

REPORTER



C. Dalpra

Another bag?! Indian Creek site organizer Zelda Bell hands another trash bag to her son, Gabe. The Bells have been to several of the Potomac cleanups.

Cleanup Volunteers Remove 117 Tons of Trash from Watershed

Goal of “Trash-Free in 10 Years” Set

The morning of April 5th was a little chilly and wet, but the gray skies didn't dampen the enthusiasm of the more than 3,000 volunteers who came out to clean up their local waterways during the 15th annual Potomac River Watershed Cleanup. For three hours on the blustery Saturday morning, the volunteers gathered at 138 sites across the watershed, donned work gloves and filled bags with 117 tons of assorted trash, much of it recyclable plastic bottles.

The event also marked the kickoff of a new goal in the cleanup, to make the river Trash-Free in 10 Years. “The event is an effective way to raise awareness of trash issues and get our communities working together,” said Tracy Bowen, executive director of the Alice Ferguson Foundation, which began the event and continues to

organize it each year. “There is as much trash in the river now as when we began the cleanup in 1989,” she said. Bowen and the foundation, which runs the Hard Bargain Farm environmental education facility on the river shore in Prince George's County, Md., will use the network of agencies and individuals involved in the cleanup to build awareness and provide educational opportunities to eliminate litter from the watershed. Establishment of indicators and benchmarks targeting trash reduction and recycling goals will be coupled with an educational campaign. The effort will draw attention to the solvable problem of litter and promote strategies for recycling and trash reduction to decision-makers and governments.

The effort was getting a good start during this year's cleanup, as some returning

Our mission is to enhance, protect and conserve the water and associated land resources of the Potomac River and its tributaries through regional and interstate cooperation.

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volunteers removed trash from sites that they had cleaned previously. Gabe Bell, the young son of Zelda Bell, who for a number of years has organized a site off Indian Creek in the Anacostia watershed, was getting a little frustrated as he filled plastic bags with assorted trash. "I really wish people would quit throwing their stuff out like this," the younger Bell said, as he surveyed an expanse peppered with plastic bottles and foam cups that had washed through storm drains to rest in a wetland area. Many of the volunteers have helped at several cleanups over the years, and the event also allows individuals to network on the litter issue as well as to meet neighbors with similar environmental concerns.

For the first time in the cleanup's history, organizers sought to get a basin-wide assessment of just how much of the trash was recyclable by providing different colored bags for those items. The results were impressive. About 23 percent of the bags of trash collected could be recycled, including about 59,400 plastic bottles. At some sites, the volume was much higher, lead by a site at Fort Foote National Park in Prince George's County, Md., where plastic bottles comprised about 73 percent of the bagged trash. Priscilla Offenhauer, a volunteer at the Indian Creek site, was dismayed by the amount of recyclables she bagged. A recent transplant from Massachusetts, Offenhauer thought that a bottle bill, requiring deposit on containers, would help clean the river environs. "It seemed like the day after the bottle bill passed in Massachusetts, the roads, woods and shorelines got cleaner very quickly," she noted.

Many unusual items were found at the cleanup sites, including a Bedford, Pa., newspaper box found in Prince George's County, four World War II U.S. Navy mine markers, a paddle boat, a toupee, a guitar, three swing sets, a stun gun, a movie

projector, bongo drums, and eight bags of neatly bagged and tied up pet waste. In addition, the cleanup collected a total of 1,448 tires, 1,834 assorted balls, more than 70 small propane tanks, 26 barrels and drums, eight shopping carts, most of an all-terrain vehicle, and several toilets and toilet seats.

During its 15-year history, cleanup volunteers have removed more than 860 tons of trash from the Potomac watershed.

The Alice Ferguson Foundation has conducted the cleanup each year with the assistance of partners, including citizens groups, nonprofit organizations, the National Park Service (a number of sites were on park land), ICPRB, and state and local governments.

The cleanup also has a growing list of sponsors, lead by the Chesapeake Bay Trust, which provides much of the funding needed for the cleanup.

