

Interstate Commission on the Potomac River Basin



2023

Annual Report

Mission

Protect and enhance the waters and related resources of the Potomac River basin through science, regional cooperation, and education.

Vision

The Potomac River basin is a showcase for our great nation fulfilling both human and ecological needs.

To achieve this vision, ICPRB is guided by the Potomac River Basin Water Resources Comprehensive Plan. The plan provides a roadmap to achieving our shared vision that the Potomac River basin will serve as a national model for water resources management that fulfills human and ecological needs for current and future generations. The Plan focuses on sustainable water resources management that provides the water quantity and quality needed for the protection and enhancement of public health, the environment, all sectors of the economy, and quality of life in the basin. The Plan is based on the best available science and data. The Interstate Commission on the Potomac River Basin will serve as the catalyst for the Plan's implementation through an adaptive process in collaboration with partner agencies, institutions, organizations, and the public.

Values

- Maximizing the environmental sustainability of the entire Potomac River basin including all sub-basins and tributaries, for the benefit of all residents, including marginalized and vulnerable communities throughout the watershed.
- Working with integrity and in conformity with the highest ethical principles.
- Building and strengthening ecosystem and organizational resilience.
- Increasing outreach through a broad range of public and private sector partnerships.
- Cultivating and fostering a talented and diverse workforce to encourage professionalism, innovation, productivity, teamwork and leadership.
- Embracing open and transparent communications in all our relationships.
- Focusing on scientific research through rigorous and unbiased analysis.
- Educating policymakers, scientists, and the general public through the free dissemination of data and information.

Goals

- To be recognized as a leader in the coordination of interstate and regional efforts by governments and other partners
- To be a provider of services to better meet the needs of our stakeholders
- A more informed and active public
- Decision-making and actions supported by science





A Note from the Executive Director

The six-sided logo of the Interstate Commission on the Potomac River Basin (ICPRB) represents the six jurisdictions that work together to care for the water resources of the 14,670-square mile Potomac River basin:

- Maryland
- Virginia
- West Virginia
- Pennsylvania
- The District of Columbia
- The United States

In addition, however, the ICPRB Hexagon can be thought of as highlighting the six sections of our agency:

- Drinking Water & Water Resources
 - Cooperative Water Supply Operations on the Potomac (CO-OP)
 - Potomac River Basin Drinking Water Source Protection Partnership (DWSPP)
- Water Quality
- Aquatic Life
- Communication and Education

As shown in this Annual Report, each of those sides of ICPRB recorded significant achievements in 2023.

Finally, this year we said goodbye to two long-time contributors to the success of ICPRB: Communications Manager Curtis Dalpra, who passed away in the spring, and General Counsel Robert Bolle, who retired at the end of 2023. We are humbled to continue to build on their legacies in 2024 and beyond.



In Honor of Curtis Dalpra

AUGUST 26, 1956 – MARCH 5, 2023



In March 2023, the ICPRB community was deeply saddened by the unexpected passing of Curtis Dalpra, the longtime communications manager. Curtis had been an integral part of the organization for over four decades, during which he authored numerous articles about the history, status, and people of the Potomac River basin. His writing was characterized by a unique blend of historical knowledge, empathy, and a deep affection for the basin's resources and inhabitants.

Curtis spearheaded many "firsts" for ICPRB, such as the creation of a website and email newsletters which greatly enhanced connectivity and engagement with the public. As a dedicated angler and sailor, he exemplified what it meant to be a steward of the Potomac River basin, and his passion for this role was evident in his radio productions, presentations, and writings.

Curtis's legacy at ICPRB will be greatly missed, and his contributions will continue to inspire and inform future generations.

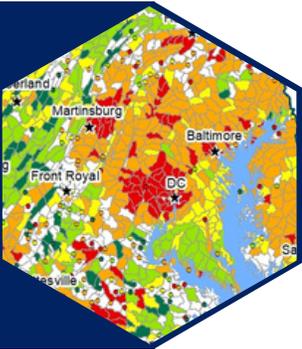
2023 Highlights

MORE INFO



Events

- Potomac River Conference: One River's Perspective on a Changing Climate
- Oil Spill Response Training and Table Top Exercise
- Walk in the Woods Series of Hikes



Reports

- Updates to the 2023 Comprehensive Water Resources Plan were finalized by the Advisory Committee (commission adoption expected in 2024).
- The newest Chesapeake basin-wide index of biotic integrity for stream macroinvertebrates, or "Chessie BIBI," report showed an improvement in stream health across the Chesapeake Bay watershed.



