

REPORTER

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Interstate Commission on the Potomac River Basin

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K.J. Holmes

The region experienced the Big Chill this winter, with record snowfall in some areas. The quickly blackened snow highlights the amount of filth that enters streams from the streets year-round. Road salt also causes problems, particularly for small streams.

2010 ICPRB Projects

Economic, Environmental Realities Require Partnerships, Cooperation

Although the economic “worst” may be past, the poor economy continues to prompt large budget cuts at all levels of government. At the same time, the region is wrestling with producing a plan to clean up the Chesapeake Bay and its major tributaries that will in some way be enforced by law and could lead to court-imposed requirements to spend money on restoration.

For these reasons, it will be important that restoration efforts be as economical as possible through forming partnerships and avoiding duplication of efforts. These principles have been and will remain hallmarks in the Interstate Commission

on the Potomac River Basin’s (ICPRB) efforts to cooperatively protect and preserve the water resources of the Potomac basin.

The ICPRB’s many projects interlock and overlap in ways that are managed and addressed comprehensively by appropriate measures. For example, many of the commission’s technical projects include strong public outreach and involvement to strengthen them and build support for these restoration activities through an engaged and informed public.

Keeping in mind the overlap among projects, ICPRB’s work falls under four general categories: addressing pollution in the watershed; restoring and promoting

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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Commissioners and their alternates are appointed by the state's governors, the mayor of the District of Columbia, and the President of the United States.

healthy ecosystems; protecting the quality of drinking water sources and ensuring adequate drinking water supply; and engaging and enlisting the public as stewards of the basin's water resources. As a non-regulatory water resources agency of the basin jurisdictions, ICPRB moves these goals forward through partnerships and cooperative programs.

Addressing Watershed Pollution

Over several years, ICPRB has worked with the Potomac jurisdictions on the development of a number of **total maximum daily load plans** (TMDLs). A TMDL is a plan to restore a waterway so that it will meet water quality standards. A plan includes an assessment of the concentrations and sources of a pollutant and an implementation strategy for reducing pollutant loads from the various sources to restore the water body to its intended water quality standards.

This year, ICPRB will complete work on a number of TMDLs in support of the jurisdictions. Nutrient TMDLs are being developed for several Maryland watersheds, including Rock and Antietam creeks, and the upper and lower sections of the Monocacy River. The nutrient loads will be based on results from the latest version of the Chesapeake Bay Program's watershed model. The ICPRB also is assisting Maryland with a nutrient TMDL for Deep Creek Lake and Liberty reservoirs, using methodology previously developed by ICPRB for other TMDLs. Although outside the Potomac basin, the Maryland Department of the Environment (MDE) requested the help of ICPRB on these lake plans because of ICPRB's expertise. Additionally, ICPRB is working with MDE to develop nutrient criteria for free-flowing streams. The criteria can be used for free-flowing streams throughout the state, including the nontidal portion of the Potomac River and Rock Creek. A TMDL addressing PCBs, a toxin contaminating fish in the metropolitan Potomac River, is being written for the Maryland portion of the Anacostia River. The ICPRB staff also will address nutrient and sediment impairment on the Potomac's North Branch and mainstem in Washington and Montgomery counties.

In Virginia, ICPRB is helping to develop **bacteria TMDLs** for two Northern Virginia tidal embayments to the Potomac, Four Mile Run and Hunting Creek/Cameron Run, and ICPRB will help the Virginia Department of Environmental Quality prepare for technical advisory committee meetings and public meetings. The ICPRB also will assist in writing a nutrient TMDL for Catoctin Creek in Loudoun County.

In Pennsylvania, ICPRB staff are conducting **stream assessments** to assist the state's Department of Environmental



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Nutrient and sediment TMDLs will address nonpoint source pollution, such as stormwater.

