

REPORTER



C. Dalpra

Looking down the tidal Anacostia to the Potomac in the background. The Anacostia is receiving much attention with regard to development and restoration.

ICPRB a Partner in Restoration Plans, Research, Outreach in 2006

As the states of the Potomac basin continue to update their assessments of overall stream health in their jurisdictions, the Interstate Commission on the Potomac River Basin is assisting with its growing expertise in restoration plans.

This year, the ICPRB member states and the District of Columbia are updating the federally mandated lists of waters in their jurisdictions—streams, rivers, and lakes—that are unable to meet their designated water quality standards. The lists of noncompliant streams will be ranked and used to create total maximum daily load plans (TMDLs). These plans assess the levels of a problem pollutant and its sources, and develop implementation concepts and programs to bring the water body back into acceptable levels of quality. The ICPRB is assisting with a number of these plans, some of which are interstate watersheds requiring

close cooperation between jurisdictions.

The human side of stream restoration also is being covered by the commission through outreach to schools and citizens groups. Commission staff are in increasingly important contact with many watershed groups and schools to educate and activate groups in the challenge of preserving the Potomac's many values. The commission supports many activities to foster public support, from organizing tree plantings and stream cleanups, starting and supporting citizen watershed groups, assisting with the acquisition of grant funds for those groups, supporting basin-wide initiatives to clean the river, and fostering connections between these groups throughout the basin states.

The ICPRB will pursue many other technical programs in 2006. In addition to its TMDL work, ICPRB is building understanding of the basin's groundwater resources, how they are being used currently and their viability in the future.

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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Groundwater is not only a critical source of water in many areas, but also influences the quality and flow rates of streams and rivers. During the recent wet years, ICPRB's technical projects with and for the Washington metropolitan area's water utilities goes on with little notice, which in some ways is a good thing. The ICPRB Section for Cooperative Water Supply Operations on the Potomac (CO-OP) coordinates Potomac withdrawals among the water suppliers to ensure adequate raw water supplies even during the worst of droughts. The CO-OP and water suppliers focus their drought operation experience in normal years with an annual week-long operations exercise with simulated river flows much lower than the drought of record. The exercise ensures that actual drought operations run smoothly. The CO-OP also explores the system's future needs and identifies alternate sources.

The watershed's living resources remain an important ICPRB focus, with project emphasis on species restoration, addressing invasive species threats, and creating ways to better use biological data for restoration efforts.

The commission is in the forefront of regional efforts to protect and preserve the Potomac's water and related resources, despite increasing federal and state budget austerity.

Water Quality Efforts Focus on Restoration Plans

The use of the science of TMDLs to create plans for restoring waterways evolves and matures each year. The ICPRB is supporting the growing number of the plans, particularly when the stream is shared by multiple states. The ICPRB provides technical expertise and support on many levels, including modeling, management of sampling efforts, data collection, and outreach and coordination of stakeholder groups.

Modeling is necessary to provide a mathematical representation of the stream and its watershed that can be used to assess the source(s) from which a pollutant originates, establishes targets for reduction of the sources, and defines how much a given action is likely to reduce the pollution. Collection and management of the data and sampling that goes into the model will help refine its accuracy, and provide a level of confidence as a model is used to test cleanup scenarios. State agencies and other stakeholders must be organized for the work to have the credibility needed to act on the plan.

In 2006, ICPRB will be working on a TMDL for the Potomac estuary involving Virginia, Maryland, and the District of Columbia to address polychlorinated biphenyls (PCBs), an industrial solvent and



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Contour farming in the Monocacy watershed. Best management practices reduce nutrient and pesticide pollution. Growth in the Monocacy watershed has increased the value of both surface and groundwater resources.

carcinogen.

In the Anacostia watershed in Maryland and the District, several TMDLs are being written to address nutrient, sediment, bacteria, and toxic pollution problems. The ICPRB is collecting historical data and running loading scenarios for a nutrient TMDL for the Monocacy River. Other commission TMDL work is focused on several Maryland water supply reservoirs. The ICPRB also is working to provide a generic sediment TMDL that could be used throughout the state.

Water Resources: Protecting and Preserving Availability and Quality

Historically, surface water issues have taken priority in protection and restoration. Surface waters after all, visibly carry pollutants from one place to another, and problems with pollution and available volume are apparent. The ICPRB is exploring an equally important but hidden part of the basin's resources—groundwater. As both surface and groundwater use increases with development, more focus is needed on the huge but finite groundwater resource. The strong connection between the state of our surface and groundwater—which supplies the “base flow” of all streams—becomes more apparent.

