

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

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ANNUAL REPORT 2005

ICPRB: Building Partnerships to Restore the Basin

The ICPRB and the Potomac Basin

A non-regulatory agency of the basin states (Maryland, Pennsylvania, Virginia, and West Virginia), Washington, D.C., and the federal government, ICPRB promotes watershed-wide solutions to the water quality and water resources challenges facing the basin and its more than 5.3-million residents. The ICPRB commissioners, appointed by their respective jurisdictions, provide policy guidance and oversight for a skilled staff of scientists and communicators.

The ICPRB's water quality, water resources, aquatic ecology, fisheries restoration, and public education and outreach programs collectively focus on comprehensive solutions to the watershed's challenges. Regional efforts rely on collaboration, and ICPRB partners with many federal, state, and local agencies and organizations across the basin and beyond. These partnerships build strong coalitions and leverage resources and skills to protect and conserve the basin's resources.

In a complex, rapidly growing watershed regulated by many jurisdictions, ICPRB's unique, basin-wide perspective, technical skills, and partnership building are essential to the future health of the basin and its residents.

The ICPRB Adds Value to Jurisdictional Efforts

We live in a shrinking world, where only our challenges seem to get bigger. As more people call the Potomac watershed home, the basin feels smaller. More cars, roads,



and rooftops and shrinking amounts of open space along the river bring increased nonpoint source pollution, further reducing the amount of prime habitat available to the river's residents.

For agencies like ICPRB, resources to improve water quality are shrinking as well. At all levels of government, the amount of money available seems to get smaller every year. The direct

congressional appropriation for ICPRB was eliminated in 1996. Since that time, the state partners that make up ICPRB have generally held fast in their contributions, although those appropriations—important to ICPRB because they provide general funds for the agency—continue to shrink as a percentage of ICPRB's overall budget. About 85 percent of the commission's budget comes from focused grants that require funds to be spent on particular efforts. Those grants also require matching funds, usually from the state contributions.

Our member states are in a similar, unenviable position. Budgets for jurisdictions' environmental programs are stretched to the bone. Jurisdiction resource managers, like ICPRB, are being asked to constantly do more with less.

In this kind of economic environment, agencies such as ICPRB that promote watershed management concepts to the jurisdictions are ever more valuable. Most of ICPRB's projects provide value for several, if not all, of the jurisdictions. Projects that are more-focused in one area of the basin are performed in a way that maximizes the reproducibility and value for use in other areas.

The ICPRB's many projects protect and restore the basin's water quality, living resources, surface- and groundwater drinking supplies, while the commission's outreach and education efforts bring stakeholders a real sense of the importance of and need for a healthier Potomac.

At the same time, ICPRB stands as a platform for collaboration and cooperation among

the many jurisdictions, agencies, and public and private organizations working to protect and conserve Potomac resources. The commission seeks to increase its role in fostering innovation and collaboration among the jurisdictions of the watershed. The ICPRB itself was created by the collective realization that no one political entity could solve the regional problems of the Potomac on its own.

The commission has moved many important programs forward during the past year, and logged numerous successes. Key to these projects is their value to the watershed as a whole, and the effort made to involve the public and stakeholders in creating lasting partnerships that outlive specific projects.

Projects to Benefit a Renewed Potomac Basin

WATER QUALITY

***TMDLs: Plans for Restoration**

The Potomac basin jurisdictions, under the Clean Water Act, are continually assessing their waters, and are

required to devise restoration plans for waters that do not meet water quality standards. The plans, known as Total Maximum Daily Loads (TMDLs), assess the levels and sources of pollution, and devise a strategy to bring the waterway back into compliance with standards. The ICPRB has become increasingly involved in helping the Potomac jurisdictions with these plans, particularly when the waterway is shared by two or more jurisdictions.



The ICPRB is assisting with the restoration of the Anacostia River (above) and the Potomac through TMDLs, fisheries restoration, and public outreach.

