

# REPORTER



C. Dalpra

**Mayor Anthony Williams (center) celebrates the creation of a raingarden along the Anacostia River. Vincent Nathan, deputy director of the District's Environmental Health Administration (left), and Joan LaLacheur, President of the Anacostia River Business Coalition, assist (see story inside).**

## Drought Grips Basin

As summer approaches, the Potomac basin remains in the grasp of an extreme drought. The flow of the Potomac River regularly established new record daily lows for the season during February and March, and in early April continued to experience flows near or worse than the drought of 1999. Despite March precipitation that was slightly more than normal, the average flow for the month broke the old record low that was set in 1931.

Without regular rainfall, the summer conditions may likely be more severe than the 1999 drought, when various water restrictions were enacted throughout the watershed. That year also marked the first use of water stored in upstream reservoirs by the major water utilities that provide drinking water for most of the metropolitan Washington area. The stored water reserve was put in place in 1982, when the U.S. Army Corps of engineers constructed the Jennings Randolph

Reservoir on the Potomac's North Branch.

The stored reserves, along with a series of agreements under which the major utilities agree to coordinate low flow withdrawals from the Potomac managed by ICPRB, leave officials confident that the Washington metropolitan area will have adequate water supplies to meet demand through the summer and fall, even if the drought is more severe than any in the historical record. "Reservoir storage is full, and releases will allow the major metropolitan water suppliers to meet demands," said Erik Hagen, deputy director of the ICPRB Section for Cooperative Water Supply Operations on the Potomac (CO-OP), which coordinates with the suppliers. "If the drought persists, we may be making releases of water from reservoirs, which is considered a part of normal operations for the area. As of April 5, our calculations show a 43 to 47 percent probability that releases will be needed this season. If

***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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*From the  
Executive Director's Desk*

## **Water Resources Critical to Basin's Future**

Recent news headlines throughout the Potomac Valley begin to sound a repetitive chorus as they state, "Area Drought Deepens" or "Community Begins Restrictions on Water Use." The mid-Atlantic region continues to suffer through an extended and rare winter-into-spring drought that has dropped some reservoir and groundwater levels to record lows, raising concerns about water supplies. Recent rains have helped restore surface sources, greened up the grasses and trees, and improved parched soils for our agricultural season. Unfortunately, the rain is probably a bit late to fully replenish our precious groundwater aquifers.

Although the Washington area reports adequate water supplies in its reservoirs, water resources for the Potomac River basin must be assessed for the future. We need to begin preparing to meet future consumptive use. We must have a plan for an interconnection of systems and long-range, comprehensive resource development. Studies indicate that by the year 2020, some parts of the basin may not be able to meet forecasted needs with current resources. In other areas, resources will certainly be stressed and restrictions on use may be required during dry periods.

In times of drought, the ICPRB Section for Cooperative Water Supply Operations on the Potomac (CO-OP) is responsible for coordinating river withdrawals and reservoir releases for the Washington metropolitan area's three major water suppliers. When natural flows in the Potomac are insufficient to meet water demands and flow-by requirements, water is released from upstream reservoirs and withdrawals by the suppliers are coordinated. Because of advanced planning by the suppliers, and others, 25 to 30 years ago, the immediate metro region is assured of adequate Potomac supplies. However, the competition for use of the stored water assets grows each year.

The demand for water in the future, coupled with the time to undertake development of new resources, means we need to begin basin planning efforts now. We - - the Commission and our basin partners - - need to find funding to gather data for studies to accurately describe the current and future water resource conditions and implement measures to meet future basin needs.

Basin communities far from Washington are attracting new residents seeking a quality of life that pastoral and suburban



settings provide, but the strain on water resources increases with development pressures. The current drought helps to remind us of the need for action.

To help meet demands for the future, we need to open the tool box and craft regional and local plans that:

- Study groundwater use and availability;
- Use surface and groundwater conjunctively;
- Use the Source Water Assessment Program (SWAP) to develop and refine

water resources data and set priorities for our total maximum daily load (TMDL) programs;

- Reduce consumptive uses, especially when systems are stressed by drought;
- Develop local demand management programs to reduce peak water usage; and
- Implement education programs to encourage water conservation initiatives by our youth.

The Potomac basin is fortunate in the wide array of agencies and groups that can contribute to a healthy water future for the basin. The immediate challenge is in mobilizing these groups, along with an educated public, to work together to ensure that healthy future.

The ICPRB will continue to encourage the federal and state governments, other agencies and the public to work together towards this goal.

