

Memo

Ohio River Valley Water Sanitation Commission

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Since 1948

*Improving Water Quality in the
Ohio River for 75 Years*

DATE: January 18, 2024

TO: Technical Committee

Scott Mandirola, WV, Chair

Scott Twait, IL

Brad Gavin, IN

Katie McKone, KY

Damianos Skaros, NY

Melinda Harris, OH

Kevin Halloran, PA

Jeffrey Hurst, VA

Erich Emery, USACE

Michael Franke-Rose, USCG

David Pfeifer, USEPA Region 5

Jeff Frey, USGS

Ex Officio

Kathy Beckett, CIAC

Cheri Budzynski, PIAC

Betsy Mallison Bialosky, Chair, PIACO

Reese Johnson, Chair, POTW

Heather Hulton VanTassel, Chair, WOAC

Chris Bobay, Chair, WUAC

Richard Harrison, Chief Engineer

SUBJECT: Announcement of 234th Technical Committee Meeting, February 6-7, 2024, Embassy Suites RiverCenter, Covington, KY, and Virtual GoToMeeting

FROM: Jason Heath, P.E., BCEE

Scott Mandirola, Technical Committee Chair, wishes to welcome everyone to the 234th meeting of the Technical Committee, which will take place at the Embassy Suites RiverCenter, Covington, Kentucky, and virtually, on Tuesday, February 6, from 1:00-5:00 P.M. (ET), and Wednesday, February 7, from 8:30 A.M. to noon.

Approximately one week prior to the meetings, Technical Committee members, Commissioners, ORSANCO staff, and registrants will receive an email that includes detailed information and instructions on how to participate virtually. Those planning to attend in person can still expect to receive this email. For virtual participation with the TEC meeting, TEC members do not need to register; however, members of the public and other interested parties will be required to register to attend virtually by Monday, February 5. To register, please visit www.orsanco.org/registration and submit the registration form. A link to register will also be available on www.orsanco.org under the "News" section.

The Technical Committee meeting will be held in conjunction with the 238th Commission meeting being held on Thursday, February 8, also in-person as well as virtual. Notes on TEC agenda items are as follows:

Item 1: Minutes of the 233rd Technical Committee Meeting

Draft minutes of the 233rd Technical Committee meeting are attached. Chair Mandirola will ask TEC members for revisions or approval of the minutes.

Item 2: Chief Engineer's Report

Executive Director Harrison will report on selected items including the ORBA strategic plan abundant clean water objective.

Item 3: Great Lakes to Gulf: Tracking Nutrient Trends in the Mississippi River Basin

The Great Lakes to Gulf Virtual Observatory (GLTG) is an interactive, geospatial application that provides user-friendly access to water quality information from the Mississippi River and its tributaries. This presentation will provide a demo of the GLTG platform showcasing nitrogen trends and the other layers and data available. We will also dive into the methodology of the trends analysis and highlight lessons learned from our work on nutrient trends analysis in the Mississippi River Basin.

Item 4: An Assessment of the Influence of Reservoirs on Ohio River Low Flow & A Discussion of the Benefits and Costs

The US Army Corps of Engineers has teamed with engineers from the University of Cincinnati on a study of the influence of USACE reservoirs on Ohio River low flow. USACE reports to Congress on the value of flood damages avoided. This project aims to develop similar quantifications of services provided during periods of low flow, such as contaminant dilution, navigation passage, sewerage assimilation, water supply, and hydropower generation (among others).

Item 5: Kentucky Communities Are Embracing Their Local Waterways and Basin Coordinators Have a Seat at the Table

Many communities across Kentucky are looking for opportunities to develop outdoor recreation and are looking towards their local creeks as part of this effort. This gives Basin Coordinators from Kentucky Division of Water a unique opportunity to be involved in these conversations at the community-level by helping with watershed management plans, developing flood mitigation strategies, and working to reduce nonpoint source (NPS) pollution runoff. One example is Maysville, Kentucky, and according to Mayor Debra Cotterill, “We’ve had our backs to the creek for too long, and now it’s time to turn around and face it.” As part of this investment effort, Maysville is currently focusing on Limestone Creek and working on multiple endeavors to restore the creek to its historic, natural beauty. In this presentation, Brian Storz with the Kentucky Division of Water, Licking River Basin Coordinator, will discuss the role of Basin Coordinators, our liaison activities between local communities and the state, and specifically, the Maysville Limestone Creek revitalization efforts.

Item 6: 2024 Biennial Assessment of Ohio River Water Quality Conditions (2018-2022)

ORSANCO staff will present draft assessments for the 2024 305b report. The report serves to provide the states with a compilation of Ohio River water quality data, and recommendations for listing streams on their 303d lists of impaired waters. The draft assessments are relatively unchanged from the 2022 report. TEC will be asked to endorse the draft assessments, with a final draft report available at the June TEC meeting.

Item 7: PCBs Trends in Fish Tissue

ORSANCO staff will review the findings of the PCB trends in Channel Catfish tissue from 1989-2021. The draft report detailing these analyses was completed and reviewed by the BWQSC in 2023. The updated draft addressing the subcommittee's comments and suggestions will be circulated for review by TEC members, with the intention for submission to a peer-reviewed journal.

Item 8: Broad Scan Survey Interim Results

ORSANCO staff will present interim results of ORSANCO’s Broad Scan Survey of parameters contained in the Commission’s Pollution Control Standards, but not included in routine monitoring programs. The objective is to identify parameters that should be added to ORSANCO’s routine monitoring programs based on observed concentrations from the Broad Scan Survey. Two rounds of sampling were conducted at three sites, and staff will discuss preliminary results.

Item 9: ORSANCO's Contact Recreation/Bacteria Monitoring and Trends Analyses

ORSANCO staff will present preliminary findings of trends analyses of ORSANCO's routine bacteria monitoring program, as well as testing a real-time bacteria sampling and analyses unit purchased from Proteus Instruments.

Item 10: Waterbody Impairment Compilation Maps for the Ohio River Basin

ORSANCO staff has been compiling states' streams and lakes impairments for the Ohio River Basin. This information will be used to demonstrate the need for water quality improvements and associated funding for the Ohio River Basin Restoration Initiative. Staff will be asking the states to verify the information which was compiled from the USEPA's ATTAINS system.

Item 11: ORSANCO's Response to the East Palestine Derailment Using EPA's River Spill Model

ORSANCO staff will present an overview of ORSANCO's response to the E. Palestine train derailment spill, particularly focusing on the use of ORSANCO's spill model to estimate spill plume transport in the Ohio River.