Potomac Estuary Polychlorinated Biphenyls (PCB) TMDL. The ICPRB role in this regional TMDL (with Maryland, the District of Columbia, and Virginia) is coordinating a regional implementation plan to reduce PCB contamination to meet water quality standards. A class of widely used industrial chemicals before they were banned, PCBs are a toxic substance that has been found in fish in the Potomac River. The ICPRB has helped the partners in regional cooperation, modeling, and public outreach, which are being shared

among the partners, while reducing costs to the jurisdictions through the elimination of study duplication. The ICPRB is organizing data that will be used in model runs, and is organizing public outreach and stakeholder input. The value of the collaborative process was recognized by Monir Chowdhury, a D.C. Department of Environment representative on the TMDL steering committee, who noted that the regional nature of the process has been a success that will encourage the District to revisit some earlier TMDLs, based on what has been learned in this process. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

Anacostia TMDLs. The ICPRB is assisting the Maryland Department of the Environment (MDE) in constructing sediment and nutrient TMDLs for its portion of the Anacostia River. The new solids load allocations established will be protective of both Maryland and downstream District of Columbia standards. The ICPRB is constructing a two-dimensional model addressing nutrient, dissolved oxygen, and algae issues in the tidal river. The interstate model is being funded by Maryland, Washington, D.C., and ICPRB. *The project is funded by two Maryland Department of the Environment (MDE) grants and ICPRB general funds (signatory dues), leveraged revenue, and other funding for this effort.*

Monocacy River TMDLs. The ICPRB is developing the information necessary for the Maryland Department of the Environment to write nutrient TMDLs for the mainstem Monocacy River. Staff are analyzing historical data, developing methodology for relating nutrient loads to in-stream water quality, and generating alternative loading scenarios. For Pennsylvania, the TMDL will help improve the entire Monocacy watershed, and provide information and guidance that can be used throughout the watershed to reduce nutrient loadings by allocating loads and developing plans to achieve them. *The project is funded by an MDE grant and by ICPRB general funds (signatory dues), leveraged revenue, and other funding for this effort.*



The ICPRB is working with Maryland and Pennsylvania to reduce nutrient loadings in the Monocacy watershed.

Maryland Reservoirs TMDL. The ICPRB is assisting Maryland in developing TMDL allocations for several reservoirs through modeling and other technical support. *The project is funded with an MDE grant and ICPRB general funds (signatory dues), leveraged revenue, and other funding for this effort.*

Maryland Sediment TMDL. The project provides technical assistance to MDE to develop TMDLs for sediment-impaired waters. The assistance focuses on work with Bay Program modelers to ensure that the model meets the state's particular needs, reviewing

TMDLs prepared by other contractors, and using the bay program's Phase 5 Watershed Model to generate useful data for Maryland TMDLs. *The project is funded by an MDE grant along with ICPRB general funds.*

***Chesapeake Bay Program.** The ICPRB serves as a valuable partner to all the Potomac basin jurisdictions in the Chesapeake Bay Program. The ICPRB's contributions to the bay restoration include data analysis and participation on several committees and subcommittees. During the past year, ICPRB staff have been deeply involved in creating an improved assessment program using new indicators and methods to accurately describe cleanup progress both for the bay itself and the efforts of the states and federal governments. This effort directly addressed Government Accountability Office recommendations for improved reporting by the bay program. Additionally, ICPRB helps to keep Potomac interests at the forefront of bay program considerations and decision-making. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***Chesapeake Bay Potomac Tributary Team Support.**

The ICPRB supports the efforts of the three Maryland Tributary Teams serving the Potomac basin, and works with similar groups in Pennsylvania, Virginia and West Virginia. Staff have helped organize policy forums, fact-finding trips, and other activities, and have helped to promote Tributary Team events, and lent expertise in a variety of ways. One ICPRB staffer, Carlton Haywood, who works with both the Upper and



Members of the Maryland Lower Potomac Tributary Team at the annual Wade-In, Morgantown, Md.