Diversity, Equity, Inclusion, and Justice (DEIJ)



The ICPRB Commissioners adopted the following DEIJ Policy Statement at the December 15, 2023 quarterly meeting:

The mission of the Interstate Commission on the Potomac River Basin (ICPRB) is to protect and enhance the waters and related resources of the Potomac River basin through science, regional cooperation, and education. Given that the Potomac River serves more than six million residents, the ICPRB affirms the importance of fostering diversity, equity, inclusion, and justice (DEIJ) in all activities. The Commission understands that increasing the diversity of its workforce, broadening outreach to marginalized and vulnerable communities, and actively considering equity issues in all of its work will enhance the ability of the ICPRB to fulfill its mission.

River Flow in 2023

10 Months that saw less-than-average rain.

8.3 Inches of rainfall below the yearly average.

106 Days CO-OP staff conducted drought monitoring & operations.

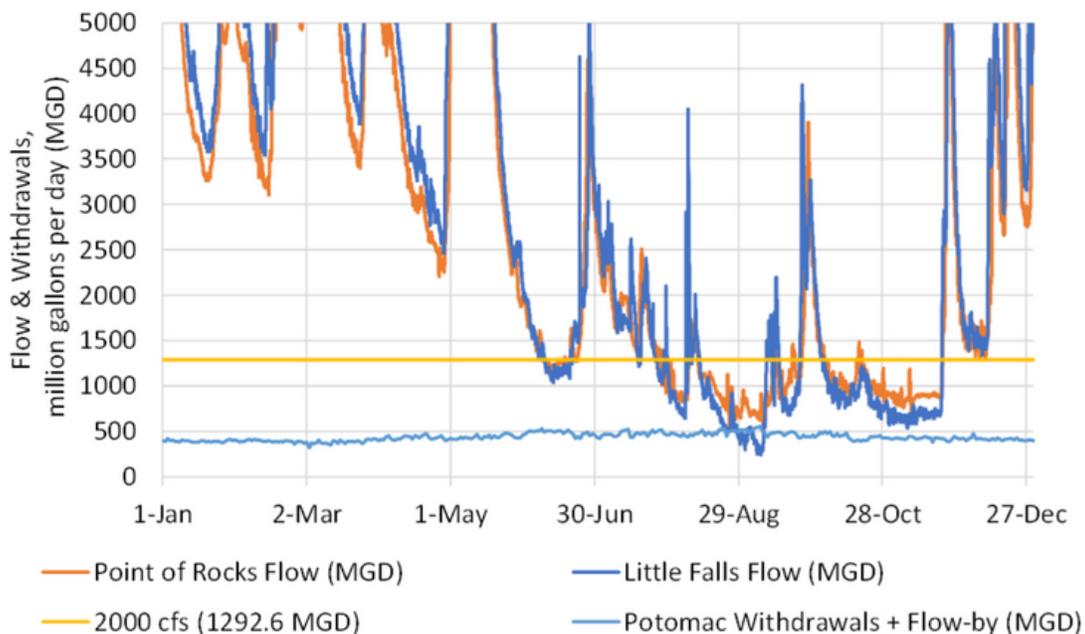
When the river flow dips below 2,000 cubic feet per second (cfs) at the USGS Point of Rocks Gage, staff in ICPRB's Section for Cooperative Water Supply Operations on the Potomac (CO-OP) begins daily monitoring, which includes a daily email to stakeholders about the flow, water withdrawals, and other conditions. When the river's flow is even lower, the team begins the next level of monitoring, which is Drought Operations. At this level, the team evaluates the need for reservoir releases on a daily basis.



A few days of daily monitoring in the dry months of August and September are normal, however, 2023 saw a dip in flow early in the year, which triggered daily monitoring in June. Overall, CO-OP staff spent 88 days (about 3 months) in daily monitoring and another 18 days in drought operations.