Item 12: Source Water Protection Programs Update

ORSANCO staff will provide an overview of the ongoing activities associated with the Commission's Source Water Protection and Emergency Response programs. This update will include a status report on the Organics Detection System (ODS) Program and a review of recent meetings to discuss the potential for an expanded role in source water protection activities in southwest Pennsylvania.

Item 13: ORSANCO Biological Programs Update

ORSANCO staff will provide an update on ORSANCO's biological programs, including recalibration of the biological indices, application of the recalibrated indices in 4th cycle pool assessments, 2024 sampling activities (pool Surveys, NRSA, and cooperative efforts on behalf of member states), and future investigations and priorities concerning new assessment tools and expanded contaminants sampling.

Item 14: Monitoring Strategy Update

ORSANCO staff will be discussing revisions to ORSANCO's monitoring strategy, including initiatives to update bacteria, PCBs, and dioxin data for use in 305b assessments, as well as the addition of PFAS to routine monitoring programs.

Item 15: Technical Committee Member Roundtable Reports

TEC members are invited to report on water quality issues of importance to their organization. Members are encouraged to provide staff with a written summary after the meeting in order to facilitate accurate meeting minutes.



234th Technical Committee Meeting
Embassy Suites RiverCenter, Covington, KY
February 6-7, 2024
Beginning at 1:00 P.M. (ET)
Chairman Scott Mandirola, Presiding

234th TECHNICAL COMMITTEE MEETING AGENDA

CHAIRMAN'S WELCOME AND ROLL CALL (February 6, 1:00 P.M.)

ACTION ITEMS AND REPORTS

1. Action on Minutes of 233rd Technical Committee Meeting – Chair Mandirola *
2. Chief Engineer's Report – Director Harrison
3. Great Lakes to Gulf: Tracking Nutrient Trends in the Mississippi River Basin – Dr. Alejandra Botero-Acosta, National Great Rivers Research and Education Center, and Maxwell Burnette, University of Illinois
4. An Assessment of the Influence of Reservoirs on Ohio River Low Flow & A Discussion of the Benefits and Costs – Dr. Patrick Ray, University of Cincinnati
5. Kentucky Communities Are Embracing Their Local Waterways and Basin Coordinators Have a Seat at the Table – Brian Storz, Kentucky Division of Water
6. 2024 Biennial Assessment of Ohio River Water Quality Conditions (2018-2022) – Ryan Argo, ORSANCO
7. PCBs Trends in Fish Tissue – Daniel Cleves, ORSANCO
8. Broad Scan Survey Interim Results – Lila Ziolkowski, ORSANCO
9. ORSANCO's Contact Recreation/Bacteria Monitoring and Trends Analyses – Stacey Cochran, ORSANCO

ADJOURN/RECONVENE WEDNESDAY MORNING (February 7, 8:30 A.M.)

10. Waterbody Impairment Compilation Maps for the Ohio River Basin – Bridget Taylor, ORSANCO
11. ORSANCO's Response to the East Palestine Derailment Using EPA's River Spill Model – Sam Dinkins, ORSANCO
12. Source Water Protection Programs Update – Sam Dinkins, ORSANCO
13. ORSANCO Biological Programs Update – Ryan Argo, ORSANCO
14. Monitoring Strategy Update – Jason Heath, ORSANCO
15. TEC Member Roundtable Reports

OTHER BUSINESS

- Comments by Guests
 - Announcement of Upcoming Meetings
-

ADJOURNMENT (NOON)

*Attachment

MINUTES
233rd Meeting of the Technical Committee
Sheraton Columbus Hotel at Capitol Square
Columbus, OH
October 10-11, 2023
Chair Scott Mandirola, Presiding

Call to Order

The 233rd meeting of the ORSANCO Technical Committee was called to order by Chair Mandirola at 1:00 p.m. on Tuesday, October 10, 2023. All eight states, all four federal agencies, and all six advisory committees were represented (for Roster of Attendance see on page 15). Chair Mandirola welcomed all to ORSANCO's dual in-person and virtual meeting of the Technical Committee.

Minutes of 232nd Committee Meeting

ACTION: Motion passed to accept the minutes of the 232nd Technical Committee meeting.

Chief Engineer's Report

Director Harrison reported on the Ohio River Basin Restoration Plan/Initiative. Jordan Lubetkin with the National Wildlife Federation has engaged a writer to pull the various plan chapters into one document, which should be drafted by spring. The Ohio River Basin Alliance held their annual summit last week, where it was reported that a Mississippi River Restoration initiative is being developed in parallel to the Ohio Basin spearheaded by the Nature Conservancy. ORBA has been working with Congressmen Johnson and Garvey to move the initiative along once the plan is finalized. Staff met with folks from Tennessee Department of Conservation and the Cumberland River compact last week to brief them on the restoration initiative.

Staff recently attended a southwestern Pennsylvania source water protection conference. Staff is also working to prepare an application for an ARISE (Appalachian Regional Initiative for Stronger Economies) grant. Staff is also looking for funding opportunities through the infrastructure bill. We were able to get three ODS units into the senate appropriations bill thanks to Senator Sherrod Brown.

New H2Ohio Initiatives to Address Concerns Regarding Forever Chemicals & Rising Salinity Levels in Ohio's Rivers and Shallow Aquifers

Bob Miltner, Ohio Environmental Protection Agency, presented background information and Ohio's study plans to assess the potential for large rivers in the state to exceed USEPA-proposed aquatic life criteria for certain PFAS by sampling water, macroinvertebrates and fish tissue. He also discussed the H2Ohio initiative addressing increasing chloride concentrations in some waters of the state through "smart salting" education programs. Contamination by forever chemicals, commonly referred to by the acronyms PFAS or PFOA, is increasingly an environmental concern. US EPA recently published draft aquatic life criteria as part of an effort to begin managing that class of pollutants. Recent sampling by the States of Michigan and Ohio, and by ORSANCO has shown that PFAS & PFOA are typically detected in water quality samples at vanishingly low concentrations, but occasional hot spots have been detected in Michigan via measuring concentrations in fish tissue. Ohio plans to assess the potential for large rivers in the state to exceed the proposed aquatic life criteria by measuring PFAS & PFOAs according to Method 1633 in water column samples, aggregated macroinvertebrate samples, and in whole body and fillet fish tissue samples. This presentation describes the study plan and contextual background.

