INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN
FOURTH QUARTER CO-OP SECTION MEETING FY2025
SEPTEMBER 9, 2025

IN-PERSON MEETING, ICPRB HEADQUARTERS, ROCKVILLE, MD
APPROVED MINUTES

Call to Order: Executive Director Michael Nardolilli called the CO-OP Section Meeting to order at 8:35am on September 9, 2025. The following commissioners, staff, and guests attended the meeting in whole or in part.

Commissioners

District of Columbia
Willem Brakel (*)
Tiffany M. Potter

Maryland
Lee Currey (*)
Dan Strodel (a)
Randy K. Rowel, Jr. (a)

Pennsylvania
Jason Minnich
Will Willis

United States
Bob Sussman (*)

Virginia
W. Weedon Cloe III (a*)
Mark E. Peterson (a)

(a) - Alternate Commissioner
(*) – Executive Committee

Staff

Michael Nardolilli, Executive Director
Richard Masters, General Counsel
Cherie Schultz, Director of CO-OP Operations
Sarah Ahmed, Senior Water Resources Engineer
Alimatou Seck, Senior Water Resources Scientist
Claire Buchanan, Director Emerita
Laurel Glenn, Director of Administration
Lily Bedwell, Administrative Coordinator
Renee Bourassa, Director of Communications
Serena Moncion, Community Outreach Manager
Alyssa Freedman, Water Resources Intern
Mary Stack, Water Quality Data Manager

Guests

1. **Roll Call**

Executive Director Michael Nardolilli took the formal roll call by jurisdiction, staff, and guests.

2. **Welcoming Remarks**

Chair Bob Sussman from the United States recognized the conference center at ICPRB Headquarters and noted that it is a big upgrade from the old space on W. Gude Drive. He commended Mr. Nardolilli on the accomplishment of moving the organization to the new space closer to downtown Rockville. Chair Sussman introduced Dr. Cherie Schultz as Director of CO-OP Operations and Commissioner Lee Currey from Maryland Department of the Environment as Vice Chair of the CO-OP Section.

3. **Adoption or Modification of Agenda**

Mr. Sussman asked for any modifications to the draft agenda. Hearing none, **he asked for a motion to approve the agenda as circulated. Commissioner James Tsai made the motion and Commissioner Tiffany Potter seconded the motion. All were in favor, and the agenda was approved as circulated.**

4. **Minutes from June 17, 2025, CO-OP Section Meeting**

Mr. Sussman asked for any modifications to the draft minutes from the Q3 CO-OP Section meeting on June 17, 2025. Hearing none, **he asked for a motion to approve the minutes as circulated. Commissioner Tsai made the motion and Commissioner Potter seconded the motion. All were in favor, and the minutes were approved as circulated.**

5. **Old Business**

   A. **Follow-up on June Action Items**

   Dr. Schultz shared that there were no action items to follow up on from the Q3 meeting.

   B. **Section's Quarterly Report**

   Dr. Schultz began reviewing the latest updates from the CO-OP section at the June 17 Commission Meeting. She reported that the collaborative process was kicked off in June when the Potomac River Environmental Flow-By Task Force met for the first time. The Task Force then convened the Ecological Flows Technical Advisory Committee (EcoTAC) where each jurisdiction was represented. The EcoTAC will report back to the Task Force bi-monthly via meeting minutes recorded by ICPRB. Greg Busch of MDE is the Chair of both of those groups.

   CO-OP had two publications in June and July: *Is Hot Drought a Risk in the US Mid-Atlantic? A Potomac Basin Case Study, JAWRA, June 2025*, and *Evaluating time-lagged relationships between groundwater storage and river discharge using GRACE-based data: insights from the Potomac basin, Environ. Research Comm., July 2025*.

   Dr. Schultz reported that CO-OP submitted the final draft of the 2025 water supply study to the water suppliers and state signatories of the Low Flow Allocation Agreement (LFAA) for review on July 31, 2025. In August, the United States Army Corps of Engineers (USACE) held an environmental flows workshop for the Jennings Randolph reservoir, which Dr. Schultz will report on later. The CO-OP Operations Committee also met in August. Dr. Reed Maxwell of Princeton University came to ICPRB Headquarters on August 29, arranged by Dr. Alimatou Seck, to discuss the ParFlow integrated hydrologic model and possible connections with ICPRB work in hydrology, modeling, and machine learning.