The river's minimum daily flow below drinking water intakes (Little Falls dam) occurred on September 7, when the daily mean at the USGS Little Falls Gage was 452 cfs (equivalent to 442 Olympic sized swimming pools flowing by each day). At the same time, upstream withdrawals from the river were at the maximum daily amount of 847 cfs (or 691 Olympic sized pools).

ICPRB's news item about drought operations was picked up widely by the press.





Drinking Water & Water Resources

- The [advisory committee](#) met 7 times in 2023 and developed the 2023 Updates to the Potomac River Basin Comprehensive Water Resources Plan
- [Potomac River Conference: One River's Perspective on a Changing Climate](#)
- Comprehensive Plan Land Use Webinar Series:
 - [Combating Climate Change through Sustainable Development](#)
 - [Innovations in Sustainable Agriculture](#)
- Completed two [Water Resources Internships](#)
- Staff submitted a manuscript on water use in the Potomac basin for peer reviewed publication
- Staff moderated the Potomac spill listserv to quickly share information about spills in the river with government agencies and water suppliers
- Developed and improved two Comprehensive Plan StoryMaps: [A Plan at Work](#) and [Tracking Environmental Progress](#)
- Development and application of modeling tools such as Spatial Statistical Network (SSN) models and the Soil & Water Assessment Tool (SWAT) to support Total Maximum Daily Loads (TMDLs)



Water Quality

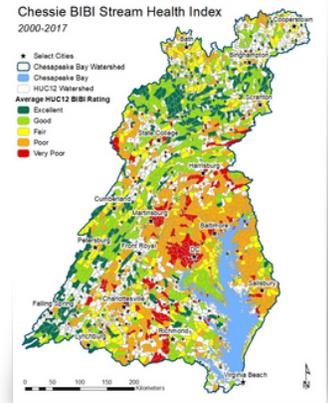
- Updated the [Potomac Water Quality Data Inventory](#)
- Developed a non-tidal sediment transport model to support the Deep Creek Lake TMDL
- Developed R scripts to automate SWAT updates and summarize model outputs
- Worked towards developing a better understanding of the water quality response of Maryland's urban watersheds to changes in management scenarios and climate conditions, which will help to inform the Chesapeake Bay Model Phase 7 development
- In collaboration with Loudoun Water, ICPRB collected microplastic water column samples to define a baseline methodology for developing a microplastic monitoring program in the Potomac basin
- Worked with Maryland Department of Environment to finalize an Enhanced Salt Management Training Manual





Aquatic Life

- The newest [Chessie BIBI](#) Report showed improvement in stream health across the Chesapeake Bay watershed
- Explored environmental factors that cause harmful algal blooms (HABs) at 9 sites in the North and South Fork Shenandoah River
- Monitored groundwater connectivity at 20 sites in the Lost and Cacapon Rivers
- Tagged and tracked 25 rainbow trout in the North Branch Potomac using radio telemetry with water and air temperatures collected every 15 minutes in the study area



Communication and Education

6K

Clicks on the newsletter

117

New followers on LinkedIn

8

In-person public events produced or attended by ICPRB staff

Events

- [Stream Cleanup along Key Parkway](#)
- Walk in the Woods: Frederick Watershed
- Walk in the Woods: Sam Michael's Park
- Walk in the Woods: Let's be Smart About Winter Salt

Press Releases:

- [Remembering the Colonial Pipeline Spill](#)
- [Good News for the Bay](#)
- [ICPRB Initiates Drought Operations](#)

Interactive Maps:

- [Bioregions of the Chesapeake Bay](#)
- [Chessie BIBI Interactive Map](#)
- [PFAS Monitoring in the Potomac Basin](#)





Cooperative Water Supply Operations on the Potomac (CO-OP)

- Supported the [Low Flow Allocation Agreement Workgroup](#)'s successful completion of a final report and proposed modification of the agreement.
- Conducted drought operations under the Washington Metropolitan area's Water Supply Coordination Agreement
- Supported a project that provides an update to CO-OP's [Water Supply Outlook](#) model
- Supported a project to build a state-of-the-art coupled watershed runoff/groundwater flow model for the Potomac watershed
- Facilitated the Supplemental Storage Work Group and outreach to Congress for funding of a USACE feasibility study for secondary storage for the Washington metropolitan area
- Established relationship with upstream dam operators whose operations impact regional water supply
- Published the [2022 Washington Metropolitan Area Drought Exercise](#)
- Published monthly Water Supply Outlooks from April through November
- Submitted a manuscript on a lower Potomac River two-dimensional oil spill model for peer reviewed publication
- Submitted a manuscript on the effects of climate change on Potomac basin streamflows