Chloride concentrations have been trending up in in some Ohio streams and shallow aquifers, especially those in suburban catchments. Studies across the northern US and southern Canada have revealed similar trends. In some instances, chloride contamination has degraded drinking water supplies, and has caused erstwhile dimictic lakes

to become meromictic. In Ohio, chloride contamination in urban catchments is limiting to aquatic life, and often exceeds the US EPA chronic standard of 230 mg/l. The source of chloride contamination is largely from road salting. The states of Minnesota, New Hampshire and Wisconsin have developed education and outreach programs to facilitate adoption of best management practices by winter maintenance professionals. The H2Ohio initiative for chloride seeks to fund education and outreach workshops similar to those employed by Minnesota, New Hampshire and Wisconsin, as well as provide small grants for cost share of equipment purchases to modernize snow removal and deicing equipment. This presentation provides a brief overview of the environmental consequences of chloride contamination and a description of the “Smart Salting” education programs.

Pennsylvania Surface Water PFAS Sampling: “Per- and polyfluorinated alkyl substances (PFAS) in Pennsylvania Surface Waters: A statewide assessment, associated sources, and land-use relations”

Amy Williams, Pennsylvania Department of Environmental Protection, presented on a study completed by USGS and PA DEP coordinated work. This “Science of the Total Environment” article was published August 25, 2023. The study quantifies PFAS in PA surface waters and attempts to identify associations with potential sources of PFAS contamination and other parameters. Raw concentrations found in stream surface waters were also compared to human and ecological benchmarks. Some observations from the study included:

- At least one PFAS was detected in 76 % of 161 Pennsylvania streams.
- Maximum PFOA & PFOS concentrations were 16 ng/L & 23 ng/L, respectively.
- Percent development (> ~7.6 %) was a primary driver of Σ PFAS hydrologic yields.
- Electronics manufacturing & water pollution control facilities were top potential PFAS sources.
- Σ PFAS yields associated to combined sewage outfalls in oil & gas development regions.

Results of Ohio River Fish Tissue Contaminants Monitoring for PFAS

Rob Tewes, ORSANCO staff, presented on the current status of PFAS analyses in fish tissue. In 2021 ORSANCO added 35 per- and polyfluoroalkyl substances (PFAS) to its suite of fish tissue contaminants analytes. The Program will have a total of 50 composite samples with accompanying PFAS analysis in the first quarter of 2024. There are currently a number of guidance documents that outline fish consumption advisory categories for PFAS (based on PFOS and PFOA concentrations) that are currently under ORSANCO staff review. No fish consumption advisory recommendations for PFAS will be issued by ORSANCO to our partners in the near future, as comparatively few samples have been collected. Additionally, no ORSANCO fish tissue composite samples analyzed for the 35 PFAS substances available for analysis by our contract laboratory (PACE Analytical) fall into a consumption advisory category more restrictive than 1 meal / week for total PFOS (all composite sample analysis results to date were non-detect for PFOA).

The Cincinnati Smart Sewers Story

Reese Johnson, MSD of Greater Cincinnati, presented on Cincinnati’s Smart Sewer System. MSD of Greater Cincinnati has transformed their collection system into the smartest sewers in the country. This presentation covered the drivers, early wins, current uses and future plans for their Smart Sewer system.

MSD has been working to use its existing sewer system more efficiently. For example, when it rains in one part of Cincinnati, the interceptor sewers in that location may be full, but other areas where it hasn’t rained may have available capacity. This approach, known officially as Wet Weather Operational Optimization, allows MSD to store flows inside large interceptor sewers, storage tanks, and high-rate treatment facilities in different parts of the sewer system, using sensors to measure flow levels and gates and valves to direct the flows controlled by a SCADA computer system. This helps keep sewage in the pipes and out of our creeks. MSD has deployed its Smart Sewer system across our service area and is now advancing the construction of new “control points” at targeted overflow locations. The additional of operable gates will enable more flow to be intercepted and taken to a treatment plant when capacity is available in downstream pipes. Smart sewers cost about \$0.01/gallon of overflow volume reduced, as compared to about \$0.23/gallon for green stormwater controls and about \$0.40/gallon for gray solutions such as larger pipes and storage tanks. MSD’s smart sewer system is anticipated to save tens of millions of dollars in capital investments in projects to control sewer overflows. This approach has reduced CSOs by over 2 billion gallons annually.

ORSANCO's Contact Recreation/Bacteria Monitoring and Analyses Initiatives

Staff reported on the Contact Recreation/ Bacteria Monitoring program sampling efforts and also discussed its historical dataset. This historical dataset is available on our website and is also used to produce the Bacteria Trends Report. Staff presented an update to the 2018 Bacteria Trends Report which spans over 2001-2022 and focuses on *E.coli* geometric mean at all historical sites. Data was displayed showing yearly *E.coli* Geometric Mean along with monthly *E.coli* geometric mean.

The Committee was also briefed on a side-by-side comparison study funded by a WV 604b grant. This study will compare the *E.coli* values using the Colilert Method (which takes 24 hours) against the real-time Proteus instrument. Colilert Method uses a substrate to produce a MPN value where the Proteus instrument uses tryptophan to measure values based off an algorithm. Staff will generate a report of these findings once the Contact Recreation Season has ended.

Biological Programs Update

Staff reported on the progress of the 2023 field season. Electrofishing surveys were successfully completed in this year's probabilistic pools of New Cumberland and Cannelton. Macroinvertebrate samplers will be retrieved over the remaining weeks in October. Crews also successfully completed data collections on behalf of member states from these pools including: electrofishing samples on Little Beaver Creek, additional fish tissue collections for IDEM, and paired water samples at each site for KDOW. ORSANCO staff also completed field surveys of 47 of the 92 NRSA events scheduled for completion between 2023 and 2024. These data will be submitted to USEPA by the end of October. Staff plan to discuss the results of this field season with the Biological Water Quality Subcommittee in early 2024.

Algae/Nutrients Update

Staff provided an update on Algae/Nutrients programs. Hypoxia Task Force funding is being provided to ORSANCO as the convener of the Ohio River Sub Basin Committee. ORSANCO has proposed a two part project which includes additional sampling at 11 locations in the basin to improve nutrient load estimates, and an annual meeting of the Sub Basin Committee. This project is proposed to be a 4 year project with a total budget of \$400,000. It is anticipated to start in early 2024. A bloom of the diatom *Aulacosiera* occurred in early August. While not a toxin producer, *Aulacosiera* can clog filters and cause high pH in the river. The bloom lasted about 10 days and impacted drinking water utilities from Wheeling, WV to Henderson, KY. Staff also gave an update on the HAB app which is the web portal which presents the output of our HAB prediction model. Staff demonstrated its use and the supporting water quality information that is available through the app.