Residents Can Help Meet New CBP Goals

The Chesapeake Bay Program (CBP) partners recently announced the new nutrient reduction goals for bay states and the District of Columbia. Since 1983, the Chesapeake Bay states along with the federal government, have worked to restore the bay under the cooperative CBP. Nutrient (nitrogen and phosphorus) reduction and sediment reduction, two of CBP's targets, are essential to preserve the bay and the Potomac River, its second largest tributary. According to the Chesapeake Bay Program, the new goals will help the partner states and the District of Columbia formulate plans for citizens, watershed organizations, and local governments to do their part in reducing excess nutrients in the bay on a local level.

The new goals for the Chesapeake Bay watershed are to achieve nitrogen loadings of no more than 175 million pounds per year and phosphorus levels of no more than 12.8 million pounds per year, both figures nearly cutting in half the original levels set 20 years ago. Excess nutrients trigger algae growth that chokes out submerged aquatic vegetation and reduces habitat and water quality needed by creatures living in the river. Based on sophisticated computer models, Jeff Sweeney of the Chesapeake Bay Program estimates that an average of 62 million pounds of nitrogen and 4.3 million pounds of phosphorus per year are discharged into Potomac basin waterways each year. The actual levels of nitrogen and phosphorus are variable from year to year depending upon rainfall. Agriculture and urban areas combined make up about 41% of the land and contribute about 48% of the nitrogen pollution and 70% of the phosphorus pollution per year. Goals for the Potomac basin are to ultimately reduce loadings to about 36 million pounds of nitrogen and about 3.5 million pounds of phosphorus

per year.

Citizens are learning that simple tasks such as planting trees can help reduce nutrients as well as filter sediments and toxins, stabilize stream banks, and lower water temperatures for healthier fish populations. Sedimentation can be largely attributed to lack of riparian (streamside) vegetation. Sweeney estimates that, on average, 1.8 million tons of sediment enter the Potomac estuary from upstream each year, blocking sunlight needed for aquatic plant growth. However, sediment deposition is hugely variable over time, depending on precipitation patterns. For the first time, CBP set a bay-wide goal to reduce sediment to no more than 4.15 million tons per year; 1.5 million tons per year is the target for the Potomac watershed. According to the Potomac Watershed Partnership, one acre of riparian buffer trees is estimated to capture two tons of sediment per year. The Potomac Watershed Partnership is a cooperative watershed restoration effort between the U.S. Department of Agriculture's (USDA) Forest Service, Virginia Department of Forestry, Maryland Department of Natural Resources Forest Service, Ducks Unlimited, and the Potomac



C. Dalpra

Student volunteers prepare a rain garden for planting in Washington, D.C. Citizen involvement is crucial in meeting Potomac and bay restoration goals.

Bay Program's Potomac Status and Goals

	1985 Levels	2000 Levels	Percent Reduction to Date	New Goal
Sediment	2 Million Tons/Year	1.8 Million Tons/Year	13%	1.5 Million Tons/Year
Nitrogen	71 Million Lbs./Year	62 Million Lbs./Year	13%	36 Million Lbs./Year
Phosphorus	5.3 Million Lbs./Year	4.3 Million Lbs./Year	19%	3.5 Million Lbs./Year

Data Source: U.S. EPA Chesapeake Bay Program

The new goal for 2010 is to reduce nitrogen by an additional 42 percent, phosphorus by 19 percent, and sediment by 15 percent below the levels achieved in 2000. The levels reflected in this table are derived from models that take into account both wet and dry years. Actual year-to-year pollutant loads fluctuate greatly with precipitation. Sediment loads noted do not include shoreline erosion.

meetings are being planned for this year. The meetings will focus organizations and local government agencies on regional issues in the Potomac basin.

