directly affect the quality of our water resources and offer a perfect opportunity for meteorologists to discuss the connections between weather and watersheds. In addition to discussing the environmental implications of weather events, meteorologists can provide useful tips on how people can help conserve water and minimize erosion and runoff. By using watershed maps and visualizations, meteorologists can significantly enhance the public's understanding of watersheds.

Although the initial focus for the project is the Chesapeake Bay Watershed, the long-term goal of this collaborative project is to train broadcast meteorologists across the country to talk about weather, watersheds, and other timely environmental issues. During a special "Eyes on the Environment"



*NBC4's Watershed Project Web page provides interactive information about watersheds.*

training workshop at the AMS's 31<sup>st</sup> Conference on Broadcast Meteorology in Williamsburg, Virginia, EPA Administrator Christine Todd Whitman told 140 meteorologists from around the country about the important role they can play in sharing watershed information with their viewers.

AMS Executive Director Dr. Ron McPherson said that he envisions the meteorologist as the "station scientist"—the person the station turns to when science issues arise, particularly environmental ones. "I would also like to see AMS Sealholders increasingly regarded by the public as reliable sources of information on a broader range of environmental issues." The

workshop inaugurated a series of pilot workshops that are planned as part of AMS's Continuing Education Program. AMS's goals call for greater outreach to the public to promote scientific literacy and a better understanding of our physical environment.

### Weathermen for Watersheds

Broadcast meteorologists can look to some of their colleagues for ideas on how they can report on watershed issues. Below are some examples of what a few leading meteorologists are doing:

- Carl Arredondo at WWL-TV in New Orleans provides weekly updates on bacteria counts in Lake Ponchartrain. <http://www.wwltv.com/weather/lakeequal.html>.
- Chief Meteorologist Bob Ryan at NBC4 in Washington, DC, frequently discusses the Chesapeake Bay watershed as part of NBC4's Watershed Project, "Where the Atmosphere Meets the Earth." <http://www.watershed.interactive-environment.com/main>.
- Paul Gross with WDIV-TV in Detroit aired an interview with EPA Administrator Whitman and did a special feature story for National Water Monitoring Day.
- San Diego weathercaster Loren Nancarrow offers regular "Environmental Field Notes." [www.thesandiegochannel.com/weather](http://www.thesandiegochannel.com/weather).



*Interactive Web pages allow visitors to find their watershed address.*

For more information, contact Patty Scott with EPA's Office of Water at 202-566-1292 (e-mail: [scott.patricia@epa.gov](mailto:scott.patricia@epa.gov))

### Envirocast Newsletter

The *Envirocast* newsletter is the newest undertaking in this collaborative effort with television meteorologists. The goal is to provide weather forecasters and news directors throughout the Chesapeake Bay with interesting, news-breaking stories that can readily be used on the air during daily weather forecasts.

The environmental information provided in the newsletter will also be useful to many of the organizations focusing on the Chesapeake Bay watershed. (To subscribe, send an e-mail to [envirocast@stormcenter.com](mailto:envirocast@stormcenter.com).)

For more information, contact Patty Scott with EPA's Office of Water at 202-566-1292 (e-mail: [scott.patricia@epa.gov](mailto:scott.patricia@epa.gov))



## National Aquarium in Baltimore Inspires Stewardship of the Chesapeake Bay

Located on the shores of the Chesapeake Bay, the National Aquarium in Baltimore attracts 1.6 million visitors annually, most of whom reside in the Chesapeake Bay watershed. Through exhibits and educational programs, the Aquarium has been teaching these visitors about the Chesapeake Bay for more than 20 years. Now the Aquarium is taking that message outside its walls and into the field. Since 1997, when the Aquarium was designated by Coastal America as the Coastal Ecosystem Learning Center for the Chesapeake region, the Conservation Department has developed action-based programs to foster awareness, inspire leadership, and promote stewardship of the Chesapeake Bay.

The Conservation Department provides opportunities for volunteers to actively engage the public in the restoration of Bay habitats and increase environmental awareness in local communities. The Department is focusing its outreach efforts on tidal wetlands, which are vital to the existence of the marine life that makes the Bay famous. Yet thousands of acres of these fragile wetlands have been destroyed, and more are lost every year.