Ensuring Adequate Drinking Water and Protecting its Sources

Approximately 4.3-million people living in the Washington metropolitan area depend largely on the Potomac River as their source of drinking water. The **ICPRB Section for Cooperative Water Supply Operations on the Potomac (CO-OP)** has worked for decades with the metropolitan area water suppliers to ensure that the region has **adequate water supplies** even during extreme droughts. Currently, the summertime demand for water (which includes water for lawn watering and other activities) can easily exceed the historical low flow of the river. Careful long-range planning, including the construction of several reservoirs has generally kept the region free from restrictions on water use.

During droughts, CO-OP staff work closely with the metropolitan water providers (Fairfax Water in Virginia, the Washington Suburban Sanitary Commission (WSSC) in Maryland, and the U.S. Army Corps of Engineers Washington Aqueduct Division, which wholesales water to the District of Columbia and parts of Virginia) to coordinate their water withdrawals, and recommends reservoir releases to bolster the flow of the Potomac when necessary. The main source of additional water is the Jennings Randolph Reservoir on the Potomac's North Branch, along with several smaller off-river reservoirs. Releases for water supply occurred in 1999 and 2002. During droughts, water released from reservoirs also benefits the river's ecological resources, and recreational and other users. In years where actual releases are not required, CO-OP and the water suppliers hold annual simulated drought exercises that keep all the parties familiar with drought operations and reveals new ways to make the system more efficient. The CO-OP staff also operates a **spill model** that can help track sewage or chemical spills that could threaten drinking water intakes.

This year, CO-OP will complete a **Water Resources Demand Study** for the metropolitan area water suppliers, which is performed every five years. The study assesses the adequacy of the region's current water supply, and using population projections, predicts demands 20 years into the future. Possible new sources that could meet future demands will be identified. The study, to be released this year, also will consider the possible impacts of climate change on the region's water resources.

The modeling expertise the ICPRB staff has used to help ensure a reliable water supply is assisting with other efforts as well. The section has worked with the Chesapeake Bay Program to **hone models used to assess bay restoration efforts**. The CO-OP staff was able to refine a part of

Protection in meeting federal requirements to regularly assess its waterways for impairments. Impaired streams will be further assessed for development of TMDLs or other actions that will bring the stream back into compliance with its water quality standards.

The ICPRB's expertise in TMDL preparation can serve as a valuable resource to the Potomac jurisdictions as the mandated Chesapeake Bay TMDL (actually a combined series of TMDLs) for nutrients is produced.

As the economy has tightened, jurisdictions are looking for more-efficient ways of reducing documented pollution loads. The ICPRB will continue to facilitate an exploration of the use of **market-based water quality improvement tools**, such as trading and offsets, that could trigger more restoration activity. Creating markets for nutrients, carbon, sediment and other pollutants may afford ways to more economically address pollution problems in the Potomac watershed. A meeting of stakeholders (state, local, and federal government representatives, and other interests) focused on carbon was held early in February that allowed a general discussion of interests and the challenges to using market-based approaches. The group will continue to meet and discuss a range of possible efforts.

A pilot program assessing the use of agricultural best management practices to decrease suspended solids and other potential contaminants at downstream drinking water intakes that would allow trading has slowed for the year due to funding and other constraints. The project explores the value of these practices to drinking water authorities, which could purchase agricultural credits and benefit from cleaner water and reduced treatment costs.

Commission staff actively participate in aspects of the **Chesapeake Bay Program**. Staff members contribute to the computer models that are key in the restoration effort, and check data that feeds the model for accuracy.

the model that predicts groundwater discharge. Another effort concerns **modeling stormwater runoff**, and an interim surface runoff model for the Shenandoah watershed is in development.

The ICPRB will continue to facilitate the activities of the **Potomac River Basin Drinking Water Source Protection Partnership**, a group of some 20 community water system and government agency representatives with a role in managing or protecting public water supplies. The group seeks ways to promote safe drinking water supplies by protecting the sources of those waters. The partnership is focused on a wide range of potential threats to source water health, including agricultural impacts, urban issues, by-products of the treatment process, and emerging contaminants. The group also is working on protecting supplies from spills and other accidents. The partnership helps members share information on these topics, and devises ways that the suppliers and managers can get more involved in watershed protection issues. This year the group will continue to promote research on emerging contaminants, agricultural issues, and disinfection byproducts, involve a greater number of water agencies, and enhance cooperative approaches to protection through a continuing series of workshops and outreach.