Recognizing the need for citizen education and involvement, ICPRB strives to keep Potomac residents updated on events and educational opportunities in the watershed. Each year, programs like

Growing Native and CREP attract more participants and incentive programs entice landowners to help alleviate the stressors on the Potomac basin and ultimately the bay. Citizens are on their way to help meet the new Chesapeake Bay Program goals via simple solutions. To learn how you can get involved in your community to help meet the CBP goals, visit our website at www.icprb.org.

Virginia to Test Non-native Oysters

Eastern oysters, *Crassostrea virginica*, are a very important species to maintain health in the tidal Potomac River and the Chesapeake Bay. They provide habitat and food for fish, crabs, oysters, and many other animals. However, eastern oyster populations in the Potomac River and Chesapeake Bay are highly stressed due to disease, overharvesting, and drought.

Historically, the Potomac River and the bay was an oyster-rich environment. According to the Chesapeake Bay Program, the oyster population has been reduced to about 1% of its historic population. With last year's drought, reduced river flows allowed saltwater to creep further upstream. Higher salinities and warm water concoct a deadly mix of MSX and Dermo, two oyster parasites that have been decimating oyster populations in the bay region for years. Kirby Carpenter of the Potomac River Fisheries Commission stated that disease is now present throughout the oyster habitat of the Potomac River. Historically, oysters could be found 60 miles upstream from the mouth and now they are restricted to 5-8 miles of suitable habitat. Carpenter emphasized that there are continuing

Conservancy. The Forest Service stresses that increased riparian buffers are well worth the effort.

With the expectation of a clean bay and the ability to be part of the solution, landowners are beginning to take advantage of restoration programs, such as the Conservation Reserve Enhancement Program (CREP) for reforestation of the watershed. CREP is a partnership between USDA and each state in the Chesapeake Bay watershed to restore riparian areas. Currently, the Potomac basin is over 50% forested, however more riparian buffers need to be created to capture sediment and nutrients before they get to the waterways.

Growing Native, a program of the Potomac Watershed Partnership, collects seeds each year throughout the Potomac River basin and now the Chesapeake Bay watershed to supply local tree planting efforts with nursery stock. Basin residents participate by collecting seeds from their yards, parks, and fields to contribute to the reforestation of the Potomac watershed. From the 15,000 pounds of seeds collected last year, the Potomac Watershed Partnership estimates that about 500,000 of them will become trees. Matt Berres of the Potomac Conservancy, a Potomac Watershed Partnership partner, stated that the majority of the seedlings go to CREP for landowners to reforest streamside areas on their private property.

In November 2002, ICPRB organized a shared restoration strategies conference with help from the U.S. Environmental Protection Agency, Metropolitan Washington Council of Governments, and agencies from Maryland, Virginia, West Virginia, Pennsylvania, and Washington, D.C. The conference discussed successes in the basin, and developed ideas for common elements among the basin's tributary strategies and the groups working to implement them. More localized



B. Bandler

efforts to plant seed oysters when available, however, it has been difficult to maintain stocks because of the diseases.

Oysters used to be tallied in millions of bushels per year, but now are counted in the thousands. "Watermen are resorting to crabbing later in the fall and many have switched to gill netting through the winter to make up for the loss in oyster revenues," said Carpenter. The overall decline of the eastern oyster has prompted discussions and studies about the potential seeding of non-native oysters, particularly the Asian Suminoe oyster *Crassostrea ariakensis*. Studies at the Virginia Institute of Marine Science (VIMS) have found that the Suminoe oyster is resistant to Dermo and MSX, its growth rates are higher, and has habitat needs similar to the eastern oyster.

However, the effects of non-native oysters on the bay are unknown. Despite concerns from VIMS, Chesapeake Bay Foundation, Chesapeake Bay Program Federal Agencies Committee, University of Maryland Center for Environmental Studies, U.S. Fish and Wildlife Service, and the Delaware Division of Fish and Wildlife, the Virginia Marine Resources Commission (VMRC) early this year approved a request from the Virginia Seafood Council for the introduction of one million sterile Asian oysters into the Chesapeake Bay.