Middle Potomac teams, was honored as a Watershed Hero at a tributary team annual meeting. The Middle Potomac Tributary Team, with Haywood as chairman, held an Urban Nutrient Management Workshop in November 2005 that has resulted in a major agreement between lawn care companies and the Chesapeake Bay Program to incorporate nutrient reduction practices in those industries. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***Tidal Potomac Study.** The study collected information for improving model simulation of the pH-alkalinity-phosphorus dynamics in the tidal fresh portion of the Potomac estuary and their impact in causing algal blooms and low dissolved oxygen events. The project included field work, laboratory analysis, and desktop studies. The understanding of the

system gained from this basic research will benefit TMDL efforts and other water quality studies of the tidal freshwater Potomac. Two reports were written for the completed project, “Sediment Phosphorus Flux: pH Interactions in the Tidal Freshwater Potomac River Estuary,” and “Measurements of C:Chl a, Pmax, Topt, and Other Model Parameters in Natural Phytoplankton Populations of the Chesapeake Estuaries.” *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

LIVING RESOURCES

***American Shad and River Herring Restoration.** An American shad stocking program run by ICPRB and its partners is an element in the tremendous rebound of Potomac stocks. The number of adult shad collected during the spring brood-stock collections has more than tripled since the project started in 1995. The numbers of young shad observed has risen by a factor of eight from surveys that go back to 1958. The project placed more than 16-million fry in the river since the project began. A sister ICPRB effort is using similar methods to restore river herring populations in the Anacostia and Rock Creek watersheds. Both projects include other federal and local agencies, public and private schools, and citizen volunteers. Benefits to Maryland, Virginia, and the District of Columbia include multiple ecological benefits, and in the case of shad, increasing angler opportunities. Potomac shad stocks have recovered enough for the U.S. Fish and Wildlife Service to take brood stock from the Potomac for use in the Susquehanna River, and for fry captured by the ICPRB program to be placed in the Rappahannock River watershed in Virginia to help restore depleted stocks. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*



Education is a hallmark of the shad program, with students, the public, and decision makers targeted. Here project leader Jim Cummins (r) and Virginia waterman Louis Harley plank shad as a demonstration at the Congressional Casting Call, for legislators and staff.

***Potomac Low Flow Assessment.** The assessment seeks to safeguard the health of the river and its fisheries by ensuring that flow levels meet or exceed ecological demands during drought conditions. The ICPRB helped to develop a low-flow committee involving regional resource agencies and other stakeholders. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***ICPRB Biology Symposium.** The ICPRB sponsored a two-day symposium in October 2005 to assess long-term progress and provide guidance for restoration and protection of the ecology of the Potomac River. The “Human Influences on the Biology of the Potomac River,” brought together a veritable “Who’s Who” of researchers who have studied the biology of the river over the last 30 years. The symposium built on similar ICPRB conferences held in the mid-1970s, and brought back many of those earlier speakers to reassess the river and the efforts made to improve it. Both presenters and the audience participated in grading the watershed, which received an overall grade of “C+,” with qualifications. Keynote speaker M. Gordon “Reds” Wolman, Johns Hopkins University emeritus professor, told the group that perhaps just holding the line on Potomac Water quality in the face of decades of growth and development was “heroic.” He praised the foresight of the 1970s researchers, who adjusted the focus of anti-pollution efforts toward runoff and stormwater issues, noting “They hit the nail on the head, except the nail is much larger [than originally thought].” Materials related to the symposium are available at <http://potomacriver.org/octconf.htm>. *The ICPRB used general funds (signatory dues), leveraged revenue, and other funding for this effort.*

WATER SUPPLY/RESOURCES

***ICPRB Section for Cooperative Water Supply Operations on the Potomac River (CO-OP).**

The ICPRB coordinates reservoir operations for the metropolitan area’s three major water suppliers, including Maryland’s Washington Suburban Sanitary Commission (WSSC), the Fairfax County Water Authority (Fairfax Water) for Virginia’s suburbs, and the Washington Aqueduct Division, which wholesales water to the District of Columbia to ensure the availability of adequate water to meet supply demands and environmental flow guidelines during low-flow conditions. This provides the metropolitan Washington area with a water source that will meet unrestricted demands even in extreme droughts. Additionally, ICPRB conducts studies every five years to assess long-term water supply reliability for future decades. *The ICPRB is using funds from the metropolitan area water suppliers for this project.*