Potomac River Basin Drinking Water Source Protection Partnership (DWSPP)

- Quarterly meetings with a focus on PFAS, Agriculture, Spill Response, Funding, and more, with [videos available online](#)
- Biweekly [newsletter](#) focused on news items about protecting drinking water in the Potomac basin and beyond
- [Small Water Systems Roundtable on May 9](#)
- PFAS Monitoring in the Potomac River basin [interactive map](#) and corresponding [website](#)
- [Oil Spill Response Training and Tabletop Exercise](#)





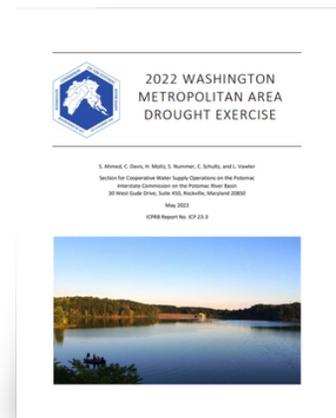
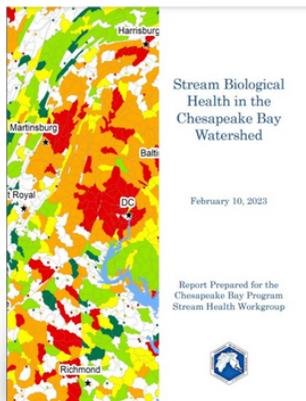
Information Management

- Completed a major upgrade to the Chesapeake Bay Program's (CBP) Data Upload and Evaluation Tool (DUET) which quality assures all water quality data submitted to the CBP Data Center
- Compiled and delivered the water quality datasets used to calculate CBP's Water Quality Standards Attainment indicator and CBP's nutrient and sediment loads and trends for water year 2022
- Organized and streamlined ICPRB's extensive library of books, publications, and other historical documents
- Maintained and implemented the quality assurance practices required by the federal government
- Catalogued and maintained an extensive GIS mapping library



Publications

- [Stream Biological Health in the Chesapeake Bay Watershed](#) (Dr. Claire Buchanan, et al.)
- [Quantifying groundwater storage dynamics in the Chesapeake Bay Watershed \(USA\) using a large-scale integrated hydrologic model with detailed three-dimensional subsurface representation](#) (Dr. Alimatou Seck, et al.)
- [2022 Washington Metropolitan Area Drought Exercise](#). (Sarah Ahmed, et al.)





Staff and Commissioners

- Dr. Alimatou Seck spoke at the American Geophysical Union Conference in San Francisco, California, on her work with two-dimensional inland oil spill modeling using high-resolution lidar bathymetry
- Dr. Stephanie Nummer spoke at the Universities Council on Water Resources Conference in Fort Collins, Colorado, on her work with the Basin-wide Water Use Compilation & Analysis
- Dr. Heidi Moltz was elected as Chair of the Board of Directors of the Interstate Council on Water Policy
- Rikke Jepsen and Dr. Claire Buchanan presented on the Chessie BIBI to the Chesapeake Bay Commission
- Commissioners commended Robert “Bob” Bolle in his retirement after decades of dedication to ICPRB as general counsel

New team members:

- Serena Moncion, Outreach Program Manager
- Rick Masters, General Counsel

Commissioners:

- Chair for FY23: Robert Sussman (Fed)
- Joined: Scott Morris (VA); Jessica Shirley (PA); Governor Wes Moore (MD)
- Stepped down: Scott Kudlas (VA); Richard Negrin (PA)