Approval for the release was granted after several major changes to the original plan. First, 100 percent certified sterile oysters will be used. These oysters will be genetically sterile and will have less than a one percent chance of becoming fertile or introducing a viable population into the bay, according to Eric Hallerman, a professor of fisheries science at Virginia Tech who helped create the risk assessment model for introducing *C. ariakensis* into the bay. The sterile oysters will be produced at the Virginia Institute of Marine Science (VIMS) Aquaculture Genetics and Breeding Technology Center. Previous methods for creating a sterile population resulted in much higher chances of fertility.

Another major change to the plan is the allowance of only ten participants. This will help to accurately gage the economic benefits of large-scale aquaculture of the Suminoe oyster. Only the most experienced growers will be given the opportunity to

participate in this initial phase. In addition, a project manager will oversee all aspects of the operation for compliance to guidelines and data compilation. The goal of this project, according to the Virginia Seafood Council's revised request, is to "demonstrate economic feasibility for large scale aquaculture of triploid *C. ariakensis*" by thoroughly documenting and reporting costs, labor, and oyster growth.

The ten project sites are located throughout the bay and its tidal tributaries from the Potomac River to the James River and inlets along Virginia's Atlantic coast of the Delmarva peninsula. One site will be located on the Yeocomico River, a tributary of the lower Potomac. Another site will be on the Little Wicomico River, located close to the mouth of the Potomac. A summer start for the project is anticipated.

The project has incorporated biosecurity to ensure that the oysters are not accidentally released into the bay, according to the Virginia Seafood Council's official request to the VMRC in November 2002. Hallerman stressed that there are advantages and disadvantages to introducing non-native oysters to the bay, a major reason that the first request by the Virginia Seafood Council was denied. Advantages of the non-native oyster are its resistance to Dermo and MSX, faster growth rates, an ability to provide ecological surfaces by forming reefs, and keeping Chesapeake Bay watermen employed. However, there also are disadvantages that may not have been discovered yet, stated Hallerman. Suminoe oysters, if introduced into the bay, may inadvertently introduce new diseases that could wipe out native oysters entirely or other bay species and it is unknown if fertile Asian oysters would outcompete native oysters for space. "The argument could go either way," Hallerman said.

The oyster's most vital role is as a filter feeder and "the bay needs a filter," emphasized Hallerman. Oysters improve water clarity and quality in the bay by consuming plankton, a mixture of microscopic plants and animals. "The oyster reef is the Potomac's coral reef; it is the beginning of the food chain," said Carpenter. Today, water visibility of only several feet is normal because there are few oyster reefs and they are unable to filter the bay's water efficiently. Scientists at the Chesapeake Bay Program estimated that in colonial times, oysters were so plentiful that the water in the Chesapeake Bay was recycled every three days, but now, it would take more than a year for the oyster population to recycle the bay's water. Fertile non-native oysters will not be released into the bay for at least several years, if ever. In that time, studies will be conducted on the impacts of oyster aquaculture and non-native oysters in the Chesapeake Bay and its tidal tributaries.

Current, Former Commissioners Pass Away

The commission was saddened to learn of the recent deaths of both an active and a retired ICPRB commissioner.

Larry C. Smith, a West Virginia commissioner, died on April 2. Smith

brought his background in many conservation efforts to his work on the commission, which began with his appointment in 1992. He was supervisor of the Eastern Panhandle Soil Conservation District, vice chairman of the National Watershed Coalition, chairman of the North Eastern National Association of Conservation Districts, and a life member of the Future Farmers of America Alumni Association.

Smith also was a member of the Liberty Town Volunteer Fire Department, a former member of the Morgan County, W.Va., Planning Commission, the Economic Development Authority and past president of the county Chamber of Commerce.