Source Water Protection Program & Emergency Response Programs Update

Staff provided an overview of the ongoing activities associated with the Commission's Source Water Protection and Emergency Response programs. This included an update on a very active period for the Organics Detection System Program. Staff secured a \$144,000 grant from the Chemours Vibrant Community Grant Program to purchase a new GC/MS for the Parkersburg ODS station. This station has been inoperable for some time due to non-functioning, obsolete equipment. The new instrumentation has been ordered and is anticipated to be installed in early 2024. Staff has also been busy to relocate the Maysville, Kentucky ODS monitoring site to the Thomas More University Field Station located in California, Kentucky. This transition is scheduled to be completed by early 2024. ORSANCO is also receiving a used GC/MS from the Pittsburgh Water & Sewer Authority (PWSA) which will be used to upgrade the station at West View Water Authority near Pittsburgh. The only cost to the Commission is the staff time and travel expenses to move and setup the donated equipment from PWSA to the West View Water Authority water treatment plant on Neville Island.

The Committee was also briefed on a multi-agency effort to improve spill response preparedness for a 317-mile stretch of the Ohio River from the Markland Locks & Dam to the Wabash River confluence at the Indiana-Illinois state border. The Kentuckiana Sub-Area Contingency Plan (KSACP) stakeholder group conducted an on-river data collection effort near Louisville, Kentucky in August 2023 to identify and record key river attributes, access points, and critical protection zones. Multiple response agencies participated including US EPA Regions 4 & 5, USCG, KY DEP, IDEM, and ORSANCO. Data collected through this effort will be uploaded to the US EPA Kentuckiana Data Viewer to aid in future Ohio River spill response efforts.

Member Updates and Interstate Water Quality Issues

Illinois

Scott Twait reported the following:

PFAS PWS Monitoring

- Goal is to determine the occurrence and prevalence of PFAS in Community Water Supply Wells, prior to entering the distribution systems.
- There were 1428 entry points into the distribution systems sampled at 1017 water systems between October 2020 and December 2021 as part of our PFAS Sampling Network. More information is available on our Illinois EPA PFAS Sampling Network (2020-2021) GIS Dashboard at [PFAS Data \(arcgis.com\)](https://arcgis.com)
 - [68 Confirmed > IEPA Human-Based Guidance Levels](#)
 - [81 Confirmed < IEPA HBGL](#)
 - [15 Unconfirmed Detections](#)
- The USGS has just published the report. [Statewide sampling to determine spatial distribution, prevalence, and occurrence of per- and polyfluoroalkyl substances \(PFAS\) in Illinois community water supplies, 2020–21 \(usgs.gov\)](#)

PFAS Permit Condition

- The Agency is requiring quarterly monitoring of influent, effluent and biosolids for 40 PFAS compounds (Method 1633) and the development of PFAS minimization program for all major facilities (industrial and municipal), minor industrials with certain SIC codes, and other facilities that have the potential for discharging wastewater containing PFAS.
 - PFAS minimization Program includes:
 - Inventory
 - Best Management Practices (BMP)
 - Approximately 10 permits with the PFAS conditions are on notice (15-day and 30-day)

Nutrient Loss Reduction Strategy

- The 2023 Biennial Report will be released in early December. The State had an interim goal for point source reductions of phosphorus of 25% by 2025. As of now, the point source reduction is 34%.

Hiring

- The Agency has been successful in its hiring in the past 4 years. Our Agency headcount has now surpassed 700 for the first time since 2016.

Grants/Loans

- Lead service lines
 - \$10,000,000
 - Amount of individual grants \$20,000 - \$50,000
- Unsewered communities
 - Planning Grants
 - \$1,000,000
 - Amount of individual Grant up to \$30,000
 - Construction Grants
 - \$23,000,000
 - Amount of individual Grant up to \$5,000,000
- Green Infrastructure Grant Opportunities (GIGO)
 - \$75,000 - \$2.5 million
 - Applications due by October 18, 2023 (noon)

Indiana

Brad Gavin reported on the following items:

Drinking Water PFAS Sampling

Phase 3 (>10,000 population served)

- 79 systems have been sent bottles and 73 have returned them
- Total systems with detects above proposed MCL for finished water: 3 (City of Columbus, Jackson County, and Ramsey Water Supply)
- Total systems with detects above health Advisory Levels for finished water: 12
- All PFAS sample results will be posted on our IDEM website at <https://www.in.gov/idem/resources/nonrule-policies/per-and-polyfluoroalkyl-substances-pfas/>.

Watershed Assessment and Planning

- In November we'll be starting a study in the Blue River and Indian Creek watersheds in the Ohio River basin. Water chemistry will be collected monthly for 1 year, pesticides (including neonicotinoids) will be sampled monthly from April through October and macroinvertebrates will be sampled one time in 2024. This watershed study is in support of Purdue University's project proposal to the Natural Resources Conservation Service's (NRCS) Regional Conservation Partnership Program (RCPP), titled "Farmers Helping Hellbenders Initiative."
- IDEM is also requesting that INDOT prioritize the removal of a massive log jam on the US-150 bridge in the Blue River at Fredericksburg in Washington County. The log jam has gotten worse since early summer, and it is causing severe bank erosion on both sides of the river. Here is a list of a few reasons we're so interested in the removal of this logjam (Stacey Sobat may have more to add as she pulled all this information together). IDEM has a site on the Blue River at US-150 in Washington County that is part of the [Stream Regional Monitoring Network](#), an [EPA project](#) which is meant to help determine thermal, biological, and hydrological baselines to help quantify and detect long-term changes in the conditions of high-quality streams. The Blue River is classified as an outstanding state resource water according to [327 IAC 2-1-11 \(b\) \(9\)](#), and IDEM has collected water samples at this [Fixed Station](#) (BLW-57) monthly since 1973. As part of the Stream Regional Monitoring Network, IDEM deployed two instream thermologgers to continuously track changes in water temperature and deployed a weather station to monitor air temperature and precipitation early this summer. The bridge over the Blue River also possesses a [USGS stream gauge](#) which is operated in cooperation with INDOT and was established in 1968 to monitor stream conditions in regards to gage height and discharge. The log jam, however, is impacting IDEM's ability to sample the biological community (macroinvertebrates and fish) and get a good representative sample of the water quality due to the log jam backing up water upstream and eroding the shoreline on either side of the bridge.
- The IDOH Fish Consumption Guidelines will be updated later this year and will include revisions to the fish advisories in the Ohio River basin (Indiana Ohio River tributaries), which is sampled every 5 years.
- IDEM finished [probabilistic monitoring](#) in the Great Miami River Basin for 2023 and will be sampling in the Upper Wabash River Basin for 2024. Probabilistic monitoring includes sampling at 38 sites for water quality (3 events Spring, Summer, and Fall), *E. coli* (once a week for 5 consecutive weeks), diatoms, macroinvertebrate, and fish communities. IDEM is currently in the 5th cycle of probabilistic monitoring in the State of Indiana.
- Monitoring program work plans and standard operating procedures can be found on IDEM's Surface Water Monitoring [webpage](#).