See Aquarium page 12



*Volunteers help restore coastal bay habitats by planting submerged aquatic vegetation (SAV).*





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**Aquarium, from page 11**

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In partnership with the National Park Service, the Aquarium maintains and monitors a 10-acre created tidal wetland adjacent to Fort McHenry National Monument and Historic Shrine in Baltimore, Maryland. Although this site is vital for many species of wildlife, including sea ducks, heron, muskrats, and red-winged blackbirds, years of neglect have left this site saturated with debris. Staff and volunteers from the Aquarium Conservation Team (ACT!) monitor the health of this site, maintain the area, and interpret it to visitors and volunteers. Since 1998 ACT! has led quarterly public field days at the site, where more than 210,000 pieces of debris have been collected.

The Aquarium has also partnered with the federal government to create tidal wetlands with material dredged from recreational boating channels. The Aquarium leads the restoration of eroding Bay islands by planting these sites with native marsh grasses. Sites at both Eastern Neck National Wildlife Refuge and Blackwater National Wildlife Refuge (Barren Island) have been successfully restored with help by the public. By involving many members from the community—Refuge Support Groups, local citizens, and students—restoration projects can raise awareness about the importance of wetlands to the Chesapeake Bay ecosystem and inspire volunteers to monitor the health of these sites for years to come.

The Aquarium is extending and enhancing its existing programs by developing interactive educational tools about the Chesapeake Bay and involving students in growing wetland plants at their schools. The Conservation Department's *Schoolyard Spartina* project teams the Aquarium with local schools and engages the students in wetland restoration activities. This new program, modeled after one developed by Tampa BayWatch, allows students to grow native marsh grass to a transplantable size in schoolyard ponds. In addition, staff from the Aquarium visit the schools and engage students in activities aimed at teaching the importance of the Chesapeake Bay and wetland habitats. In the spring Aquarium



*Water quality monitoring helps the Aquarium determine the health of restored sties.*

staff will assist the students in planting their marsh grasses at Chesapeake Bay restoration sites.

For more information about these projects, contact Angie Ashley, Chesapeake Bay Program Manager for the National Aquarium in Baltimore, at [aashley@aquarium.org](mailto:aashley@aquarium.org) or check the Web site at <http://www.aquarium.org>.

### **EPA Announces New Water Quality Trading Policy**

On January 13, 2003, EPA announced a new Water Quality Trading Policy designed to cut industrial, municipal and agricultural discharges into the nation's waterways. The goal of the policy is to support and encourage states and tribes in developing and putting into place water quality trading programs that implement the requirements of the Clean Water Act and federal regulations in more flexible ways and reduce the cost of improving and maintaining the quality of our country's water.

The new Policy incorporates economic incentives to improve the water quality. The Policy allows one source to meet its regulatory obligations by using pollutant reductions created by another source that has lower pollution control costs. The standards remain the same, but efficiency is increased and cost will see a decrease. Under this policy industrial and municipal facilities will first meet technology control requirements and then could use their pollution reduction credit to make progress towards water quality goals. The policy is expected to increase the success of cleaning up impaired rivers, streams and lakes throughout the country.

For more information, visit EPA's Trading web site at <http://www.epa.gov/owow/watershed/trading.htm>.

## Earth Force Helps Youth Become a Force for Clean Water

Students at Vare Middle School had to go past refineries and littered parking lots just to catch a glimpse of the Schuylkill River in South Philadelphia. After conducting surveys and assessing the impact of industry on the river, they developed proposals for the river's future. They joined forces with the Schuylkill River Development Council (SRDC) and held a community meeting at which the students proposed revitalization initiatives such as a new dog park, a performing arts center, and an environmental education center.

"[The students] played an integral role in the Tidal Schuylkill River Master Plan Process. Their energy, innovative ideas, and civic commitment helped create the Schuylkill River plan that will bring Philadelphians back to the river," said Tiffany Hodge, the director of community relations at Schuylkill River Development Council.

It is obvious that the watershed industry must reach out to young people to cultivate future adult leaders who are invested in protecting water. If that isn't reason enough, young people like the Vare students are a valuable resource now for assessing the health of watersheds and making real improvements.



*Students' energy was vital to the success of the restoration project.*

Currently about 70 percent of rivers go untested in a given year even though more than 12,000 student groups monitor waterways in the United States. The involvement of more young people in water protection could make a serious dent in the number of rivers with unknown water quality, and that involvement need not be superficial.