With the support of dwindling congressional funding (scheduled to end in June), ICPRB, its project partner, the U.S. Geological Survey, and other stakeholders are assessing the basin's groundwater resources. The collaborative effort includes three main components: real-time monitoring of groundwater levels, a basin-wide screening-level analysis, and focused study of targeted subwatersheds. Preliminary estimates of groundwater availability for gaged subwatersheds through the basin will be available this year, although using the work performed in gaged watersheds to make assessments for ungaged watersheds has been difficult

and will take more time to be useful. Work focused on the Monocacy watershed, identified as an area of particular concern, is ongoing. Project staff will be carrying the work to the coastal plain area of the basin this year, with stakeholders meetings being held in March.

In 2004 and 2005, ICPRB coordinated the creation of the Potomac River Drinking Water Source Protection Partnership (DWSP). The partnership is an outgrowth of federal regulations that require drinking water facilities to assess current and potential threats to the utilities' sources of water. The partnership has an expanding membership of water providers, state and federal agencies with water supply responsibilities, and other stakeholders and seeks to expand membership throughout the basin. The group is examining a number of issues, including pathogens found in intake water (e.g., giardia), pharmaceuticals, toxics, and other pollutants. Educating about and addressing these issues on a watershed level can save time and effort among the utilities, keeping drinking water and its sources cleaner for less cost. The growing group is seeking funding for further investigations and source analysis this year.

The ICPRB also is assisting efforts for comprehensive water resources planning in the Shenandoah watershed being led by a coalition of local governments, providing data and planning help. The commission also is assisting Pennsylvania in development of a statewide water plan that includes watershed-specific plans.

The ICPRB CO-OP will enhance its work with the metropolitan water suppliers this year. The CO-OP is constructing a watershed runoff model that can help to determine the impacts of land use change on the river's hydrology during low-flow periods. Changes in forest cover and development affect stormwater flows and infiltration back into the groundwater table. These changes can have a significant effect on flow levels, particularly when river levels are quite low and water demand high.

The CO-OP also is maintaining a set of river level monitors for low-flow water supply coordination studies examining both water

availability and ecological changes that may occur during droughts. The two projects complement CO-OP's ongoing efforts: coordination of Potomac water withdrawals and supplies stored in reservoirs during drought conditions, studies that assess new sources of water, and annual drought exercises that have brought the metropolitan area decades of dependable water supply.

Living Resources to Continue Fisheries Monitoring



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Students learn about river herring as eggs are collected on the Anacostia's Northwest Branch.

For the last ten years, ICPRB's Director of Living Resources, Jim Cummins, has been immersed in the recovery of American shad in the Potomac River. Restoration stocking efforts put more than 16-million shad fry in the river and involved thousands of school children. All figures point to a fishery well on its way to recovery. Cummins said, "Not only are we seeing more shad from the Potomac, but larger ones as well—a good sign for recreational fishermen." As has been done in recent years, ICPRB staff will assist the Virginia Department of Game and Inland Fisheries (VDGIF) to stock shad fingerlings in the Rappahannock River. The project will also include children raising fingerlings in Virginia's classrooms through the Living Classrooms Foundation as was done in the Potomac River restoration effort.

American shad were once so plentiful in the river that John Smith commented that the fish were "lying so thicke with their heads above water, as for want of nets we attempted to catch them with frying pans." They were once important as a food source and anglers have expressed interest in a recreational shad fishery. In 1980, the American shad numbers had dropped low enough for Maryland to close the fishery. The Potomac River Fisheries Commission followed suit in 1982 and Virginia closed the shad fishery in 1993. "We are down to only a percentage of historic abundance,

but we are greatly encouraged by the increasing numbers our monitoring efforts are indicating," said Cummins.

In previous years, ICPRB staff monitored river herring in the Anacostia and Potomac rivers, however, a lack of funding has halted those efforts. River herring, like shad, are important to the river ecosystem.

The ICPRB staff also serves on the Snakehead Control and Management Workgroup, a group including Maryland Department of Natural Resources, Washington, D.C. Department of Fisheries, U.S. Geological Survey, U.S. Fish and Wildlife Service, and VDGIF, that is working

to develop a national plan using the Potomac River as an example. The group is investigating the species, its effects on the river's ecosystem, and recommending solutions for the fish's control. "With the finding of hundreds of snakeheads in 2005, we are pretty certain that we are past any eradication plans. Though we are concerned about the fish, they are a game and food species in their native habitat. Given our history of regulating such species, they should be fairly easy to manage. Our biggest issue is preventing the spread of snakeheads to other river systems," said Cummins.