Kentucky

Katie McKone reported the following:

The Division of Water, in partnership with the National Wildlife Federation, hosted an [Ohio River Restoration Tour](#) on September 6, 2023. After our discussions in DC with representatives in June, we heard that they wanted us to highlight the basin more. In an effort to do so, we scheduled a day to show off the work our 319(h) partners have done, specifically MSD in Louisville and their work on Middle Fork Beargrass and Mill Creek, Currys Fork in Oldham County, and Bacon Creek in LaRue County. We had 75 people in attendance in Louisville, including Congressman McGarvey, and 42 attendees ride the bus for the full day. We also had Congressman Massie's Field Representative attend for the Oldham portion of the tour. We plan to do more restoration tours once ORBA publishes the Restoration Plan – no ETA on that one though.

EPA approved Kentucky's 2022 303(d) list on July 7, 2023. Like last cycle, Kentucky has developed an [IR Hub Site](#) that provides a more interactive platform to review assessment results, designated use attainment, impaired waters, and causes of impairment throughout the Commonwealth. As we continue to work on the 2024 cycle, the 305(b)/303(d) program provided its final 2024-2025 TMDL submittal schedule to EPA.

Staff have finished their portion of EPA's National Rivers and Streams assessment throughout Kentucky.

For the 2024 Triennial Review, we plan to hold listening sessions during early 2024. Items under consideration will be released during that time.

The Division is helping coordinate drinking water and clean water services to five Higher Ground communities that will be built in 4 counties in the areas impacted by the July 2022 flood. The communities will be constructed in Letcher, Knott, Perry and Floyd counties with money from the state's Eastern Kentucky Flood Relief Fund and federal disaster recovery grants.

PFAS:

- EPA just awarded the state over \$22 million to address emerging contaminants in drinking water for small or disadvantaged communities. The funding will be used to support an alternative water source (Portsmouth) for the City of South Shore in Greenup County, and for the Department to expand PFAS sampling and analysis capabilities, water treatment, remediation efforts, outreach, and training.
- In 2023, staff sampled finished drinking water from an additional 113 drinking water treatment plants not included in our 2019 study. Results from that study are available on DOW's webpage.
 - [2023 Finished Drinking Water Study Results.xls](#)
 - [2023 Finished Drinking Water Study Results.pdf](#)
- We continue to sample PFAS in fish tissue (turned in 81 samples so far this year) and surface water as well.
- The Division is in the process of adding PFAS to its Ambient Groundwater quality assurance documentation

Nutrients:

- New Gulf Hypoxia Task Force funded USGS gages in Western Kentucky went live on Obion Creek and Mayfield Creek
- Hosted the following Nutrient Reduction Strategy events:
 - Nutrient Reduction Strategy kick-off meeting
 - Public Agencies Workgroup
 - Agriculture Workgroup
 - Utilities/CWAW Nutrients Workgroup
 - NGO Workgroup
- SWPB continues work on addressing nutrient requirements for POTWs and is finalizing draft permit requirements for nutrient optimization under certain conditions.

Water Quality Branch continues to evaluate its methods for assessing and impairing waterbodies for nutrient related parameters, and continues to engage with other DOW programs to prioritize priority waterbodies for nutrient monitoring. DOW's TMDL program is evaluating where nutrient TMDLs are most needed, what TMDL approaches are most practical, and where non-TMDL plans and activities can be leveraged into Advance Restoration Plans that are tracked and communicated through the 303(d) program.

Ohio

Melinda Harris reported on the following items:

Monitoring and Assessment

- Finished up a successful field season, including the statewide headwater probabilistic survey.
- Released the draft Large Rivers Data Summary from the statewide sampling in 2020 and 2021. Report is available at: <https://epa.ohio.gov/static/Portals/35/tmdl/LargeRiverSurvey-DataSummary-2023.pdf>
- Maumee Watershed Nutrient TMDL project was approved by U.S. EPA Region 5. The final report is available at: <https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/maumee-river-watershed>
- Work on the 2024 Integrated Monitoring and Water Quality Assessment Report well underway. A new draft aquatic life use assessment methodology for Lake Erie's open waters will be included for review and comment.

H2Ohio Fund

H2Ohio Rivers Initiative was funded in the state biennium budget. Ohio EPA received \$7.5 million each year for Emerging Contaminants sampling (PFAS), dam removals, chloride reduction program and river restoration projects.

- Sampling for PFAS in Ohio's large rivers began in September 2023 and will continue in the 2024 sampling season.

Water Quality Standards

- Completed our Triennial Review and submitted our report to U.S. EPA Region 5.
- Began the rulemaking process with Early Stakeholder Outreach for our aquatic life criteria rule that includes updating the ammonia and selenium criteria and the addition of new criteria including acrolein, carbaryl, diazinon, nonylphenol, tributyltin based upon U.S. EPA recommendations, and the addition of new Ohio developed criteria for barium, fluoride, peracetic acid, and strontium.

Nonpoint Source Program

Work to update Ohio's Nutrient Reduction Strategy began in September. Advisory groups are being set up.

Facility Updates

Metropolitan Sewer District of Greater Cincinnati

- Consent Decree Update: The Regulators approved Phase 2A of the WWIP for the MSDGC Consent Decree.
- Ohio EPA is in the process of working through the renewal of the NPDES permits for Little Miami WWTP, Mill Creek WWTP, and Muddy Creek WWTP (all Ohio River Dischargers)

Power Plant NPDES permit renewals

- Zimmer Station
- The old Beckjord Station
- Miami Fort Station

Pennsylvania

Kevin Halloran reported on the following:

1. 10th Triennial Review of Water Quality Standards to the EQB, the Board voted to adopt the proposed rulemaking published in the PA Bulletin on Saturday, October 7, which opened the 45- day public comment period. The public comment period is scheduled to close on November 21, 2023 and there will be a virtual public hearing held on November 14, 2023. Those interested in submitting comments should visit the Department's web site and select "Public Participation" followed by "eComment". The triennial review proposed rulemaking is regulation #7-577.
 - 17 new or updated WQ Criteria
 - 14 Human Health (HH) 1,4 – Dioxane, 2,4-D, Chloroform, Barium, Boron, Methyl ethyl ketone, 1,2,3-trichloropropane, 1,2,4-trimethylbenzene, 1,3,5- trimethylbenzene, Xylene, Acetone, Formaldehyde, Metolachlor, Resorcinol
 - 3 Aquatic Life (AL) Cadmium (updated), Carbaryl (new), Tributyltin (TBT) (new) Minor definition revisions.
2. Shell. Full operations. Had some air and NPDES violations related to start-up. Executed a Consent Order and Agreement that includes \$5 million for Community Environmental Projects. Environmental Mitigation Community Fund steering committee has finalized the protocol on how money will be distributed and what entities are eligible to apply for funding. Working on finalizing the application process.
3. East Palestine Derailment.
To date PADEP has completed the following sampling:
Private Water wells: 189 samples at 71 properties Soil Samples: 187 samples at 91 properties
Surface Water Samples: 23 samples at 23 locations Public Water Supplies: 31 samples at 16 locations NS
GW Monitoring Wells: 17 samples at 3 locations

PADEP (GAI) is continuing to conduct additional rounds of samples at approximately 55 private well locations. This includes properties within the 1 mile radius that have agreed to additional sampling and properties with a previous positive detection outside the 1 mile radius.