***Potomac Basin Drinking Water Source Protection Partnership.** This ICPRB-coordinated program includes metropolitan area water suppliers and relevant water supply agencies to strengthen protection of the raw sources of drinking water from contamination. The project exemplifies the type of networking effort that is providing value for the Potomac jurisdictions, and is growing to include water utilities, government agencies involved in public water supply, and other stakeholders around the basin to



Pennsylvania DEP staffer John Hines signs the Drinking Water Source Protection Partnership Agreement for the commonwealth.

collaboratively address active and potential threats to the sources of those supplies. The effort will benefit the health of basin residents through provision of safer drinking water from the Potomac, the major source of water for basin residents. The partnership reflects the proactive stance of the region's water suppliers in addressing emerging contaminants, endocrine disruptor chemicals, stormwater pollution, and other quality aspects of source water supplies. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort. For FY 2006/2007, jurisdictions and water suppliers will contribute funds.*

***Potomac Ground Water Assessment.** The ICPRB is conducting an ongoing assessment of the availability of groundwater resources throughout the basin in collaboration with the U.S. Geological Survey (USGS). The three major components of the project include real-time monitoring, analysis to determine areas of concern, and focused study of targeted sub-watersheds. The study will provide data and tools for sub-watersheds to better understand the resource, including how much water is available, its recharge characteristics, and how use can be sustained in the future. The ICPRB has held several meetings and seminars related to the project.

“Coastal Plain Ground Water: A Regional Perspective,” was held in March with participation by the USGS, MDE, the Maryland Geological Survey, and Virginia DEQ. The workshop gave attendees a brief overview of the coastal plain aquifer system, a review of available data on ground water levels, projected demands, and current and proposed studies on the coastal plain in Maryland and Virginia. The workshop also reviewed water withdrawal regulations and regulatory concerns in the two states.

Great Valley Water-Resources Science Forum: The USGS and its cooperative partners formed the regional Great Valley Water-Resources Science Forum in 2003 to address the availability, vulnerability and quality of ground water in the Great Valley of the eastern United States. The ICPRB interests and participation links to the groundwater assessment project since it is focused principally along the I-81 corridor and the Shenandoah Valley that have experienced rapid growth. This growth has the potential to profoundly influence the region's land, water, and biological resources. Current resource-management concerns center on the sustainability and vulnerability of the region's water resources and their ability to provide a reliable long-term water supply.

The ICPRB received a congressional appropriation through the USGS to fund the core of this effort over a three-year period. The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort, particularly the workshops, forums and other outreach.

***Potomac Watershed Toxic Spill Model.** The ICPRB staff help protect water suppliers in the event of a toxic spill by using a time-of-travel model to predict the arrival and duration of a toxic spill into the river or its tributaries. The model provides this information to water suppliers to protect public health and infrastructure. The model, with proper data inputs from emergency crews, can predict arrival time, peak concentration, and duration estimates for points downstream. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***Pennsylvania Water Resources Planning Participation.** The ICPRB has been active in several committees and subcommittees for the implementation of Act 220 (Pennsylvania State Water Resources Planning). The Commission has *ex officio* appointments to the Statewide Water Resources Committee and the Potomac Regional Water Resources Committee and has been an active participant on the Policy and Integration subcommittee of the Statewide Committee. Additionally, staff have been participating in some of the activities of the Critical Water Planning Area Subcommittee at the request of one of the Regional Committee members. The Commission assisted DEP in conducting and in hosting the first public meeting and hearing for the Potomac Regional Committee at Mont Alto Campus of Penn State University in May 2005. The ICPRB is involved less formally in helping jurisdictions plan for their water resources futures. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***Virginia Water Supply Planning.** Virginia has undertaken a major effort to enhance its water supply planning, especially at local levels. The ICPRB is involved in this process, as well as similar efforts in Maryland and West Virginia water supply planning actions, to ensure that key issues, including consumptive use, are given adequate consideration as new programs and regulatory actions are pursued. As a regional body, ICPRB's actions support all the jurisdictions in terms of the shared water resources in the Potomac basin. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***Maryland Water Resources Planning Support.** The ICPRB staff is participating in Maryland's Governor's Advisory Committee on Management and Protection of the State's Water Resources, attending meetings and reviewing reports dealing with the state's complex water issues. Staff has brought focus to Potomac issues regarding allocations and consumptive use. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***West Virginia Water Planning.** West Virginia has begun to inventory its water resources and has a reporting system in progress for water users. The ICPRB is involved in the adjoining states of Maryland and Virginia water supply planning actions, attempting to ensure that key issues, including consumptive use, are given adequate consideration as new programs and regulatory actions are pursued. As a regional body, ICPRB's actions support West Virginia in terms of the shared water resources in the Potomac basin. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