Rockwood H. "Adam" Foster died on March 11. He served as a District of Columbia commissioner from 1975-1993, covering a time of great positive change in the Potomac River basin. Bringing 14 years of U.S. Foreign Service experience with him, as well as his service to the city as a city council member and chairmanship of its environmental committee, Foster sought to build bridges and partnerships among the



Watching the River Flow

The Potomac River flowed somewhat more than normal in February, followed by a March rate nearly twice the long-term average, according to the U.S. Geological Survey.

Provisional data collected near Washington, D.C., for February showed the river's flow at an average of 11.4 billion gallons per day (bgd) for the month, about 109 percent of the historical average of about 10.4 bgd. Daily extremes ranged from a low of about 1.8 bgd on February 18 to a high of about 62.6 bgd on February 25, the high flow a mix of heavy rain and melting snow. Water withdrawn for drinking use averaged about 370 million gallons per day (mgd) for the month, about three percent more than in February 2002. Freshwater inflow to Chesapeake Bay averaged about 68.5 bgd, 89 percent of the historical average. The Potomac contributed about 23 percent.

Bolstered by basin-wide precipitation, the river averaged a March flow of about 30.4 bgd, or 196 percent of the average. Flows ranged from a high of about 72.7 bgd on March 22 to a low of about 13.8 bgd on March 30. Drinking water withdrawals averaged about 366 mgd in March, a one percent rise from March 2002. Inflow to the Chesapeake Bay averaged about 144 bgd during the month, about 149 percent of the historical average of about 96.2 bgd. The Potomac contributed about 22 percent of the total.

Reservoirs used to augment river flow for metropolitan area drinking water supplies are full, and groundwater levels throughout the region are normal to above-normal.



government agencies and citizens groups in the watershed. He viewed the commission "as a form of nationalism, on an interstate level," and used his skills to further commission goals.

Foster took the lead in a number of commission projects. He helped organize the Thames-Potomac Seminars, an exchange of environmental and policy insights from the two basins, with a British group traveling to the U.S., and Americans from the Potomac visiting Great Britain. In 1990, Foster took a lead role in the agency's 50th anniversary, which included a large exhibit that began with a three month showing at the Smithsonian Institution, followed by stops in each of the basin state's capital cities.

Foster kept in touch with commission members and staff, and was interviewed by this newsletter in 2000 for the commission's 60th anniversary.

The Potomac River basin has greatly benefitted from the contributions of these two men, and they will be missed.

New Federal Commissioners Appointed

Three new federal commissioners were appointed to ICPRB by President George W. Bush in April. J. Winston Porter, Jane G. Witheridge, and George Reiger will serve as federal government representatives who will provide Administration input to assist in fulfilling the ICPRB mission.

J. Winston Porter is a leading environmental and management consultant, and president of the Waste Policy Center, a private consulting and research firm in Leesburg, Va. Dr. Porter is well-known for frequent reports, speeches, and op-ed articles on waste management, litter control, agricultural biotechnology, federal facilities site remediation, and streamlining Superfund cleanups. Porter served as U.S. Environmental Protection Agency Assistant Administrator for Solid Waste and Emergency Response from 1985 to 1989, and was national program manager for the Superfund and Resource Conservation and Recovery Act Programs. He also established a national municipal solid waste recycling goal of 25 percent, which was reached in 1995, and directed a state-federal protocol for the remediation of federal facilities such as nuclear weapons sites. Porter is “looking forward to making a contribution to the efforts of the commission in conserving and protecting the resources of the Potomac basin.”

Jane G. Witheridge is the president of Resource Efficiency Associates, Inc., a consulting firm for business efficiency. Witheridge has served as Vice President of Recycling and Joint Ventures for Waste Management Inc., where she successfully reached over 25 million people to address benefits of recycling through articles in major national media. Witheridge also served as Director of Environmental Management for the company, where she directed clean-up operations of high-liability disposal sites and designed and implemented the Internal Environmental Audit Program. Witheridge also serves on Yale’s *Journal of Industrial Ecology* Advisory Board. “I very much look forward to serving the Interstate Commission on the Potomac River Basin, to help enhance the resources of our Nation’s River for many generations to come,” Witheridge said.