Conducting an after action review currently.

Virginia

Jeffrey Hurst reported the following:

Selenium Criteria

I last updated this body of Virginia DEQ's receipt of a petition to our State Water Control Board from a permittee to promulgate site-specific aquatic life criterion for selenium. Specifically, the Permittee formally requested that the Board amend the existing surface water quality criteria for selenium to allow a special standard (9VAC25-260-310) incorporating EPA's Recommended Aquatic Life Ambient Water Quality Criterion for Selenium in Freshwater, as published in the Federal Register on July 13, 2016 (Vol. 81, No. 134) and revised in August 2021. At the Virginia State Water Control Board meeting on August 23, 2023, the Board directed DEQ to proceed with initiating a rulemaking to incorporate site specific selenium criteria as a special standard in the Water Quality Standards regulation (9VAC25-260) consistent with the petition request for the specific tributaries to Knox Creek in Buchanan County. The four streams which are the subject of the rulemaking are tributaries to Knox Creek, which is a sub-watershed of the Tug Fork in the Tennessee/Big Sandy river basin. The Tug Fork flows north from Virginia into Kentucky and then, West Virginia. The Notice of Intended Regulatory Action (NOIRA) should publish next month to begin this process.

Construction General Permit

Virginia is working on our new Construction General Permit which will be reissued on July 1, 2024, which will provide turbidity benchmark options to be consistent with EPA's 2022 Construction General Permit.

Stormwater handbook and Virginia Runoff Reduction Method (VRRM)

The next and final SAG meeting for the Stormwater Handbook will be on October 30, 2023, at DEQ. Virginia is in the process of updating the Virginia Runoff Reduction Method from version 3 (2017) to version 4. These initiatives will provide necessary updates and consolidate stormwater information into a comprehensive reference tool.

State Surface Water Delineation (SSWD) certification program

The Virginia DEQ has developed a new voluntary certification program, the Virginia State Waters Delineator (VSWD) certification, for the public to submit state surface waters delineations in accordance with our Virginia Wetland Protection Program regulations (9VAC25-210-10 and 9VAC25-210-45). The DEQ Virginia State Waters Delineator (VSWD) certificate signifies that a practitioner assumes professional responsibility for the accuracy of state surface waters field delineations and that the information submitted to DEQ for review is complete. A benefit of the certification is that DEQ will prioritize State Surface Waters Delineation (SSWD) reviews by a certified individual ahead of other SSWD requests, 30-day review.

TMDL and Water Quality Sampling

Virginia DEQ is working on several TMDL initiatives within the upper reaches of the watershed.

Virginia DEQ just received EPA approval on the Peak Creek (within the New River sub-watershed) Implementation Plan. This is a bacteria IP that covers Wythe, Bland and Pulaski Counties.

Virginia DEQ recently submitted the South Fork Holston River Implementation Plan (IP) for EPA review and approval. The South Fork Holston is a sub-watershed of the Tennessee River. We anticipate approval by the end of 2023.

While on the Holston (again Tennessee River watershed), Virginia DEQ has initiated the benthic TMDL development of the Middle Fork Holston River and its tributaries. This TMDL updates and revises two previous completed TMDLs and adjusts for future growth.

Virginia DEQ and EPA has been monitoring the Bluestone River (New River watershed) for PCBs, and DEQ has contracted PCB TMDL development support from Virginia Tech University.

Coordinated discussions continue among West Virginia, Virginia, and EPA to address the PCB impairment and the possibility of developing a joint TMDL between Virginia and West Virginia.

Clinch Powell Clean Rivers Initiative (CPCRI) Sampling

DEQ's completed sampling for trace elements and ionic constituents at nine (9) sites in the Clinch River drainage system (Tennessee River watershed). The sampling was targeted at low flow or base flow conditions and is intended to assist with identifying inorganic, ionic, and trace elemental constituents present in the water column throughout the impacted mussel assemblages in the Clinch River. Currently, DEQ is working on development of the final report to detail results of the sampling. The final report is anticipated later this year.

Permitting Enhancement and Evaluation Platform (PEEP)

An ongoing initiative that Virginia is now implementing is our new Permitting Enhancement and Evaluation Platform (PEEP), and I guess I can now say award winning, since it recently won the Environmental Council of the States (ECOS) States, *Program Innovation Award*. The Permitting Enhancement and Evaluation Platform (PEEP) brings transparency to DEQ's environmental permitting processes by providing current information about the critical steps and permitting schedules needed for permit approval. Applicants, agents, the public, and DEQ staff may use PEEP to track and manage permitting and approval processes. Groundwater withdrawal permitting is the last program to be brought online and is scheduled for April 1, 2024. <https://www.deq.virginia.gov/get-involved/permitting-enhancement-and-evaluation-platform-peep>

OneDEQ

Virginia DEQ is currently in process of developing new performance metrics and incorporating them across all programs to allow permitting workload to be equalized and distributed across regions to address resource variability across the Commonwealth. In conjunction, there has been a focus on reducing the number of administratively continued permits or backlogged permits within our Water and Air divisions. We have seen a 25% reduction in administratively continued permits since beginning this initiative.