--Joseph K. Hoffman

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## Drought *(continued from pg. 1)*

needed at all, a release is unlikely before July," Hagen said. In the meantime, metropolitan-area governments are coordinating drought responses and preparing a wise water use conservation program through the Metropolitan Washington Council of Governments.

While the drinking water supply is of primary importance to the vast majority of the basin's residents, who live in the metropolitan area and get their water from the Potomac, the drought's effects go far beyond that area and population. In fact, the drought's impact on individual quality of life is largely determined by location and how water is used. The drought's effects are different for urban/suburban dwellers, rural residents, farmers, recreationists, and of course, the fish and other creatures that are the waterways' true residents.

While customers of the metropolitan area's major water suppliers will have enough water despite the drought, other basin residents on public supplies that tap smaller streams or groundwater, as well as those on private wells, may find the summer difficult. Groundwater levels throughout the basin are quite low, with records being set in many areas.

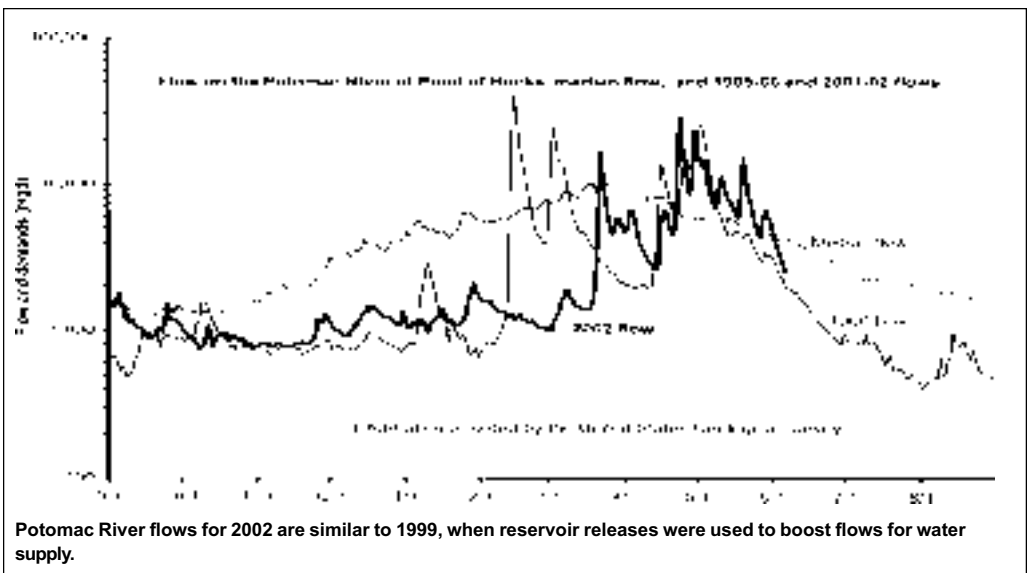
The State of Maryland set mandatory water restrictions for its central region, excluding areas served by the Washington Suburban Sanitary Commission, which supplies water to Maryland's metropolitan-area suburbs. Residents in sections of Montgomery County and all of Frederick and Carroll counties are restricted from car washing, lawn and garden watering, with several exceptions (for a complete list of

restrictions, visit [www.mde.state.md.us/drought/mandatory.asp](http://www.mde.state.md.us/drought/mandatory.asp)). Restaurants are to serve water only on request, and business and residential users are asked to voluntarily reduce water usage by 10 percent.

Pennsylvania's counties in the Potomac River basin were placed under a drought emergency in February, which mandates water use restrictions that cover lawn and athletic field watering, car washing, serving water in restaurants, and other water uses. Counties under the emergency plan have established drought task forces, and public water suppliers have individual contingency plans, and can coordinate with the state to implement rationing plans, if needed. "The severity of drought conditions underscores the need to develop an accurate water budget, said Department of Environmental Protection Secretary David Hess. "We need to develop long-term water-use strategies as part of a comprehensive approach to better manage our precious water resources," he said. For more information, visit [www.dep.state.pa.us](http://www.dep.state.pa.us) and use the keyword "drought."

Other basin states are experiencing severe agricultural impacts, increased risk of forest fire, and other effects, although they have not issued mandatory restrictions.

Communities are experiencing drought problems throughout the basin. Cumberland, Md., along the upper Potomac, gets its drinking water from two reservoirs in nearby Pennsylvania, and those reservoirs are drying up. Water restrictions have been in place since February, but without rain, its storage could be gone by mid-summer. (As



the newsletter went to press, recent rains have eased the situation in Cumberland.) Many smaller communities are operating under mandatory use restrictions.