Dr. Schultz touched on the current drought monitoring conditions (which CO-OP initiated on September 2) and presented NOAA maps showing abnormally dry conditions all throughout the Potomac basin as of September 2 compared to significantly wetter conditions in June 2025. She presented a flow graph that shows percentiles of historical flow records at Little Falls for every day of the year in contrast to the 2025 conditions. It shows trends of largest median flows in the spring and lowest flows in September/October. ICPRB initiates drought monitoring when the flow at the Point of Rocks gage falls to 2,000 cfs. Dr. Schultz said that 2,000 cfs is right around the median level for September so it is not a particularly low flow for the season, and she noted that ICPRB often conducted drought monitoring during September. The Potomac River watershed above Little Falls dam had just 41% of normal rainfall in August, making it an extremely dry month. Chair Sussman and Vice Chair Currey asked about the sections of the blue area on the graph. Dr. Schultz explained the legend of the graph to the group.

Dr. Schultz reported that she attended the USACE Jennings Randolph E-flows workshop in Elk Garden, WV in August with the Aquatic Habitats section staff. Mr. Mike Selckmann gave one of the workshop presentations. Dr. Schultz explained that Jennings Randolph reservoir (JRR), located on the Potomac River North Branch, was completed in 1981 and filled in 1982. USACE owns and operates JRR for the authorized purposes of flood control, water quality, recreation, and water supply. She shared that JRR is the CO-OP system's largest resource as all CO-OP suppliers pay regularly for operation and maintenance of the reservoir, as well as continued payments for the construction of it through cost share agreements. Dr. Schultz explained the categories of the JRR storage accounts. When the reservoir is full it is considered broken into two categories: water quality storage at about 55% and water supply storage at about 45%. Above those categories and the conservation pool level lies flood storage. USACE likes to keep flood storage empty in case of a high precipitation event causing possible floods. USACE releases water quality storage daily to support downstream water quality, aquatic habitats, and recreation. The water supply releases are much more infrequent but can happen if there is a need. Releases were only made three times: summer of 1999, summer of 2002, and autumn of 2010.

Dr. Schultz discussed the impetus of the workshop and changing conditions in the North Branch Potomac. Before 1982, abandoned coal mines and industrial discharge from the Luke Paper Mill caused the North Branch to be considered a dead stream. Post 1982, the North Branch experienced acid mine drainage mitigation, cooler temperatures from JRR releases, and the trout fishery recovered. Commissioner Cloe asked about the mitigations that took place. Dr. Schultz mentioned lime doses but directed the question to Dr. Claire Buchanan, a biologist and ICPRB Director Emerita. She said that atmospheric depositions of sulfur and nitrogen decreased over time and helped the quality of the river to recover to pH levels conducive to supporting biological communities. Commissioner Tsai asked if the trout in the North Branch are consumable and Dr. Schultz responded that yes, they may be consumed, depending on the region.

The objectives following the E-flows workshop are to identify species and habitats of concern and their flow needs and to support the development of environmental flow-by for water quality releases. Dr. Schultz emphasized the importance of the health of the trout fishery as many people in the area want and need to eat the fish. MD DNR and WV DNR stock trout annually (rainbow, brown, and brook trout, but brook trout is the only native species to the area). Dr. Schultz

expressed CO-OP's interest in this workshop because their PRRISM model, discussed often during this fiscal year, uses outdated release information and for a more accurate simulation it needs updated release decision rules.

The long-standing goal is for the implementation of language from the Water Resources Development Act (WRDA) of 2007 requiring authorized use of JRR water quality storage for water supply during drought emergencies. CO-OP plans to scope a drought contingency plan that balances ecological and human needs in a drought emergency. They hope to make progress on that moving into the next fiscal year.