West Virginia

Scott Mandirola reported the following:

WV PFAS update

HB3189 passed legislature, the PFAS bill requires;

- DEP to write a PFAS action plan to identify and address sources of PFAS by July 1, 2024 for 37 sites (DEP beginning action plans now)
- DEP initiate a study to resample the finished water for 100 sites above MDL but below PQL and above the EPA HA by December 31, 2023 (DEP has a contract with USGS to sample 106 site for finished drinking water, the original 100 mentioned in the bill and 6 additional ones that we feel qualify since the proposed MCL has come out. 6 raw water samples exceed the HI. 440 K for the study, it will be done in accordance with UCMR5 requirements)
- DEP shall write a PFAS action plan to identify and address sources of PFAS for the public water system's raw water source for the 100 sites resampled above. First 50 plans by December 31, 2025 and the remaining by December 31, 2026.(DEP worked with WVRivers to apply for a grant from EPA to engage disadvantaged communities effected by the PFAS issue to help write the plans. Should find out this month if we get the grant)
- For each community water system for which a PFAS action plan is required the public water system is required to deliver a Consumer Confidence Report to its customers under the Safe Drinking Water Act (UCMR5 data is beginning to come in to BPH now)
- By December 31, 2023, all facilities which manufacture, use, or have used PFAS chemicals in their production process since January 1, 2017, and which have been issued a WV NPDES permit since January 1, 2017, must report the use of these chemicals to the DEP. DEP is required to put quarterly monitoring on these discharges. (Letters were sent to all NPDES permit holders on August 28 notifying them of the requirement to report)
- After the USEPA establishes final water quality criteria under the Clean Water Act for any PFAS, DEP shall propose adopting such criteria by rule as part of the next regular legislative rulemaking cycle.(waiting on that to take place)

WQS Update

Looking at updating fecal to E.coli, if we can come to an agreement with EPA on a couple of assessment issues. The review for the next triennial review has begun for presentation to the 2025 legislative session. A workgroup to review the trout stream definition in the WQS rule has been formed and is still working on the issue.

Legislative rules updates

Rules for the next session will be filed this week for 2024 session. Many Air rules, start up, shut down, maintenance air rule is the most controversial. Haz waste rule for consistency with EPA updates, UIC rule update to be consistent with EPA rule and a drinking water rule transfer to DEP. Also, some proposed code changes, UIC code update, a recycling code update to track it better and a code change to deal with limiting liability on VRP sites.

MVP Update

MVP crossings are moving forward at full speed. EE is focusing much attention to make sure everything is going in accordance with the permits. They are required to have a third-party inspector on site at every active crossing during construction. Going well so far.

US Army Corps of Engineers

Erich Emery reported the following:

For the Corps, low water issues are the primary focus for our Division Water Management team right now:

- **Ohio River conditions:**
 - Due to a prolonged period of low flow conditions on the Ohio, the upper Miss and Missouri, our Ohio River Water Management teams have been focused on coordinating lock and dam releases to better support the operation of the Olmsted Lock and Dam and support navigation needs on the lower portion of the Ohio. As you know, the Ohio is the largest contributor of water to the lower Mississippi, so what we do on the mainstem resonates well downstream on the Miss as well. Typically, the mainstem dams operate independently of one another. However, we are trying to develop methodology and procedures to better coordinate the movement of water through our series of dams on the mainstem in order to reduce the propagation of ‘waves’ along the system, and do a better job of more steadily increasing or decreasing flows as conditions change.
- **UC Study: Beyond the day-to-day operations.....**
 - As mentioned to this group previously, our division office is working with the University of Cincinnati to conduct a study examining Ohio River hydrology under low flow conditions.
 - UC wrapped up the hydraulic analysis portion of the study this summer and is now moving on to the economic analysis.
 - The study should be wrapped up by this time next year and I can coordinate with Jason to have the results presented to this group if desired.
- **DCP: Continuing with the low flow theme.....**
 - This summer our Division Water Management team also began a process to revise our Drought Contingency Plan. This a 2-yr effort is being led by our Huntington District and will include agency coordination and a public review period and along the way the team may be reaching out to you for information in support of this effort.
- I will keep this Committee informed as these projects mature, and preliminary results or reports become available.

Power Industry Advisory Committee

Cheri Budzynski reported the following:

March 29, 2023: Proposed Rule: Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category

May 18, 2023: EPA proposed changes to the Coal Combustion Residual regulations for inactive surface impoundments at inactive electric utilities, referred to as "legacy CCR surface impoundments."

Watershed Organization Advisory Committee

Chris Tavenor reported the following:

1. **Quarterly meeting.** The committee met on October 3 and prioritized discussing the following topics, as well as other items:
 - Discussions regarding ORSANCO’s Environmental Justice committee
 - PFAS and Alert Systems
 - Ohio River Basin Restoration Plan
2. **ORSANCO Environmental Justice committee.** While WOAC recognizes the staff of ORSANCO have a lot on their plate and need to prioritize their work, we recommend that the EJ committee agrees to meet at a regular cadence and establish a scope of work for ORSANCO when it comes to EJ work. We recognize the current transition period of the chair, and understand the effort will need to wait until the transition is complete. Integrating principles of environmental justice into an organization’s work takes time and effort, but it can be immensely rewarding to both an organization and the communities it serves if pursued in a thoughtful and deliberate manner.

3. **PFAS and Alert Systems.** Our committee appreciates all the studies and data collection ORSANCO has conducted over the past few years pertaining to PFAS and its impact on the Ohio River. In our committee meeting last week, we discussed a few recommendations for future PFAS work. Specifically, we think it is essential to figure out how to trace PFAS discharge back to original sources where possible, in order to systematically identify the places where pollution can be reduced or eliminated moving forward. NPDES permit requirements may be one way to achieve this goal.

We also discussed the importance of pollution alert systems, which is a specialty of ORSANCO. However, we recommend identifying additional ways to integrate nonprofits into those alert systems, not just government organizations. Many NGOs are trusted in communities where, for one reason or another, government institutions may not be as trusted. When it comes to combating misinformation about pollution, nonprofits can play a pivotal role in validating information to communities and potentially helping bridge trust gaps that may exist with governmental entities. We're reflecting on this opportunity in the context of recent crises like East Palestine.

4. **Ohio River Basin Restoration Plan.** Our organizations are excited to see a draft of the Ohio River Basin Restoration Plan come to fruition by the end of the year, setting the stage for advocacy at the federal level in 2024.

Water Users Advisory Committee

Chris Bobay reported the following:

Our committee last met on September 19 and 20 at Northern Kentucky Water District in Erlanger, KY.

River Update

I'm happy to report it has been a quiet summer growing season for most of the river. Aside from a short filamentous diatom bloom, resulting in a large pH spike and challenging filter operations, there have been no significant widespread water quality issues reported on the river main stem, despite low flow conditions since mid-May. Some river systems in the middle river report ongoing taste and odor issues, requiring treatment, likely related to sediment bacteria and a lack of any significant bed scour in the past four months. So, member utilities anxiously await a good flush and reset, which may not come for another month or so.

ODS Update

I'm also happy to report that the Organics Detection System is expanding. We've been down two sites at Parkersburg and Maysville. ORSANCO staff have worked diligently to resource new GC installations at the Chemours Facility and at the Thomas More Field Station. Staff also worked to replace an aging GC at Portsmouth. Two other existing ODS stations have or will be donating used GCMS instruments to be repurposed by ORSANCO staff in 2024.