Many more residents on private wells are feeling the pinch. Tom Miller, with the Maryland Cooperative Extension Service, is seeing it. "The most obvious impact is in the number of well permits requested," he said. The number of applications to drill replacement wells [for dried-up wells] has more than doubled," Miller noted.

Additionally, some counties have halted percolation tests (needed before home construction to determine if the land is suitable for installing a septic system) because it is too dry to test them. The suspension of tests will halt development of those lots, Miller said, until next year, after rainfall has hopefully returned to a more-normal state.

State extension services throughout the basin have a long history of promoting conservation, but Miller has come to realize how difficult the education aspect is, particularly at times when people are not worried about water supplies. "If there is a silver lining to this," Miller said, "the drought conditions do get people thinking." He recalled a recent telephone conversation with a person who had sought advice on saving water, and now catches unused shower water while waiting for the water to warm and practices other routines. "He told me he never realized how much water he was wasting until he started catching it," Miller said.

Agriculture in the basin has borne the brunt of drought impacts, as farmers struggle with parched conditions and thirsty crops. Irrigation has not been heavily used in the basin, and has decreased over the past decade, noted Gary Felton, a University of Maryland professor and water quality specialist.

"Drought is in the eye of the beholder," he noted. Those using groundwater for

water supply feel the longest impact of the drought because of the time needed to recharge aquifers. For farmers, the problem is eased with an inch or two of rain at a time, if the timing is right for germination of seeds and keeping the plants from failing, although a few weeks of dry weather can put them right back where they started, he said. "This is different than the home owner, who is concerned with household needs, watering the lawn and washing the car," Felton said.

For the river's aquatic residents, prolonged drought can have numerous effects, some of which can create changes that allow some creatures to flourish. "Droughts, like floods and fires can be critical to certain plants and animals, providing conditions that favor them," noted ICPRB Associate Director of Living Resources Jim Cummins. "Without periodic drought conditions, some species or communities may not survive in the long run. But for most aquatic species, droughts are stressful."

Cummins suspects that the drought conditions may be contributing to fewer river herring being caught in the Anacostia watershed to be used in a stock improvement project. The migratory fish use stream flow rates as one of the cues to travel upstream to spawn. The clearer water from the lack of storm runoff also can make the fish more cautious and wary of predators.

As streams shrink with the drought, and in the tidal Potomac, saltier water from the bay moves further upstream, the habitats of many species of creatures decreases. The higher competition for space can cause greater predation, competition for food, and less successful reproduction.

Other possible drought effects could include increased submerged vegetation (from better water clarity and sunlight penetration), fewer aquatic insects (an important food source for many fish), and a reduced ability of a slow-moving stream to

absorb or assimilate pollutants and hold oxygen. "The Potomac is a complex system, and there are many interacting factors that can affect the success of a species," Cummins said.

It can be argued that the complex reaction of the ecosystem is perhaps only slightly more so than the human response to drought. Felton noted the different perceptions of drought cause confusion among the different user groups. "It is difficult to promote a single conservation ethic among the different groups," he noted. "What is really needed is to promote water conservation on the same level as governments promote land preservation," he said.

ICPRB Executive Director Joseph Hoffman agrees with the need for a more-educated public. "People need to become

more aware of our valuable Potomac resource. A water-savvy public that understands the value of the resource will help us plan for the region's future. While the metropolitan area water supplies are adequate, we must seriously plan for what we think will be needed a few decades from now. Our vision should go beyond the metropolitan area, and try to develop a cooperative framework that can address the range of concerns throughout the basin." The commission is working to raise interest in developing comprehensive plans that will look at many factors in determining how future needs can be met (see executive director's column).

*Editor's Note: As this issue went to press, a more regular rainfall pattern began to establish itself throughout the basin, leading us to wonder if the best way to ease a drought is to write about it...*

## Potomac Cleanup Continues to Grow

In an ever-growing effort to build grassroots support for and clean the basin's waterways, about 4,000 volunteers spent an April morning cleaning up nearly 400 miles of shoreline and land throughout the Potomac watershed.

The 14<sup>th</sup> annual event included a record 127 sites in each of the basin's jurisdictions, including 20 counties throughout Maryland, Pennsylvania, Virginia, West Virginia, and the District of Columbia. More than 122 tons of trash was removed.