Too many attempts to involve youth in community projects deny young people real leadership roles and opportunities to have their opinions heard. Organizations that invest time in youth resources get out of that investment what they put into it. Youth are capable of doing far more



*Students gather around a 3-dimensional model to learn about the different ways urban runoff can pollute the Schuylkill River.*

than picking up trash from a river bank. Here are some ideas to keep in mind when working with youth to make sure both the students and the organization get the most out of the collaboration:

- Let the process be truly youth-led by giving students a project they can own so that they decide what plan of action to pursue.
- Aim to have projects transcend short-term fixes—such as park cleanups—and engage youth to be active leaders in creating lasting community change by addressing the root causes of a problem.
- Ensure that action plans are based on balanced research that the students conduct early on. The research students conduct gives them the credibility to be taken seriously and helps them become true agents of change.

### Earth Force as a Resource for Youth Involvement

All Earth Force programs are based on the three principles above and can help watershed organizations increase youth involvement in their programs. Earth Force has a variety of watershed education and assessment resources available through its Global River Environmental Education Network (GREEN) program. If you want to learn more about GREEN and how it can help you actively involve more young people in your organization, contact Earth Force at [green@earthforce.org](mailto:green@earthforce.org). The resources on <http://www.green.org> can also help get you started.

## A Bottom-Up “Watershed Approach”: One Woman Makes a Difference

**T**his is a story of one woman, Mary Bernstein, making a difference. It's about not only stewardship and personal responsibility, but also collaboration and community building. In other words, it's about the “watershed approach,” which might be defined as a coordinated, voluntary, consensus-based approach to watershed issues.



A few years ago Mary bought a home near San Pedro Creek. She soon became president of the homeowners' association, where she learned that the conservation easement they managed offered scarce protection for the creek. From the New Mexico Environment Department's Surface Water Quality Bureau (SWQB), Mary learned that the creek was “unclassified,” meaning that it had only basic protection from degradation.

Mary decided to get the creek classified, beginning by educating herself about stream science and the regulatory process. She obtained funding and conducted her own water quality testing, and she engaged nearby university students in research and other work. She also convinced the SWQB to conduct water quality, biological, and geomorphological surveying.

This work revealed that the creek was already suffering from signifi-

cant impairment, including disruption of the sediment loading and hydrologic regimes. Mary engaged a local expert in riparian restoration, Bill Zeedyk, who volunteered his expertise. The result was native riparian restoration work and removal of exotic vegetation. With additional work, this restoration is expected to stabilize stream banks, decrease water temperature, increase the depth of pools, and otherwise improve the habitat for fish and other wildlife.

Mary's next step was to petition the New Mexico Water Quality Control Commission (WQCC) to classify the creek with an appropriate designated use. During the WQCC hearing, Mary apologized for the “family album” appearance of her photo documentation. The Commissioners replied that it was like a breath of fresh air compared to the stodgy materials agencies usually present. At the end of the day, the Commissioners elected to classify

### NPDES Watershed Permitting Policy

On January 7, EPA's Assistant Administrator, G. Tracy Mehan, III, signed the Watershed-Based National Pollutant Discharge Elimination System (NPDES) Permitting Policy. For this Policy, watershed-based permitting is defined as an approach that produces NPDES permits that are issued to point sources on a geographic or watershed basis to meet watershed goals. The policy states the benefits of watershed-based permitting, the implementing mechanisms for this part of the watershed approach, and how the EPA will encourage an increase in the use of watershed-based NPDES permits. The Policy can be viewed at: <http://cfpub.epa.gov/npdes/whatsnew>.

San Pedro Creek with the designated uses of coldwater fishery, irrigation, livestock watering, wildlife habitat, and secondary contact. Their decision was based on informed values that were much better refined than anything written in a statute, regulation, or agency mission statement.

Mary engaged the SWQB and WQCC as fellow stakeholders. Her effort provided a venue for the SWQB to satisfy its own mandates. Now she is moving on to other stakeholders and issues. Recently, Mary formed the Intermountain Conservation Trust to continue conservation work on San Pedro Creek and expand into other areas. One by one, she seems to be finding the best solutions available.