At the request of the Commission, we are working to stand up another round of the NextGen ODS work group to take a fresh look at existing network assets and explore options for enhancing basin coverage and broadening analytical capabilities. We last convened this work group in 2018. That work involved broad stakeholder input, comprehensive assessment of monitoring gaps and opportunities, and a breakdown of the costs/benefits of various options. Ultimately, we brought a series of recommendations to the Commission for consideration. I envision a similar approach this time around. And I hope to share more about this effort in future meetings.

Emergency Preparedness Training

Finally, I want to underscore the importance of ongoing training for spill response and emergency preparedness. The Committee is grateful for the Commission's work, during and since the East Palestine incident, to get ORSANCO technical staff a seat at the table on Ohio River spill response and a larger voice among the state and federal emergency management community. The Committee encourages the Commission to continue working across state agencies and EPA regions to ensure ORSANCO staff are plugged in and not on the outside looking in. The Committee was glad to hear that ORSANCO staff recently participated in an EPA spill response and ICS training exercise. Our committee Vice-Chair, Erika Pauken, with West Virginia American Water, is planning a similar tabletop training in Huntington next month. These trainings are important. They not only serve the participants, but they also serve to inform and equip the larger basin network, including water users.

Public Information Advisory Committee

Betsy Mallison Bialosky reported the following:

PIACO met virtually on Sept. 21. We received updates from the staff on FORE programs. Richard provided an update on the ORBA Summit and the Ohio River Basin Restoration Plan.

Our group discussed the River Sweep activities. ORSANCO received \$101,000 in funding support with another \$42,000 pending. New sponsors include Shell Polymers and Milacron/MilaComm. Some 4,000 volunteers participated in 95 cleanup events this year, picking up 80 tons of trash with 205 miles of the river basin covered.

There will be an end of the season event on Oct. 31 at Schmidt Fields boat ramp in Cincinnati. Plans are being made for a multi-state kickoff event in the spring and a potential event with Rotary clubs in early summer.

Annette continues to co-chair the Ohio River Way Coalition Clean Ohio River committee which is focused on the success of River Sweep programs and educational activities. Through September, the ORSANCO staff has done 50 educational events and reached 12,731 people.

ORSANCO received a \$25,000 grant from the OhioEPA OEFF program to offer free educational programs to lower income schools and replace deteriorating program supplies. EQT provided \$5,000 to add additional free programs to students in the Pennsylvania/Ohio and West Virginia regions.

Staff continues to finalize the draft five-year strategic plan which was presented to the Commission during a roundtable event during the February meeting. The communication planning will begin in the fall and ORSANCO will be reaching out to PIACO, state public information officers and numerous other partners for input. PIACO plans to meet again in November to help with the plan.

POTW Advisory Committee

Reese Johnson reported the following:

The POTW Advisory Committee has reconvened after a period of inactivity. We held a hybrid meeting on Thursday, September 28th at ORSANCO headquarters with representatives of several POTWs on the Ohio, Director Harrison, and several ORSANCO staff, including our new staff liaison Stacey Cochran.

Our first order of business is to reinvigorate the engagement of POTWs, starting with the 6 largest CSO communities on the Ohio (as you know: Pittsburgh, Wheeling, Huntington, Cincinnati, Louisville, and Evansville). We discussed current and future issues of interest to POTWs and received a great presentation by Jason and Stacey on ORSANCO's current initiatives relating to bacteria and contact recreation. One example of the synergy this committee can leverage is ORSANCO's and MSD of Cincinnati's shared interest in real-time COD/BOD monitoring equipment, and we plan on sharing lessons learned from testing the Proteus sensor suite.

We established a future cadence to reconvene through 2024 I look forward to working with POTW Committee members and ORSANCO staff to advise the Commission in the coming years.

Chemical Industry Advisory Committee

Kathy Beckett is the new Chair of the committee, and she reported the following:

The committee is currently in its informative stages. There are currently 25 committee members from trade associations and individual companies, some of whom are attending this meeting today. She asked for any membership recommendations from TEC. They will be holding a first meeting to discuss future topics and initiatives for the committee.

Adjournment

The 233rd meeting of the ORSANCO Technical Committee was adjourned by Chair Mandirola at 11:50 a.m. on Wednesday, October 11, 2023.

Approved:

Scott Mandirola

DRAFT

Roster of Attendance

Technical Committee

Chairman
Illinois
Indiana
Kentucky
New York
Ohio
Pennsylvania
Virginia
West Virginia
US Army Corps of Engineers
US Coast Guard
US Environmental Protection Agency
US Geological Survey
Chemical Industry Advisory Committee
Power Industry Advisory Committee
Public Interest Advisory Committee
POTW Advisory Committee
Water Users Advisory Committee
Watershed Organizations Advisory Committee
ORSANCO Chief Engineer
Staff Liaison

Commissioner Scott Mandirola
Scott Twait
Brad Gavin
Katie McKone
Damianos Skaros (virtual)
Melinda Harris
Kevin Halloran
Jeffrey Hurst
Scott Mandirola
Erich Emery (virtual)
LT Mike Franke-Rose (virtual)
David Pfeifer (virtual)
Jeff Frey
Kathy Beckett
Cheri Budzynski
Betsy Mallison Bialosky (virtual)
Reese Johnson
Chris Bobay
Chris Tavenor
Richard Harrison
Jason Heath

Commissioners/Proxies

Douglas Conroe, George Elmaraghy, David Flannery, Toby Frevert, Bruce Hershlag (virtual), John Hoopingarner, Carey Johnson (virtual), Tiffani Kavalec, John Kupke (virtual), John Lyons (virtual), David Miracle, Ron Potesta, Mike Wilson

Staff

Ryan Argo, Stacey Cochran, Sam Dinkins, Tracey Edmonds (virtual), Richard Harrison, Jason Heath, Adam Scott, Annette Shumard, Bridget Taylor, Rob Tewes, Jamie Tsiominas, Greg Youngstrom, Lila Ziolkowski

Guests

Bill Boria (virtual)	PIACO
Rich Budnik	OH EPA
Gabrielle Ghreichi	IDEM
John Hirschfield (virtual)	Westlake
Ebie Holst	Cleveland Water Alliance
Mariah Hood	OH EPA
Jim Lazorchak (virtual)	USEPA
Robert Miltner	OH EPA
Michael O'Callaghan (virtual)	
Nick Reif	KY Division of Water
Angie Rosser (virtual)	WV Rivers
Bryan Stubbs	Cleveland Water Alliance
Heather Hulton VanTassel (virtual)	Three Rivers Waterkeeper
Matt Thompson	ICL Industrial Products
John Wathen (virtual)	US EPA
Amy Williams	PA DEP