The event, with the theme of "From Our Streets to Our River," is organized by the Alice Ferguson Foundation, which runs the

Hard Bargain Farm environmental education facility in Prince George's County, Md. The cleanup is a partnership of many organizations, including citizens groups, nonprofit organizations, the National Park Service, ICPRB, and state and local governments. The cleanup is partially funded by a grant from the Chesapeake Bay Trust.

As could be expected from such a large effort, many common and unusual items were recovered from river and stream banks. Cleanup coordinator Michelle Radez compiled a list that included 2,300 tires, three steel I-beams, the front end of a mobile home found at Mason Neck State Park in Virginia, five refrigerators, 13 mattresses, 19 bicycles, 45 shopping carts (a ubiquitous feature of many urban/suburban streams), 12 stoves, six lawn mowers (for aquatic grasses?) a bag of Barbie dolls, a handgun found at Roosevelt Island in the District, three wallets, 40 deer carcasses, a moped, and the usual large number of assorted balls.

In the past 14 years, cleanup volunteers have removed more than 720 tons of trash from the watershed. "This cleanup is truly a grassroots event that happens through the



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The "asphalt mountain" at the Greenbelt cleanup site served as a staging area for collected trash.

involvement of hundreds of volunteers through community and organizations,” said Tracy Bowen, executive director of the Alice Ferguson Foundation. “Together, we cooperate with a complex web of county, state, and national parks and government environmental agencies,” she said.

For many of the volunteers, it is a way to improve their local environment, meet their neighbors, and build a stronger coalition for a cleaner environment. Such was the case in Greenbelt, Md., where a site organized by the Citizens to Conserve and Restore Indian Creek (CCRIC) contained only a stormwater “pond.” The site, littered with bottles and other debris, accepts



## Watching the River Flow

The flow of the Potomac River measured near Washington, D.C., remained at extremely low levels, according to the U.S. Geological Survey.

In February, the Potomac flowed at a rate of about 1.6 billion gallons per day (bgd), only 15 percent of the long-term average of 10.4 bgd. Daily extremes during the month ranged from a high of about 2.1 bgd on February 1, to a low of 1.2 bgd on February 28. Diversions for metropolitan-area drinking water averaged about 359 million gallons per day (mgd), about three percent less than February of last year. Fresh water inflow to the Chesapeake Bay averaged about 34.2 bgd during the month. The Potomac River contributed a meagre seven percent of the total.

During March, the daily flow averaged only 28 percent of the long-term average at 4.38 bgd, setting a new record low for the month. The previous record low was in March 1931, when flow averaged about 4.39 bgd. Daily extremes ranged from a high of 16.9 bgd on March 23, and a low of 1.25 bgd on March 1, a record single-day low for March. Diversions from the river averaged 361 mgd, about two percent less than March of last year. Chesapeake bay freshwater inflow averaged about 42.9 bgd during the month, with the Potomac contributing about 14 percent.

stormwater runoff from a shopping center and large apartment complex. Part of the site was recently purchased by the State of Maryland in connection with the development of land near the Greenbelt Metro Station. Well hidden from the street, the lowland forest site contains an “asphalt mountain” about 20 feet high and covering several acres. The tons of asphalt and concrete, piled up over many years, is slated for removal by Metro property developers. The man-made mountain is next to a recycling center and an old quarry operation, noted CCRIC Director Pat Blankenship.

“The site, if restored, can be valuable open space again,” said Blankenship, explaining the need to work on what many would see as a forsaken industrial site. “It is part of the Anacostia and part of the Indian Creek watersheds,” Blankenship noted. “It holds some of the last wetland remnants in the area. I grew up around here; I played on this site as a child, before there was a beltway,” she said. “People who haven’t lived here long don’t understand how much green space we are losing. We would like to see a nature center put on this site as part of the metro development. We’re here today to show we care about our green spaces—and I really hate garbage,” Blankenship said.

More than 40 local residents and students from the University of Maryland agreed enough to help clean the site, which is inhabited by many deer and other animals, including more than 48 species of birds, according to a survey of the site. The group removed about 2,500 pounds of trash.

## D.C. Mayor Inaugurates Rain Garden at Earth Day Celebration

The day began misty and overcast. Ninth grade students from Anacostia High School had been shoveling mulch and soil all morning readying the ground for planting. But by the time District of Columbia Mayor Anthony Williams arrived on the pier at the Air Pegasus Heliport on the banks of the Anacostia River to inaugurate the first of three rain gardens, the sun was shining brightly and a 32<sup>nd</sup> annual Earth Day celebration was underway.