The ICPRB in 2010 will continue to assist Pennsylvania with its **critical water resources planning** efforts. ICPRB has participated in the development of the plan from its inception several years ago. Currently, the plan is focusing on identifying growing areas where water demand may not be sustainable. Adams County, Pa., in the northern reaches of the Potomac watershed is a special focus, and ICPRB staff will be working with county and government agencies to hone a water resources plan and develop a monitoring network of ground water observation wells, stream gages, and precipitation data.

West Virginia is working toward a statewide water resources plan to protect and preserve those resources in the future. This year, ICPRB staff will hold four workshops in the state assist that effort. County and regional planning personnel will attend the workshops to benefit from ICPRB water planning expertise to help them and the West Virginia Department of Environmental Protection assess current water uses and provide the methodology for producing comprehensive water resources plans.



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Schools in Schools students release shad fry to the Potomac as part of the shad restoration program.

On a smaller scale, ICPRB is assisting the U.S. Environmental Protection Agency (EPA) to develop a **watershed resource registry** for the Mattawoman Creek watershed in Charles County, Md. The registry will map sensitive areas, such as wetlands, and other areas in the watershed to create a basis for comprehensive scenario planning. Providing a tool that allows planners to better assess the long-term results of land use decisions can result in a healthier environment. This pilot project may be used nationally in the future.

Restoring and Promoting Healthy Ecosystems

As a partner with the U.S. Army Corps of Engineers Baltimore District and The Nature Conservancy, ICPRB is conducting an assessment of the **human and environmental uses of stream flow in the Middle Potomac Basin**. The Potomac's natural flow regime is in some areas at risk from increasing population accompanied by increased demand for surface- and groundwater. The assessment focuses on the middle watershed—175 river miles and home to approximately 75 percent of the Potomac basin's residents—but will include hydrologic and ecological considerations extending upstream to the Potomac's North Branch and downstream to the estuarine Potomac.

The project will support regional planning for the sustainable use of the available water for its many human uses (drinking water supply, commercial/ industrial, recreation, and other uses) while maintaining the river's ecological integrity. The ICPRB staff are involved in compiling water quality and biological databases for the assessments, as well as developing hydrologic models and databases. The risk levels for a number of factors in each watershed will be assessed. Along with a projection of future water use, these activities will help to define the status of various types of subwatersheds and how water use is affecting them now and how it

might in the future. This information can be used for sustainable water resources planning. Additionally, the biological and hydrological research can be used in other projects, such as the Chesapeake Bay Program. Completion of this multi-year project will depend on future federal appropriations.

The ICPRB's cooperative **American Shad Restoration Project**, which began in 1995, will continue this year. The Potomac's shad population has rebounded since the project began, and stocks are much higher than they have been since record-keeping began in the 1950s. The Potomac population represents the only steadily improving stock in the Chesapeake Bay. While active stocking of the Potomac with shad fry



Watching the River Flow

Frequent precipitation boosted the flow of the Potomac River to about twice the normal levels in December 2009 and January 2010, according to provisional data from the U.S. Geological Survey. Provisional data has not been reviewed for accuracy.

Measured near Washington, D.C., the December average flow of the Potomac was about 15.8 billion gallons per day (bgd), or about 112.2 percent more than the long-term average of 7.4 bgd. Daily extremes during the month ranged from a low of about 4.4 bgd on December 2, rising to a high of about 43.8 bgd on December 28. Water taken from the river for metropolitan water supply averaged about 200 million gallons per day (mgd).