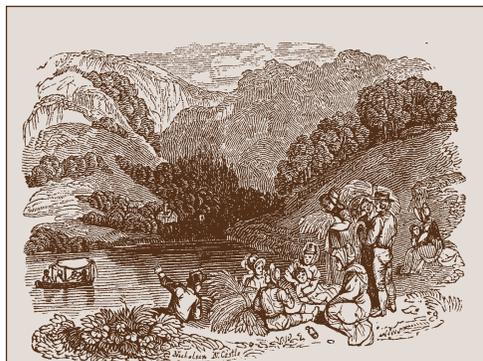
The snakehead was first found in the Potomac in May 2004, and has been caught sporadically throughout the river until last fall when hundreds were spotted in Dogue Creek.

Staff have also been involved in sturgeon restoration efforts in the Potomac and Chesapeake Bay, however, the project is suffering from budgetary constraints and has stalled. The two species that are native to the Potomac River are Atlantic and short-nosed sturgeon, which are found in other river systems along the east coast and even in the Potomac. However, Cummins noted that the sturgeon found in the Potomac are native to other river systems, including the Hudson and Delaware rivers. Sturgeon can reach lengths of 14 feet and weigh 800 pounds. The fish is important to the river's ecosystem because they feed on mussels, worms, and detritus, essentially cycling energy through the food chain.

In addition to fish restoration efforts, staff have also been involved in a flow-by study to help determine the minimum flow requirements for sustaining the river's ecosystem while also meeting the demand of water supply in the region. The project has been delayed because of funding issues and a lack of drought to study adequately. The two focus areas are the mainstem Potomac near Washington, D.C. and the Shenandoah. "About 400-million gallons of water are taken daily from the

Potomac for municipal use-enough to drink the river dry without proper management,” said Cummins. Typically the east coast is water rich and does not need to worry about water supply, but in drought years, significant demand can tax the river system.

With the changing fish populations and increased demand for water supply in the Potomac River, monitoring native and invasive fish species and flows is imperative to understanding the overall ecosystem and how it will change over time.



Watching the River Flow

Though December was cooler than normal and January was warmer than normal, precipitation in the watershed for each month was near normal at about three inches. River flows jumped higher than normal following November's low flows.

Provisional data collected near Washington, D.C., by the U.S. Geological Survey measured flows averaging 9 billion gallons per day (bgd), about 23 percent above the normal flows in December. Daily extremes ranged from 43 bgd on December 15, reflecting the inch of precipitation that had fallen, to 4 bgd on December 1. Water withdrawn for drinking use averaged about 361 million gallons per day (mgd), slightly lower than December 2004. Freshwater inflow to the Chesapeake Bay averaged about 70 bgd. The Potomac contributed about 17 percent of the total.

January flows averaged 13 bgd, about 43 percent above the normal flow of 9 bgd. Flows ranged from 22 bgd on January 5 to 8 bgd on January 13. Water withdrawn for drinking use averaged about 340 mgd, slightly lower than January 2005. Freshwater inflow to the Chesapeake Bay was about 100 bgd, about 70 percent above the historical average. The Potomac contributed 16 percent of the total.

Outreach and Communications Opportunities

Outreach and education projects help citizens, watershed groups, and others understand the Potomac River. Staff help organize watershed groups, organize funding and installation of rain barrels, rain gardens, and riparian buffers, participate in watershed-wide events, and reach citizens through online and printed media.

The latest challenge is to foster support for Hickey Run, one of the most polluted streams in the Anacostia subwatershed. The ICPRB will build on its past successes, such as developing the active Friends of Rock Creek's Environment (FORCE) watershed group, to help create an active watershed group for Hickey Run. The ICPRB is partnered with the Metropolitan Washington Council of Governments to help generate interest and develop the group. The project provides opportunities to partner with many organizations including the National Arboretum, Washington, D.C. Department of Health, the US Fish and Wildlife Service, citizens, and other stakeholder groups.

The ICPRB will provide several weekend paddling opportunities for citizens, watershed groups, and school groups during its new Potomac River Rambles. The trips will foster citizen stewards throughout the watershed by providing hands-on educational opportunities. Depending on location, the weekend trips may include clean-up sites, tree planting opportunities, trail-building, and other fun activities. Participants will camp along the river at night and paddle down river by day. Potential trips include the Paw Paw Bends, Zekiah Swamp, Mattawoman Creek, and the Anacostia River. For more information about the River Rambles, contact Steve Saari at (301) 984-1908 ext. 103.

With a solid year of events and capacity-building, FORCE is prepared to obtain grants to continue watershed work. In little more than a year, the organization has grown to over 200 members. They will host several cleanup sites as a part of the Alice Ferguson Foundation's Potomac Cleanup to encourage Rock Creek residents to learn ways to protect the watershed, and inform local citizens about issues in the watershed through their website, www.friendsofrockcreek.org.