For more information, contact Neal Schaeffer, New Mexico Surface Water Quality Bureau, at [neal\\_schaeffer@nmenv.state.nm.us](mailto:neal_schaeffer@nmenv.state.nm.us).



## Children's Groundwater Festival Celebrates 15 Years of Groundwater Education

Since 1989 The Groundwater Foundation has been involved in teaching children about groundwater and the environment through the Children's Groundwater Festival. Since the Festival's inception, more than 35,000 fourth- and fifth-grade students have traveled to Grand Island, Nebraska, to learn about groundwater and related resources in a fun and interactive atmosphere.

During the festival, groundwater and natural resources professionals representing government agencies, environmental organizations, colleges and universities, and private business lead interactive displays and provide lively entertainment. Each activity is designed to teach children important lessons while they have fun.

On March 19, 2003, more than 1,700 students will participate in the 15th annual Children's Groundwater Festival. Students will explore the world of groundwater and discover their potential as rising stars in environmental stewardship with this year's theme, "Groundwater Galaxy: A World of Rising Stars." To help celebrate, Scott Carpenter, world-famous astronaut and aquanaut, will share his experiences in outer space



*Students met some of Nebraska's water-dependent feathered friends.*

and underwater. It will be an out-of-this-world experience for all involved.

Students are eager to learn how to make a difference in their communities by inspiring groundwater protection behaviors in others. The Children's Groundwater Festival has become an international model of hands-on environmental education. Over the years water education festivals have sprung to life across the United States and around the world. To meet the demand for specialized training for festival organizers, The Groundwater Foundation has published several books and launched a one-of-a-kind workshop held in conjunction with the Children's Groundwater Festival called "Festival Expedition."

For more information about the Children's Groundwater Festival or Festival Expedition, visit The Groundwater Foundation's Web site at <http://www.groundwater.org>, or contact Carla Mansfield of The Groundwater Foundation, Children's Groundwater Festival Cochair, at 800-858-4844, or [carla@groundwater.org](mailto:carla@groundwater.org).

## Project WET: No Boundaries in Water Education

The human ability to achieve balance between needs and desires while maintaining ecological integrity and economic growth is being tested all over the globe. More than 300 watersheds are shared by two or more countries with different forms of government, language, culture, and development. In addition, global population numbers grew from 2.6 billion in 1950 to 6.2 billion in 2002, while the amount of natural resources is finite. The need for education and stewardship by all water users has never been greater.

To meet this need, International Project WET (Water Education for Teachers) committed to creating education programs that serve all water users and can be used by anyone. Project WET has 23 publications and 25 more in the works. All Project WET materials are science-based, hands-on, multidisciplinary, and classroom-ready. The books are supported by training programs and support services in every U.S. state and territory, Canada, Mexico, the Philippines, and the Peace Corps. This international delivery network



allows Project WET to reach millions of children, educators, nongovernment organizations, agencies, watershed groups, and community organizations each year.

Project WET is a nonprofit science, natural resources, and heritage education program and publisher located on the campus of Montana State University in Bozeman, Montana.

Since its inception in 1989, Project WET has expanded to include Healthy Water, Healthy People; Native Waters; WOW! The Wonders of Wetlands; the Discover a Watershed Series; Ground Water; Conserve Water; KIDS (Kids In Discovery Series); and Project Archaeology. The organization responds to the needs of many diverse groups and relies on public and private partnerships to accomplish its work.

Seed money from EPA has fostered Project WET's vision and growth. One example is *Discover a Watershed: The Rio Grande/Rio Bravo Educators Guide*, a 378-page guide, now available in English and Spanish, that offers background information and activities for grades 5–12. Topics include hydrology, plant and animal communities, history and culture, comparisons of water management systems, priority issues, basin economy, and future scenarios. Each lesson has been tested by American and Mexican teachers and students. Activities are matched to National Science Standards, and they fit disciplines ranging from fine arts to health.

*Since its inception in 1989, Project WET has expanded to include Healthy Water, Healthy People; Native Waters; WOW! The Wonders of Wetlands; the Discover a Watershed Series; Ground Water; Conserve Water; KIDS (Kids In Discovery Series); and Project Archaeology.*

For younger students, the KIDS activity booklet *Discover the Rio Grande/Rio Bravo* is available in English or Spanish. This inexpensive, full-color, 16-page booklet is a fun, informative introduction to the diverse world of this binational watershed. Every page is filled with experiments and illustrations of mazes, murals, and marketplace games that stimulate understanding of the basin. Nine other KIDS booklets on various water topics are available.