For the first month of the new year, flows averaged about 17.8 bgd, or about 92.3 percent more than the long-term average of about 9.2 bgd. The river's flow ranged from a low of about 4.7 bgd on January 16, and reaching its high of about 95.7 bgd on January 27. Water taken for municipal supply averaged about 200 mgd.

ended in 2002, the public education and monitoring efforts continue. The Living Classrooms of the National Capital Region organizes the Schools in Schools part of the project, where students hatch shad eggs in the classroom, and later release the fry into the Potomac. The activity is integrated into many parts of the students' curricula, and provides a sound foundation for realizing the importance of the river in the region's quality of life. In 2009, approximately 3,000 students from 52 area schools participated, with similar effort expected for 2010. As one teacher in the program explained, "The shad experience has not only motivated these children to explore science in the world around them, but has resulted in an inspirational commitment to our environment." The project is supported by the Virginia Department of Game and Inland Fisheries and the Mirant Power Company.

Promoting Public Stewardship

An involved and engaged public, acting as stewards of the river, are essential in generating the public, government, and private support needed to preserve an essential resource for future generations.

The ICPRB's efforts to protect and preserve the water quality and resources of the Potomac through its projects and partnerships are magnified by strong public support for the river.

The ICPRB communications team educates and involves citizens, watershed groups, and other stakeholders about Potomac basin issues and the range of ICPRB technical projects, including biological stream monitoring, TMDLs, modeling efforts, and fish and habitat restoration. Getting the word out on these projects helps to build the partnerships that support these actions.

In addition, ICPRB conducts a number of projects aimed directly at building public knowledge and support for the river. The annual **Potomac River Ramble** canoe trip is tentatively scheduled for July 8-11 this year, and will traverse the scenic Paw Paw Bends area of the Potomac. The Ramble takes a group of voyagers on a multi-day canoe/kayak trip on the river, directly exposing them to a wealth of river issues. The Ramble provides a unique experience that strengthens public awareness, understanding, and appreciation of the river as an essential element in the quality of life in the region. The Ramblers receive riverside briefings from biologists, planners, government officials and others that open the eyes of people to the need for their strong involvement in river issues. More information is available at the ICPRB website, www.potomacriver.org.

The ICPRB **Rain Barrel Project** connects citizens directly to water conservation and pollution reduction

issues on the household level, and addresses how changes in homeowner behavior can improve water quality. This ongoing program continues to grow and spread the word about how homeowners can use rain barrels and green landscaping principles such as rain gardens to conserve drinking water and reduce stormwater runoff from their properties. This year, ICPRB and its partners, the Accokeek Foundation, Clarke County, Va., and Stadler Nurseries in Frederick, Md., expect to sell about 800 rain barrels, along with holding workshops that teach watershed-wise gardening, turf reduction, and methods to retain stormwater to be absorbed on site rather than reaching a storm sewer and nearby creek.

Direct support for the basin's **citizen watershed groups** will continue in 2010. The commission provides support for formation of watershed groups, organizational help, data acquisition, and assistance with grant applications. The effort promotes citizen stewardship of local streams, creating new constituencies that support environmental awareness and restoration.

Many of these groups participate in the annual **Potomac Watershed Cleanup**, scheduled for April 10. The ICPRB has worked with the Alice Ferguson Foundation for more than 20 years to reduce pollution in and along the waterway. During that time, the watershed-wide cleanup has grown from a single site at the foundation's Hard Bargain Farm to more than 200 sites cleaned by thousands of volunteers. The ICPRB also is working with the foundation on its **Trash-Free Potomac Initiative**, which seeks an end to river trash by 2013 through a mix of new regulations, public education, and increased stewardship. Like the rain barrel project, reducing trash in the river will largely involve changing the behavior of residents toward river and streams in their neighborhoods.

The ICPRB keeps the public informed about its many projects through the **Potomac Basin Reporter** newsletter, a bimonthly publication that reaches about 15,000 readers. The commission's website, found at www.potomacriver.org, is another important resource, which is visited upward of 20,000 times each month during the summer.