With two successful riparian buffer projects completed in 2005, ICPRB is partnering with other groups to help reduce runoff into local waterways. The Maryland Department of Natural Resources Forest Service and the Town of Williamsport are working with ICPRB to develop a riparian buffer, rain garden, and wildflower garden

in Byron Memorial Park. Trees for the buffer and shrubs and flowers for the gardens will be planted on April 8. The public is welcome to join in the planting. Visit

www.potomacevents.org for more details.

The ICPRB also will support the efforts of the Potomac River Swim on June 3.

Swimmers from across the country gather at the mouth of the Potomac to make the 7.5-mile journey across the river. Each swimmer is accompanied by a support kayaker and several support boats surround the group for safety. Money raised by the swimmers goes to several organizations, including ICPRB, which will dedicate the funds toward outreach efforts. For more information about the swim, visit www.crosslink.net/~cherylw/pr2006i.htm.

For the last 15 years, ICPRB has stongly supported the annual Potomac River Cleanup, organized by the Alice Ferguson Foundation to be held on April 8. A record 218 tons of trash were removed from the 309 cleanup sites in the Potomac watershed last year. The yearly cleanup efforts spawned a Trash Treaty, signed in March 2005, to have a trash-free Potomac by 2013. Signed by officials throughout the watershed, the treaty is a testament to the desire for a clean and healthy river. The ICPRB is assisting the Alice Ferguson Foundation in cleanup efforts and maintaining momentum for the goal of trash-free in 2013.

The ICPRB will continue to keep the Potomac's citizens informed through its website at www.potomacriver.org. The website includes information about the Potomac River, its history, water quality issues, living resources, and water supply. In addition, ICPRB publications are available on site, including the *Potomac Basin Reporter*.

In partnership with the National Park Service, Friends of the Potomac, Potomac Conservancy, Potomac Watershed Partnership, and the C&O Canal Association, the ICPRB hosts a Potomac-wide events calendar at www.potomacevents.org. The calendar includes events in all the Potomac's jurisdictions and a form for adding a Potomac event to the calendar.

Following last year's "Human Influences on the Biology of the Potomac River" symposium, ICPRB will hold a symposium on the water quality of the Potomac watershed in 2006. Last year's symposium focused on several key areas such as



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The ICPRB will host Potomac River Rambles this year.

submerged aquatic vegetation, forest cover, fish health, and plankton and presenters each gave the Potomac a grade based on their expertise in the field. The ICPRB hopes to continue bringing experts together to focus on river issues and solutions.

The ICPRB will continue to reach out to local citizens through its website, the *Potomac Basin Reporter* and other publications, and at public events. For more information about the Commission, visit www.potomacriver.org or call (301) 984-1908.

Chairman's Report

**by Bill Brannon,
ICPRB West Virginia Cmmissioner
and 2005-2006 ICPRB Chairman**

After several flashes of brilliance that quickly fizzled, I gave up on trying to generate a profound thought for the Chair's Report and decided to simply relate my perspective on the Commission and my role on it. As a career civil servant with the West Virginia Department of Environmental Protection (DEP), I have represented my agency on the Commission since around 1995. During that time, my level of interest and concern for the Potomac River has increased exponentially from year to year. Admittedly, the driving influence of my increased level of interest has been West Virginia's participation in the Chesapeake Bay Water Quality Initiative. In both the Chesapeake Bay and Potomac River drainages, West Virginia is considered a headwater state and although our level of involvement in the Chesapeake Bay Program and the ICPRB may not match that of our watershed partners, our commitment to the partnerships established in both is just as strong.

I don't profess to have a passion for the



The ICPRB CO-OP staff continues to provide excellent service to the metropolitan area water utilities to ensure that minimum environmental flow requirements and water supply withdrawals can be met. Another successful drought preparedness exercise was held last fall. Unfortunately, federal funding for the basinwide groundwater assessment to evaluate the availability of groundwater resources in the Potomac River basin is running out. This important project is being carried out in close cooperation with the USGS and includes the installation of real-time monitoring equipment at groundwater wells throughout the basin as well as database development and data analysis work. Thanks go out to Virginia, Maryland, and Pennsylvania, who have recently committed funds to continue operations in their jurisdictions.