“As we celebrate the 30<sup>th</sup> anniversary of the Clean Water Act and the 32<sup>nd</sup> annual Earth Day with the theme, ‘Everyday is Earth Day,’ we need to work on the



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Anacostia High School students and mentors prepare the rain garden for planting.

environment everyday with the cooperation of all. That is why partnerships make goals a reality,” said Joseph Hoffman, executive director of the Interstate Commission on the Potomac River Basin (ICPRB), who commenced the rain garden inauguration celebration.

Rain gardens are designed to capture and filter storm water before it is carried by storm sewer systems into rivers and streams. The objective of the Air Pegasus rain garden is to capture storm water from the nearby heliport complex.

The planting of the Air Pegasus rain garden is the result of a partnership between the Anacostia River Business Coalition (ARBC), ICPRB, and many other businesses and organizations. Funding was provided by the Chesapeake Bay Program and the D.C. Department of Health.

“Business partnerships are vitally important,” Mayor Williams told the group, “and what’s good for our city is good for our environment. It is important to remember conservation and preservation every day.” Mayor Williams, who has focused on improving the Anacostia, named several environmental projects that the city is undertaking. He made it clear that “the Anacostia is our biggest challenge.”

“A journey of a thousand miles is begun by that first step. We’ve taken that step in protecting the Anacostia by planting this rain garden. Partnerships are what we need to make this work,” said the mayor.

After his speech, Mayor Williams joined the Anacostia High School students in planting native plants in the rain garden, which was constructed at the top of an embankment above the Anacostia shore. The plants, peat moss, and soil will clean storm water naturally through a process called bioretention.

Rain gardens are created in low-lying areas, with specific layers of soil, sand, and organic mulch. These layers naturally filter rain as it runs into the rain garden. During the few days after a storm, the soil absorbs and stores the rainwater and nourishes the garden’s grasses, trees, and flowers.

The garden replaces a simple storm drain that carried storm water runoff directly to the Anacostia without any filtering process.

Asked about the experience of planting the rain garden, Anacostia High School student Dominique Hammonds said, “It’s fun. We’re working and having fun at the same time.” Damani Runner-Avery thought that planting a rain garden was a good idea. And Marie Britton also thought planting the garden was fun and said, “it’s also fun getting dirty.” The next rain garden is scheduled to be planted at the Minnesota Avenue metrorail station.

Mayor Williams ended the ceremony with this quote: “Whatever befalls the earth, befalls the sons of the earth.” He encouraged youth and citizens to participate in other Earth Day activities.

Other speakers for the day were Joan LaLacheur, president of the ARBC and Dr. Vincent Nathan, deputy director of the Environmental Health Administration, District of Columbia Department of Health.

The ARBC partners in this project were Air Pegasus, Inc., Anacostia High School, Cardinal Concrete, Inc., Chesapeake Bay Program, CTI/DC Inc., DC Rock, LLC, Earth Conservation Corps, Manhattan Construction, Maryland Rock/Florida Rock Industries, PEPCO, Senate Asphalt, Steuart Investment, Inc., Super Salvage, Inc., Superior Concrete, Inc., Washington Gas, and the Washington Metropolitan Transit Authority.

# Annual Potomac Swim Set for June 1

Join environmental groups for a picnic at Point Lookout State Park to cheer in more than 30 swimmers who will stroke their way more than 7.5 miles across the Potomac River to raise consciousness and money for river restoration projects. This year's swim has more than twice as many swimmers as last year, and is becoming a major distance swim event in the region.

Volunteers with touring kayaks are still needed to provide a boat that will paddle alongside each contestant as they swim across the river near its mouth. Swimmers and kayaks are ferried across the river early on Saturday morning, and will be cheered to shore by the crowd several hours later.

To volunteer or get more information on the swim, call swim organizer Cheryl Wagner at (202) 387-2361, or email to [cherylw@crosslink.net](mailto:cherylw@crosslink.net).

For a full calendar of events, visit our website at [www.potomacriver.org](http://www.potomacriver.org).



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A tired contestant hits shore at last year's swim.

## ICPRB Business Meeting June 11

ICPRB Commissioners will meet to discuss commission projects and other issues relevant to the Potomac River Basin. The meeting has been tentatively set for Westmoreland State Park on the Potomac in Virginia. The business portion of the meeting is open to the public. For more information, contact Bo Park at ICPRB at 301-984-1908 x100, or email [bpark@icprb.org](mailto:bpark@icprb.org).



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