These efforts represent ICPRB's focus on a broad range of projects designed to address many aspects of the restoration and protection that the watershed needs to protect and preserve resources essential to the region. To carry out these and other initiatives, ICPRB must work closely with its many partners to stretch the resources available. The ICPRB will continue to build support for restoration initiatives among its partners, including working to increase the



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ICPRB Senior Communications Specialist Jennifer Willoughby conducts a workshop on rain barrels and green landscapes.

federal contribution for restoration.

"Undertaking the challenging projects and activities in the Potomac basin requires a very dedicated staff of professionals individually and collectively committed to seeing the work brought to fruition," said ICPRB Executive Director Joseph Hoffman. "Additionally, we must have funding that allows the work to continue. Funding sources are tight at this time, but our members see us as staff multipliers--able to assist them in completing priority work even though the jurisdiction personnel and funding are being reduced during these economic conditions. We are still seeking to restore the federal funding for our operational budget that was lost many years ago. 'Our Nation's River' deserves to have support and participation from all appropriate levels of government to commit to the needs of this great resource," Hoffman said.

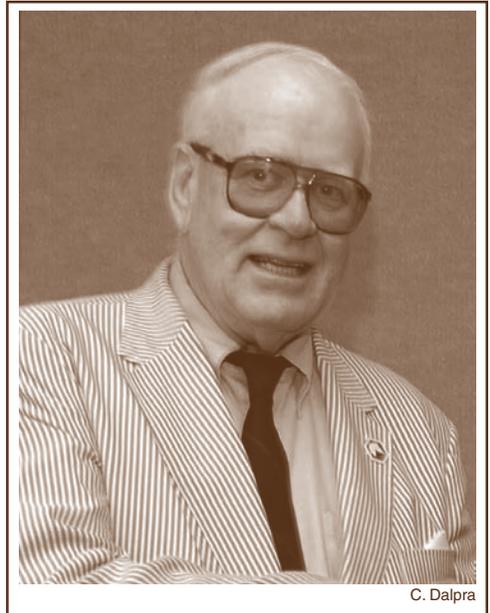
Chairman's Report

**by George Reiger,
United States Commissioner
and ICPRB Chairman,
2009-2010**

As the ICPRB enters, or ends, its seventh decade, depending on whether you count zeros as numbers — the Romans used them as punctuation marks and still managed to build roads, bridges, aqueducts, and a civilization that lasted a thousand years — the media paint a sorry picture of the Potomac watershed. Local TV stations feature film-bites of flooded streets, algae blooms, and fish kills. They report discoveries of ever-increasing numbers of hermaphrodite-fishes, which

raise concerns about impacts to human health from the bewildering brew of contaminants in the Potomac and its tributaries. Between ads for pills that allegedly fix everything from headaches to erectile dysfunction, TV news-presenters giggle over names of the latest invasive species in the region: spiny water flea, furry mitten crab, rapa whelk, dead man's fingers, and provide worrying updates on the ever-expanding range of the northern snakehead. The only "upbeat news" includes the on-going development of rural areas where ecologically compatible farms and forests continue to give way to incompatible suburbs and roads. (By contrast, Roman roads were so crowded and uncomfortable, businessmen preferred to work out of their homes or "commute" by water.) And just when you think the environmental horizon couldn't get any bleaker, you learn the anti-pollution goals set for 2010 in the Chesapeake Bay have been rolled back to 2025.