The Discover a Watershed Series' goal is to facilitate and promote the awareness, appreciation, knowledge, stewardship, and understanding of watershed topics and issues from an unbiased perspective that crosses political, cultural, and economic boundaries. Other books in the series are *Discover a Watershed: The Everglades*, and *The Watershed Manager Educators Guide*. *Discover a Watershed: The Missouri* will be published in the summer of 2003, and at that time an expedition researching the Colorado

River will provide background material for a 2004 guide. For more information, visit [www.discoverawatershed.org](http://www.discoverawatershed.org) or call Or call (toll-free) 866-337-5486.

Another new Project WET program, Healthy Water, Healthy People, encourages investigation of the connections between water quality and environmental and human health. Through inquiry-based investigations, the program promotes individual understanding and integration of water quality principles and values. For more information, visit [www.healthywater.org](http://www.healthywater.org).

Project WET's new catalog is now available online at [www.projectwet.org](http://www.projectwet.org). In addition to ordering publications and products, you can find out the latest information about water festivals around the country and plan for the once-a-year megacelebration, Make a Splash. More than 40,000 students across the country attended the 2002 Make a Splash festivals, funded by Nestle Waters.

The Project WET staff is actively taking part in transboundary education initiatives around the globe. The collaboration between the United States and Mexico to educate citizens of the Rio Grande/Rio Bravo watershed may serve as a reference for all water users across shared rivers and, let's hope, as a starting point for new watershed education awareness.

For more information, contact Dennis Nelson, Executive Director or Project WET at 406-994-5392 or [dennison@montana.edu](mailto:dennison@montana.edu).

## New Resources

### **New Clean Water Act Module Added to Watershed Academy Web**

The Office of Water's Watershed Academy has completed a Web-based training module called "Introduction to the Clean Water Act" at <http://www.epa.gov/watertrain/cwa/>. Users can go through the entire 65-slide course on the Clean Water Act (CWA) in sequence, or they can jump to the particular CWA program of interest by going to the "CWA Big Picture" by linking to <http://www.epa.gov/watertrain/cwa/slide.htm>, shown at the top of each slide. For further information, contact Bill Painter at 202-566-1218.

### **New Tribal Water Quality Standards Publication**

*How Water Quality Standards Protect Tribal Waters* (EPA 823-B-02-002) is a new EPA publication designed to help tribes develop their own water quality standards programs. The document provides an introduction to water quality standards, discusses the benefits of a standards program on reservation lands, and answers some frequently asked questions about the process to obtain EPA authorization to conduct such a program. Water quality standards are laws or regulations that Indian tribes (authorized to administer the program) adopt to enhance the quality of their waters and protect human health, and are the cornerstone of the nation's surface water protection program under the CWA.

Two case studies are included in the publication. The first features the Fort Peck Reservation, home to

Montana's Assiniboine and Sioux Tribes. It highlights the tribes' efforts to use biological criteria in their water quality standards. The second case study focuses on the Seminole Tribe of Florida and the use of water quality standards to solve a severe nutrient problem on the Big Cypress Reservation.

To obtain copies of the new publication, contact Eleanor Jackson at 202-566-0052 or [Jackson.Eleanor@epa.gov](mailto:Jackson.Eleanor@epa.gov).

### **Database on State Water Quality Standards and Designated Uses**

EPA is developing an online National Water Quality Standards Database (WQSDB) to improve public access to information about how waters are being protected and to empower the public to better understand how actions in their watershed can help or harm those waters. The first phase will allow users to access information on "designated uses." These uses, which the state sets, describe the functions that each waterbody is intended to support (e.g. swimming, fishing, drinking water). The second phase of the WQSDB will add numeric "water quality criteria" representing the quality of water that supports particular uses. When completed, the WQSDB will allow access to maps and tables for all of the approximately 2.7 million surface waterbodies across the nation. You can visit the database at <http://www.epa.gov/wqsdatabase> or download fact sheets at <http://www.epa.gov/wqsdatabase/demo/docs/wqsdatabase.pdf> and <http://www.epa.gov/wqsdatabase/demo/docs/wqsrep.pdf>.