Funding for the Commission programs has been a constant struggle, at least since my involvement began in 1995. At about that time, the federal appropriation for the Commission was eliminated from the federal budget. Subsequently, the Commission has had to supplement its funding through obligating the services of its professional staff to member jurisdictions in need of technical and scientific assistance. Federal grant support for the Commission's activities has generally remained static, which translates over time to fewer dollars. As a representative of a member jurisdiction with intimate involvement in the operational budget of the state environmental agency, I "feel the pain" of continuing budget reductions confronting the Commission. Most of the state jurisdictions supporting the Commission through annual dues have "tightened our belts" well beyond the last notch. Discussions related to increasing those annual obligations have met resistance not from a lack of commitment to the cause but, at least in my case, the reality that state funds are just not available.

Is there a solution? A silver bullet? Probably not. National and global pressures on the federal budget affect all our resources and show little sign of abating. Leadership in water quality and quantity issues in the Potomac River drainage is the mission of ICPRB. Enhancing the visibility of the Commission's successes, already initiated via the symposia series, should result in access to resource opportunities beyond those already explored. After 65 successful years, the Commission's next 65 can be just as productive. It will take innovative thinking, strong leadership, and continued commitment to a shared vision and the value the jurisdictions place on the forum the Commission provides for cooperatively achieving that vision.

Potomac; I don't live along its banks; and I don't even recreate in or around it. But I do respect and appreciate those who do and have spent their lives trying to protect and promote it. The Commission is filled with state representatives and staff that do have that passion. My interest is based on my responsibilities as a water quality regulator for the state. In my 29 years with the DEP, I have been a witness to and participant in working to improve the quality of our state's waters, not the least of which is the Potomac.

Three years ago, the nation celebrated the 30th anniversary of the federal Clean Water Act, the most ambitious demonstration of a national commitment to improving the quality of the nation's waters up to that date. This milestone garnered a lot of national attention, spawned an annual World Monitoring Day event (which this year WVDEP celebrated on Rocky Marsh Run, a Potomac tributary) and generally acknowledged the water quality improvements the Act stimulated. Those of us in the "business" of water quality protection appreciated the national recognition. It seems that nowadays the public has come to expect, and even take for granted, clean water, and only take note when a threat to that quality occurs. Which is as it should be in a society which values clean water as integral to its quality of life.

This year makes the Commission's 65th year of commitment to and celebration of the Potomac River. The *Potomac Basin Reporter* is but one example of the opportunities the Commission uses to communicate news to the citizens of the watershed of its activities and involvement in Potomac River water quality and quantity issues. In October, ICPRB sponsored the first in a series of symposia entitled "Human Influences on the Biology of the Potomac River" to assess the effectiveness of past and current efforts, use that knowledge to evaluate potential future actions, and set new goals for protection of the Potomac for future generations. Other planned symposia include water quality, water quantity, and issues related to each.

Join the Potomac Watershed Cleanup...

We need your help to help the Potomac River basin. Join your neighbors on **Saturday, April 8 from 9 a.m. until noon** to give your local waterway a dose of spring cleaning at the **18th Annual Potomac River Watershed Cleanup**.

More than 300 sites around the watershed have been targeted for the annual cleanup, organized by the Alice Ferguson Foundation. This year, the cleanup's theme, "Take Pride in Our Potomac," takes on new meaning as the foundation organizes watershed governments and organizations to create a trash-free Potomac by 2013.

Last year, the cleanup broke several previous records when more than 6,000 volunteers removed nearly 218 tons of trash from rivers, streams, and shorelines. The ICPRB has been a partner in the effort for 14 years.

You can make a difference by helping at one of the sites. For more information, call (301) 292-5665, or visit www.PotomacCleanup.org.

...Watch a Swim...

The **13th Annual Potomac River Swim for the Environment** welcomes spectators with a picnic lunch at Maryland's Point Lookout State Park on **Saturday, June 3**. Dozens of distance swimmers will stroke their way from the Potomac's Virginia shore,

more than 7.5 miles to the finish at the park. Swimmers collected pledges that benefit ICPRB and other environmental organizations. Swimmers are assisted by a large contingent of volunteer kayakers, power boaters, rescue squads, and law enforcement. Environmental groups are on hand to discuss Potomac issues, and cheer in the swimmers. For more information, contact Cheryl Wagner at (202) 387-2361, or email to cherylw@crosslink.net. Volunteers are needed!

...And Check the Water Clarity

Join members of the Maryland Lower Potomac Tributary Team for their annual **Potomac Wade-In Saturday, June 10** at the Mirant Power Plant in Morgantown, Md. The event begins mid-morning, and features a picnic lunch hosted by Mirant, environmental and wildlife exhibits, and the annual group wade-in, a measure of the water depth based on how deep one can wade into the river while still seeing one's sneakers. For more information, contact Mike Bilek at (410) 260-8988 or email to mbilek@dnr.state.md.us.



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