Most media coverage of the environment is so superficial (quickie sound- and film-bites), it feeds the average person's feelings of helplessness. That's why it's so important that the ICPRB has reached beyond its founding function of moderator/mediator for agencies with a vested interest in the Potomac River to give regional residents hope they can make a difference. In the coming year, the ICPRB will expand the Rain Barrel Program into new areas of the watershed, continue participation and support for the Potomac Basin Trash Summit and Annual Cleanup, extend the Drinking Water Source Protection Partnership, conduct another mind- and body-stretching Potomac River Ramble, improve the ICPRB website, and publish six issues of an always informative and often insightful Potomac Basin Reporter. The commission will also pursue development of a trading program for nutrients, sediment and carbon in the



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basin as well as support for new techniques of evaluation. Also ongoing is the American shad restoration program, the jewel in the crown of our educational efforts. Since spring runs of shad in the Potomac are now self-sustaining, staff will continue working with teachers in helping school kids raise shad fry so runs of this important "indicator species" may be restored to other rivers in the region. Success of the shad program lends credibility to plans for restoring herring runs to the Anacostia and Potomac and, perhaps, one day even bringing the Atlantic sturgeon back from the brink of extinction. Yet each one of these programs costs money which the cash-strapped states and District of Columbia are hard-pressed to supply. While the Romans may not have needed zeros, the ICPRB does, bunches of them modified by real numbers. That's why the ICPRB's most important challenge this year will be to get its federal funding restored under the Water Resources Development Act of 2007.

ICPRB Milestones

During the course of 2009, several ICPRB Commissioners stepped down, and new faces were appointed. Three ICPRB Commissioners, and their alternates are appointed by the jurisdictions: the District of Columbia (mayor's office); Maryland, Pennsylvania, Virginia, and West Virginia (governor's office); and the United States (President). Commissioners serve according to the rules of their jurisdiction.

In Virginia, Dann M. Sklarew was appointed an alternate to Virginia Commissioner Walter Alcorn. Sklarew is an associate professor at George Mason University and is the associate director of the university's Potomac Environmental

Research and Education Center. He has worked on Potomac issues for many years.

Virginia Del. Jackson H. Miller was appointed as an alternate commissioner to Del. Joe T. May. Miller represents the 50th District, which includes Prince William County and the town of Manassas.

In West Virginia, long-serving Alternate Commissioner William Brannon retired from his post at the states Department of Environmental Protection (DEP). He is replaced by Michael Stratton, DEP's Water Use Program manager.

The ICPRB welcomes these new members, and looks forward to their contributions.

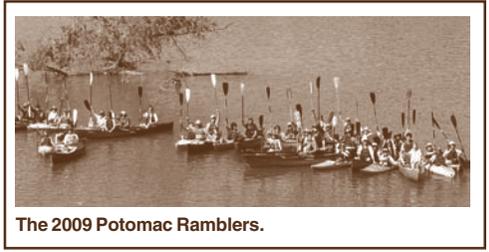
Winter Will End!

Once the weather breaks, here are a few activities that you shouldn't miss.

The 22nd Annual Potomac River Watershed Cleanup takes place on Saturday April 10, 2010, from 9a.m.-12p.m. Since 1989, more than 50,000 volunteers have teamed with 375 partner organizations to tug over 3 million tons of trash from the watershed's streams, rivers and bays. Last year's haul was more than 290 tons, and took place at over 500 sites throughout the watershed. The Annual Potomac River Watershed Cleanup, organized by the Alice Ferguson Foundation, is encouraging all residents to become involved. For more information, visit www.potomaccleanup.org, or call 301-292-5665.

On June 5, **The Potomac River Swim for the Environment** will be held at Point Lookout State Park at the river's mouth in Maryland. About 30 swimmers cross the Potomac from Virginia to Maryland, and raise funds for several conservation organizations, including ICPRB. The

organizations hold a picnic to welcome the swimmers in. Volunteer paddlers to accompany the swimmers are needed. For more information, visit www.potomacriver swim.com.



The 2009 Potomac Ramblers.

Paddle the upper Potomac River with ICPRB on its **Potomac River Ramble** through the Paw Paw Bends. Tentatively set for July 8-11, the trip features camping along the river, and presentations on the ecology and conservation of the river at every stop. Information will be posted soon on the ICPRB website, www.potomacriver.org. We hope to see you on the river!

Celebrating 70 Years of Leadership and Service



Potomac Basin

REPORTER

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