### **NOAA Web Site Consolidates Funding Information**

The National Oceanic and Atmospheric Administration's Coastal Service Center site now offers coastal managers information on grant-funding opportunities provided by the Center and other relevant organizations. This site also provides links to many free resources, including articles, tutorials, and tips to help managers and staff through the grant-writing process. Visit the Coastal Service Center's Web site at <http://www.csc.noaa.gov/text/grant.html>.

### **"Forests Matter" Section Added to NBC4 Web Site**

The NBC4 Weather Net4 Web site has a new section called "Forests Matter." Check out the six new chapters at <http://watershed.interactive-environment.com/main/forest.php>.

Also, by clicking on the NBC4 Watershed Project homepage, you can view NBC4's chief meteorologist, Bob Ryan, interviewing USDA Forest Service Chief Dale Bosworth. Chief Bosworth discusses the role of forests and trees in providing healthy watersheds and clean water, and the threats to the nation's forests from urbanization, fire, drought, and forest loss from development and other factors. Click on the words next to the little camera icon to see the 3-minute video. Also, be sure to check out the media features, environmental news archives, and watershed community involvement calendar.

EPA and other federal agencies are supporting this project through a cooperative agreement with the National Environmental Education



### Year of Clean Water Materials

EPA's Office of Water is providing a number of new materials in celebration of the 30<sup>th</sup> anniversary of the Clean Water Act. Visit <http://www.epa.gov/water/yearofcleanwater/month.html> to download new brochures, articles, and publications on a variety of water issues.



and Training Foundation. The goal is to use weather forecasts as a way to raise awareness about water quality and watersheds.

### Storm Water Strategies CD-ROM Available

To help communities implement better storm water controls, the Natural Resources Defense Council (NRDC) recently released a CD-ROM version of its 1999 report *Storm Water Strategies: Community Responses to Runoff Pollution*. The new CD-ROM is very user-friendly and includes updated case studies on storm water management issues (including new information on Low-Impact Development), Web site links to storm water management leaders across the nation, and

electronic navigational tools to locate information of particular interest to your watershed. For more information on the *Storm Water Strategies* CD-ROM, visit the NRDC Web site at [www.nrdc.org/publications](http://www.nrdc.org/publications), or call 212-727-2700.

### New Watershed Project Management Guide

The recently released *Watershed Project Management Guide* presents a four-phase approach to watershed management based on a collaborative process that responds to common needs and goals. The recommended process consists of a series of four basic phases: Assessment, Planning, Implementation, and Evaluation. The process can be used to meet

load allocations required by an approved TMDL, goals of a source water protection plan, USDA programs (e.g., Environmental Quality Incentive Program), or section 319 projects. To order, visit the Web site <http://www.crcpress.com> or call 800-272-7737.



## Events ...

### February 2003

- 17-20 *Urban Storm Water: Enhancing Programs at the Local Level*, Chicago, IL. Contact Bob Kirschner, Conference Coordinator, Chicago Botanic Garden, 1000 Lake Cook Road, Glencoe, IL 60022; e-mail: bkirschn@chicagobotanic.org.
- 24-28 *International Erosion Control Association: 34<sup>th</sup> Annual Conference & Expo: A Gathering of Global Solutions*, Las Vegas, NV. Contact IECA, P.O. Box 774904, Steamboat Springs, CO 80477. Phone: 970-879-3010; Internet: [www.ieca.org](http://www.ieca.org).

### March 2003

- 10-14 *Natural Rivers: Mechanisms, Morphology, and Management*, Baltimore, MD. For more information, contact Wildland Hydrology, 1481 Stevens Lake Road, Pagosa Springs, CO 81147. Phone: 970-731-6100; e-mail: [wildlandhydrology@wildlandhydrology.com](mailto:wildlandhydrology@wildlandhydrology.com). To register, visit [www.wildlandhydrology.com/html/register.htm](http://www.wildlandhydrology.com/html/register.htm).