OUTREACH AND WATERSHED COORDINATION

***Anacostia Watershed Restoration Committee (AWRC).** The Anacostia watershed is considered one of the most challenged sub-watersheds in both the Potomac and Chesapeake Bay watersheds. The ICPRB participates in a range of projects under the

umbrella of the regional AWRC, which includes, Maryland, District of Columbia, federal, and local agencies. The AWRC collectively seeks to restore and conserve the resources of the Anacostia watershed, recognizing that regional coordination is essential for success. Participation by ICPRB includes fisheries restoration work, support for businesses' environmental initiatives in the watershed through the Anacostia River Business Coalition, creation and support of new citizens watershed groups, and participation in AWRC policy and public outreach efforts. Staff from ICPRB have worked with AWRC to develop indicators of progress used to develop an annual report card for restoration progress, and development of a watershed forest management and protection strategy. Our public outreach projects have assisted Anacostia watershed residents and businesses in creating raingardens, planting trees, organizing stream cleanups, and stenciling storm drains. These projects have in some cases been supported by watershed groups that ICPRB has helped to create and sustain. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***Rock Creek Watershed Initiative.** The initiative has succeeded in creating and sustaining a new citizen watershed group, the Friends of Rock Creek's Environment (FORCE). The group is expanding its reach among the community to work on issues throughout the Rock Creek watershed in Maryland and the District of Columbia. The ICPRB has assisted the group in organizing several cleanups, storm drain stenciling efforts, rain barrel installation, water quality monitoring, and attendance at government meetings that deal with the watershed. The group also is educating Rock Creek watershed residents about non-point source pollution reduction. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*



FORCE members with their cleanup pile after a cleanup in the Rock Creek watershed, Montgomery County.

***Support Tools for Watershed Planning.** The ICPRB has supported the Pennsylvania Department of Environmental Protection and citizen watershed groups in Pennsylvania and throughout the watershed by providing a range of water quality, outreach, and other tools to forward the restoration and protection of watersheds in Pennsylvania's portion of the Potomac. The project has funded water quality monitoring and gage stations, created a toolkit available both on the internet and CDs, and developed web-based fact sheets for four Pennsylvania watersheds (Sideling Hill, Town, Rock, and Marsh creeks). A set of 20 watershed tools, or activities, that groups can use to improve watersheds is included in a toolkit available at www.watershedactivities.com or on CD. A series of meetings were held to familiarize groups with the material. *The project was funded through a Pennsylvania Growing Greener grant.*

***Green Communities.** The ICPRB reaches out to watershed communities to assist local governments and citizen groups to install best management practices that conserve water, reduce runoff, and beautify their communities. During the past year, ICPRB has worked with the communities of Williamsport, Frederick, and Middletown in Maryland to plant buffer strips, construct raingardens, and promote use of rain barrels to achieve local water quality and conservation goals. *Grants from the Chesapeake Bay Trust and Tremendous Maryland have been combined with ICPRB general funds (signatory dues) for these projects.*