George Reiger, an author of books and magazine articles on fisheries and natural resources conservation issues, has been a conservation editor for *Field and Stream* magazine since 1974. He also is a contributor to *Saltwater Sportsman* magazine and *National Geographic*. He

has authored several books on conservation and nature, including “Wanderer on My Native Shore,” which was a finalist for a Pulitzer Prize for Nonfiction. Natural resources conservation is a profession and a way of life for Reiger, who also has written many articles about birds, fish, and other wildlife. His greatest interest—one that will serve the commission well—is in fish and fisheries. “I think the ICPRB projects aimed at restoring the river’s fisheries are very exciting,” Reiger said. “Fisheries are an important indicator for the environment. They are the canaries in the coal mine,” Reiger said.

ICPRB federal commissioners represent federal interests and provide federal input into commission projects and establish commission policy. Commissioners from all jurisdictions approve the commission’s operating budget and work with their jurisdictions to ensure that ICPRB has adequate funding to carry out its programs. The commission serves as a base where state and federal jurisdictions can coordinate their activities and provide a watershed-based focus on the cooperative management of the water and related resources of the basin.

Come Paddle the Tidal Potomac!



C. Dalpra

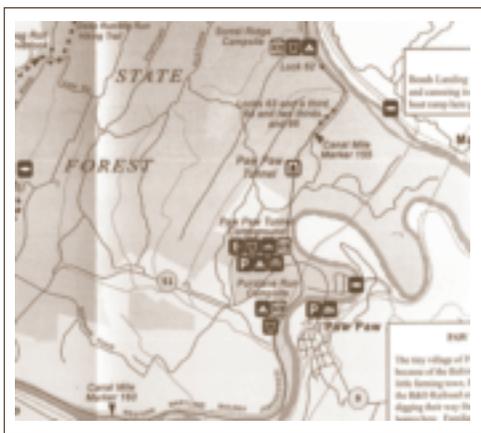
The 2003 sojourn begins on the Anacostia.

Scenic tours don’t get much better than the Toyota Prius Potomac River Sojourn. This marks the second year for the summer event, organized by the Alliance for the Chesapeake Bay. From June 14 through 21, paddlers will enjoy the river’s nature and enrich their minds with conservation messages and activities. This year, the sojourn kickoff will be at Anacostia Park in Washington D.C., and will conclude in Morgantown, Md., with the Morgantown Wade-In. The ICPRB is hosting the opening day, and will be providing educational activities at several points during the trip. For more information or to register for one or more days, call Jamie Albert at (202) 466-4633, or visit www.acb-online.org/.

Potomac Water Trail Maps for Sale

Recreation on or around the Potomac River has become increasingly popular for residents and tourists alike. Finding that elusive fishing hole or hiking trail that leads to the river can be difficult without the right map. The "Potomac River and C&O Canal" map sets for the upper and middle Potomac are just the thing to get you to the river. The middle Potomac map set, created by ICPRB, covers the river and surrounding trails from Georgetown in Washington, D.C., to Opequon Creek, upstream of Shepherdstown, W.Va.. The upper Potomac map set, produced by ICPRB, the Maryland Department of Natural Resources, National Park Service, and the West Virginia Department of Natural Resources, covers the Potomac and its trails from Shepherdstown to Potomac Park, Md., just upstream of Cumberland. The two sets together cover the river and the length of the adjacent C&O Canal National Historic Park.

These map sets provide information on boating, public access sites, support facilities, camping and fishing sites, and picnic and parking areas as well as historical facts and safety information.



The middle Potomac map set is available for \$6, postpaid. The upper Potomac map set, printed on waterproof, tearproof polyester, cost \$10 postpaid. When ordering, please specify the map set requested on the memo line of your check. Sorry, we can not take credit cards. Ordering information also is posted on our website, www.potomacriver.org. For more information, e-mail ICPRB at info@icprb.org or call (301) 984-1908.



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