Commissioner Brakel asked about the workshop held on the water quality at Quarry Lakes. Dr. Schultz shared that Hazen and Sawyer and ICPRB partnered to have the workshop at ICPRB Headquarters under a Water Research Federation grant. Dr. Schultz talked about the history of Travilah Quarry, and the discussions focused on water quality and water treatment (i.e. the possibility of eutrophication and pH differences between a natural lake and a man-made quarry). Ms. Renee Bourassa noted that since the workshop was under a Water Research Federation grant, there will certainly be a detailed report about the project, and she will include it in the Potomac News Reservoir upon its publication. Hearing no other questions, Dr. Schultz directed the meeting to Dr. Seck.

C. Machine learning predictions of daily water demands – Dr. Alimatou Seck

Senior Water Resources Scientist Dr. Alimatou Seck of the CO-OP section presented the results of applying machine learning models to daily water demand forecasting for the Washington Metropolitan area. To anticipate peak demands and more accurately forecast Potomac River flows downstream of intakes, CO-OP needs to forecast daily withdrawals. This is critical for drought management and systems resilience. The traditional approach, created by CO-OP former staff Roland Steiner, uses an equation based on linear regression that is simple, transparent, and fast, but struggles with peaks and seasonal extremes. CO-OP tested machine learning models including tree-based and neural network approaches to attempt at better capturing non-linear and seasonal patterns.

D. Finalization of 2025 Water Supply Study

Dr. Schultz reminded the Commissioners that the study happens every five years. She reported on the objectives of forecasting future water demands, availability as impacted by climate change and upstream consumptive use and assessed the availability of the current plan system to meet demands. The forecast horizon was 2050, but CO-OP is doing extrapolations to 2085 to support Virginia DEQ plant requirements and the USACE feasibility study.

Dr. Schultz reported on the results of the scenario planning for future system reliability predictions. She presented three climate change scenarios, with high, medium, and low flow scenarios. Four alternatives were reviewed, including cooperative use of Loudoun Water's Milestone Reservoir storage and use of the Jennings Randolph water quality storage for water supply during drought emergencies. Dr. Schultz said that qualitatively the results are very similar to the 2020 study.

Chair Sussman asked for clarity on the definition of system failure. Dr. Schultz said that failure is defined as the inability to meet flow-by and demand requirements, and detailed outcomes will be

provided in the report. Commissioner Kjellerup commented that the demand slide did not show the dramatic increase in demand and asked if that included data center consumptive use and other consumptive use projections. Dr. Schultz said that those data are included in the forecasts. Dr. Schultz confirmed that the report will be much more detailed with specific scenarios for the forecasts. Chair Sussman asked how these projections compare with the 2020 study. Dr. Schultz said that the 2025 study forecasts look a bit more concerning than the 2020 study. He asked if this is the first time we have seen system failure with the combination of lower flows and high demand. Dr. Schultz responded yes. Commissioner Currey asked why most projections were red instead of yellow and Dr. Schultz suggested that their criteria may be strict, and some red scenarios could be yellow with less strict criteria.

E. Update on the LFAA Modification 3

This item was skipped because we will discuss it in the Business Meeting.

F. Recognition of Commissioner McCabe's contributions to the CO-OP Section

Commissioner McCabe was not in attendance, so we skipped this item until the Business Meeting.

G. Financial Statement

Dr. Schultz shared that CO-OP is slightly over budget for FY25, but she was not concerned because CO-OP has money in reserves.

6. New Business

Commissioner Darryl Madden, Chair of the Nominating Committee, was not in attendance so Commissioner Potter presented the nominations for the Chair and Vice Chair for FY26. **The committee nominated Commissioner Currey for Chair, and they nominated Commissioner Cloe for Vice Chair. No second was needed. Commissioner Currey and Commissioner Cloe accepted the nomination, and the Commission confirmed the nominees by unanimous vote.**

7. Adjourn

The meeting went overtime, and Mr. Nardolilli asked the group to gather back for the Business Meeting at 10:00am instead of 9:45am. The CO-OP meeting was adjourned at 9:50am.

These minutes were written by Ms. Lily Bedwell, revised by Dr. Cherie Schultz, and approved by Mr. Michael Nardolilli.