Planning for 2024

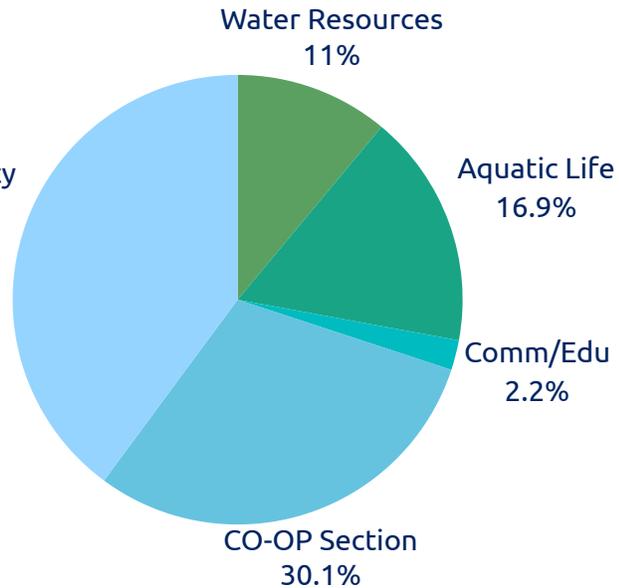
- Initiate work on 2025 Washington Metropolitan Area water demand and availability forecast
- Issue data call for stream macroinvertebrate data for the next update of the Chessie BIBI stream health indicator
- Publishing and implementing 2023 Updates to the Comprehensive Plan
- Onboard a second Data Manager at Chesapeake Bay Program Office
- 3rd Annual Potomac River Conference
- Revised Strategic Plan
- Online Winter Salt Hub for basin residents
- Update to the Land Prioritization Project
- PFAS and microplastic monitoring programs
- More Walk in the Woods and other outreach events
- Water Resources Internships
- Microplastics State of the Science Symposium
- Drought Exercise



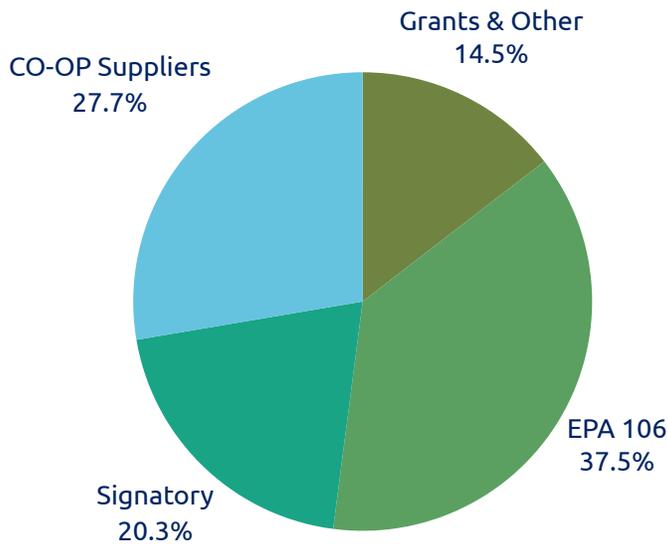
FY23 Financials



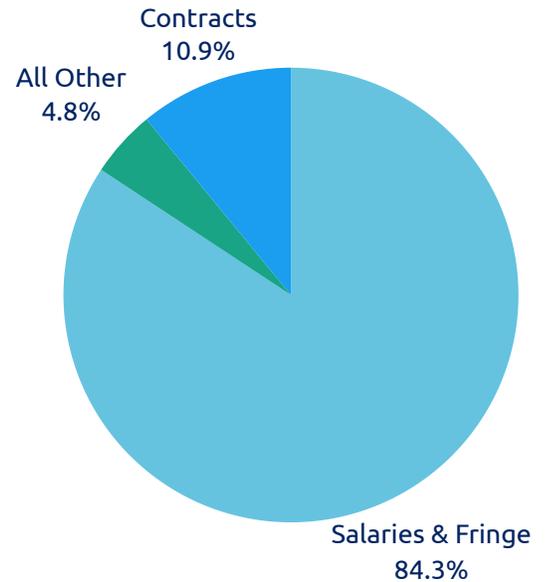
Allocation of Expenses



Revenue ~ \$2.2M*



Expenses ~ \$2.8M



INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

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* ICPRB did not receive the \$650,000 assessment owed from the federal government in FY23. Legislation is pending in Congress to appropriate these funds to ICPRB.