***Potomac Cleanups and Trash-Free Initiative.** The ICPRB has partnered with the Alice Ferguson Foundation in organizing and fostering the watershed-wide annual Potomac River Watershed Cleanup for almost two decades. The event has grown to more than 200 sites around the watershed involving more than 3,000 volunteers. Many of those sites are located in Maryland. The cleanups foster greater awareness and stewardship for the river by Maryland residents. An offshoot of the cleanup is the Potomac Watershed Trash Free Initiative, which seeks to end litter in the watershed. This program is getting underway, with the support of ICPRB, federal, and state jurisdictions, and many local governments and public and private organizations. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

***Potomac River Sojourn.** A popular element of ICPRB's outreach effort is educational canoe/kayak trips on the Potomac. A diverse group of residents have been brought into close personal contact with segments of the river to learn first-hand about its challenges and their role as stewards of the resource. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*



Alexandria City Council Member and ICPRB Virginia Commissioner Andrew Macdonald signs the Potomac Trash Treaty at the World Bank.

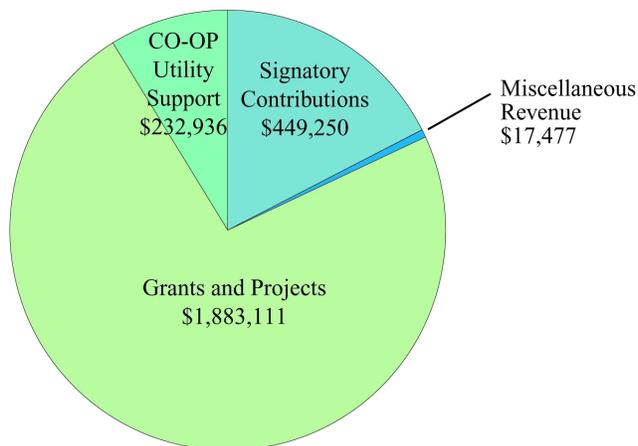


A swimmer strokes her way from Hull Neck, Va., to Point Lookout, Md. during the annual Potomac River Swim for the Environment. The bi-state swim symbolizes the regional nature of the watershed and is one of several outreach projects in which ICPRB is involved. The project allows for networking among environmental groups, helps educate the public, and raises money (from pledges collected by the swimmers) for ICPRB and other river groups. The annual event attracts about 30 or more swimmers, whose crossing near the river's mouth totals more than 8.5 miles.

***General Outreach.** The ICPRB keeps basin residents up to date about these and its many other projects that forward basin health through several means. About 15,000 copies of the *Potomac Basin Reporter* newsletter are distributed; the ICPRB website at www.potomacriver.org receives about 15,000 visits per month. Commission staff field about 30 information requests and referrals each week. The ICPRB is involved in many outreach events that promote river stewardship, including educational efforts at Potomac-related events, such as the annual Potomac River Swim for the Environment. *The ICPRB is using general funds (signatory dues), leveraged revenue, and other funding for this effort.*

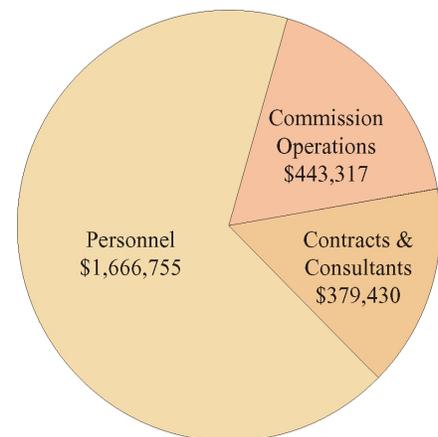
FINANCES

Revenues



TOTAL REVENUE: \$2,582,774

Operating Expenses



TOTAL OPERATING COSTS: \$2,489,502

This report covers major ICPRB projects. Further information about ICPRB and its programs is available at www.potomacriver.org; (301) 984-1908; or info@icprb.org.

The ICPRB is an interstate compact commission established by Congress in 1940. Its mission is the enhancement, protection, and conservation of the water resources of the Potomac River and its tributaries through regional and interstate cooperation. Represented by appointed commissioners, the ICPRB includes the District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia, and the federal government.