### April 2003

- 13-16 *Restore America's Estuaries: Inaugural National Conference on Coastal and Estuarine Habitat Restoration*, Baltimore, MD. Visit [www.estuaries.org](http://www.estuaries.org) for more information.
- 22-25 *16th Annual National Conference on Enhancing the States' Lake Management Program*, Chicago, IL. Contact Bob Kirschner, Chicago Botanic Garden, 1000 Lake Cook Rd., Glencoe, Illinois, 60022. E-mail: [bkirschn@chicagobotanic.org](mailto:bkirschn@chicagobotanic.org).
- 23-25 *6<sup>th</sup> National Mitigation Banking Conference*, San Diego, CA. For more information, visit [www.mitigationbankingconference.com](http://www.mitigationbankingconference.com), or call 703-548-5473.
- 29-30 *26<sup>th</sup> Annual Conference on Analysis of Pollutants in the Environment*, Chicago, IL. Sponsored by EPA. Contact Marion Kelly at 202-566-1045; e-mail: [Kelly.Marion@epa.gov](mailto:Kelly.Marion@epa.gov).

### May 2003

- 1-4 American Wetlands Campaign Biennial Conference: Bogs, Playas, and Pools: Protecting America's Unique Wetlands. Contact Leah Miller at 301-548-0150 x219; e-mail: [awm@iwla.org](mailto:awm@iwla.org).
- 12-14 AWRA's 2003 Spring Specialty Conference: Agricultural Hydrology and Water Quality, Kansas City, MO. Contact Ramesh Kanwar, Iowa State University, IA. Phone: 515-294-1434; e-mail: [rskanwar@iastate.edu](mailto:rskanwar@iastate.edu).

### June 2003

- 4 *National Source Water Protection Conference*, Washington DC. The theme of 2003's conference is "Protecting the Sources of the Nation's Drinking Water: Opportunities for Action." For more information, visit: <http://www.epa.gov/safewater/protect/swpconf.html>.
- 8 -11 *Eighth National Watershed Conference*, Council Bluffs, Iowa. Contact: Tammy Sawatzky, National Watershed Coalition, PO Box 7793, Edmond, OK 73083. Call: 405-521-4823. e-mail: [NWCTammy@aol.com](mailto:NWCTammy@aol.com). Internet: <http://www.watershedcoalition.org>.

## Watershed Summits Bring People Together

### National Watershed Youth Summit

On October 6–10, 2002, the Smithsonian Environmental Research Center (SERC) hosted the Youth Watershed Summit on the shore of the Chesapeake Bay in Edgewater, Maryland. The Summit brought together 280 students and teachers from across the country for the purpose of engaging youth in the challenges of protecting and restoring the nation's waters. Students and teachers learned about scientific and policy issues concerning watershed protection in classroom and field sessions led by state, national, and private sector water quality experts. America's Clean Water Foundation and SERC were the primary sponsors of the event, which was cosponsored by ASIWPCA, USEPA, USDA, USGS, and NOAA. Student radio spots and photos from the Youth Watershed Summit can be found by clicking the button at the top right of the screen at [www.yearofcleanwater.org/events/youth.htm](http://www.yearofcleanwater.org/events/youth.htm).

### Senior Watershed Summit

An October 2002 conference in Sandy Cove, Maryland, brought together seniors from across the nation to learn about watersheds and water quality protection. Participants attended sessions conducted or facilitated by government and private sector experts in water quality. America's Clean Water Foundation and the Environmental Alliance for Senior Involvement cosponsored the event.

### World Watershed Summit

From October 30 through November 1, 2002, more than 250 government, public, and private sector leaders from the United States and a host of other nations (England, Scotland, Holland, Japan, Israel, Canada, Germany, and Venezuela among others) came together in Washington, DC, for a series of educational, work group, and plenary sessions on technical and policy issues concerning international water resource protection.

Sessions addressed both urban and rural landscapes and were led by experts in water quality protection from the United Nations, federal agencies, state governments, the academic community, and other domestic and foreign organizations. One product of the Summit was a synopsis of lessons watershed managers have learned. America's Clean Water Foundation and the Association of Metropolitan Sewerage Agencies sponsored the Summit, in collaboration with ASIWPCA, USEPA, USDA, USGS, NOAA, and the United Nations Environment Programme.

Views expressed in *Watershed Events* do not necessarily reflect those of EPA. In addition, mention of commercial products or publications does not constitute endorsement or recommendation for use by EPA.