

Memo

Ohio River Valley Water Sanitation Commission

5735 Kellogg Avenue
Cincinnati, Ohio 45230
Phone: (513) 231-7719
Fax: (513) 231-7761
www.orsanco.org

Since 1948
*Improving Water Quality in the
Ohio River for over 75 Years*

DATE: January 23, 2025

TO: Technical Committee

Scott Mandirola, WV, Chair
Scott Twait, IL
Gabrielle Ghreichi, IN
Katie McKone, KY
Damianos Skaros, NY
Melinda Harris, OH
Kevin Halloran, PA
Jeffrey Hurst, VA
Erich Emery, USACE
LTJG Connor Sullivan, 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
Sam Dinkins, Executive Director

SUBJECT: Announcement of 237th Technical Committee Meeting, February 11-12, 2025, Embassy Suites RiverCenter, Covington, KY, and Virtual Meeting

FROM: Jason Heath, P.E., BCEE

Scott Mandirola, Technical Committee Chair, wishes to welcome everyone to the 237th meeting of the Technical Committee, which will take place at the Embassy Suites RiverCenter, Covington, Kentucky, and virtually, on Tuesday, February 11, from 1:00-5:00 P.M. (ET), and Wednesday, February 12, 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 10. 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 241st Commission meeting being held on Thursday, February 13, also in-person as well as virtual. Notes on TEC agenda items are as follows:

Item 1: Minutes of the 236th Technical Committee Meeting

Draft minutes of the 236th 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 Dinkins will report on selected items.

Item 3: Groundwater Quality in Abandoned Underground Coal Mine Aquifers Across West Virginia

Mitch McAdoo, USGS, WV Science Center, will discuss abandoned underground coal mine aquifers, which cover a large part of West Virginia, and could supply substantial quantities of water for agricultural, industrial, residential, and public use. Calculation of net alkalinity and multivariate statistical analysis of elemental data indicated that Upper Pennsylvanian coal beds primarily produce net acidic waters and Lower Pennsylvanian coal beds primarily produce net alkaline waters. These results substantiate the potential benefits of leveraging abandoned underground coal mine aquifers as a multifaceted resource in West Virginia and can be used as a reconnaissance tool for water managers to characterize abandoned underground coal mine aquifers on a local scale.

Item 4: Ohio River Water Quality Update: 2024 Water Quality Conditions

ORSANCO staff will discuss 2024 monitoring activities and observations on water quality of the Ohio River and major tributaries.

Item 5: Update on Proteus Real-time Bacteria Monitoring

Stacey Cochran, ORSANCO staff, will discuss up-to-date results of ORSANCO's evaluation of the Proteus instrument real-time bacteria monitor. The instrument uses a surrogate measure of tryptophan to develop a relationship with turbidity and E.coli for estimating bacteria levels in water on a real-time basis.

Item 6: The Ohio River Community Model Impact on Operations and Research on the Ohio River

Brian Astifan, with National Weather Service, Ohio River Forecast Center, will discuss the Ohio River Community Model that was initiated nearly 20 years ago to create a continuous unsteady hydraulic model of the entire Ohio River system. This presentation will review the origin and evolution of the model over the past two decades, how the model is currently constructed and maintained, and provide several examples of how output from the model is used to support a range of operational and research activities today.

Item 7: Update on Ohio River HABs Research and Monitoring through the ORSANCO, EPA-ORD, and Neptune and Company Partnership

Chris Nietch, USEPA-ORD, will provide an update on partnership facilitated research activities since the Ohio River HABs risk characterization tool was brought online during the 2022 bloom season. R&D completed since then has included the implementation of a 14-day ahead HABs occurrence forecast, an update of the original scripts used to produce the web application, an exploratory analysis to bring remotely sensed data related to HABs into the risk characterization, and sampling campaigns designed to help evaluate the underpinning hypothesis to the original HABs risk model, assess newer analytical methods, and to survey the extent to which benthic cyanobacteria may pose risk to river water quality and safety.

Item 8: Analysis of Long-term Temporal Trends of the Ohio River and Major Tributaries

Riley Lanfear, ORSANCO staff, will present a proposed methodology for analyzing long-term temporal trends of Bimonthly and Clean Metals monitoring data.

Item 9: Biological Programs Update

ORSANCO staff will present results from the 2024 field season including probabilistic surveys of Montgomery and Newburgh pools, the conclusion of the 2023-2024 cycle of National Rivers and Streams Assessment surveys, and preliminary results from those assessments and special studies. Recommendations from the Biological Water Quality Subcommittee and plans for the upcoming 2025 field season will also be detailed.

Item 10: Source Water Protection and Emergency Response Programs Update

ORSANCO staff will give a brief status update on Source Water Protection and Emergency Response Program, highlighting congressionally directed spending funding from Senator Brown for Ohio ODS system replacements.

Item 11: Monitoring Strategy

Jason Heath, ORSANCO staff, will present the results of work by the Monitoring Strategy Committee to develop priorities for future monitoring initiatives, as well as a revised monitoring strategy document.

Item 12: New Draft Federal Recommended Criteria for PFAS

The USEPA recently issued draft National Recommended Human Health Criteria for three PFAS constituents and is asking for comments from the public. Jason Heath, ORSANCO staff, will provide an overview of the recommendation and how it compares to a recent survey conducted by ORSANCO of PFAS levels in the Ohio River.

Item 13: 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.

Item 14: Ohio River Basin Restoration Initiative

Jordan Lubetkin, with National Wildlife Federation, will discuss the Ohio River Basin Restoration Initiative and the status of the Restoration Plan.



237th Technical Committee Meeting
Embassy Suites RiverCenter, Covington, KY
February 11-12, 2025
Beginning at 1:00 P.M. (ET)
Chairman Scott Mandirola, Presiding

TECHNICAL COMMITTEE MEETING AGENDA

CHAIRMAN'S WELCOME AND ROLL CALL (February 11, 2025, 1:00 P.M.)

ACTION ITEMS AND REPORTS

1. Action on Minutes of 236th Technical Committee Meeting – Chair Mandirola *
2. Chief Engineer's Report – Director Dinkins
3. Groundwater Quality in Abandoned Underground Coal Mine Aquifers Across West Virginia – Mitchell McAdoo, USGS
4. Ohio River Water Quality Update: 2024 Water Quality Conditions – ORSANCO Staff
5. Update on Proteus Real-time Bacteria Monitoring – Stacey Cochran
6. The Ohio River Community Model Impact on Operations and Research on the Ohio River – Brian Astifan, National Weather Service, Ohio River Forecast Center
7. Update on Ohio River HABs Research and Monitoring through the ORSANCO, EPA-ORD, and Neptune and Company Partnership – Chris Nietch, USEPA
8. Analysis of Long-term Temporal Trends of the Ohio River and Major Tributaries – Riley Lanfear, ORSANCO Staff
9. Biological Programs Update – Ryan Argo, ORSANCO Staff
10. Source Water Protection and Emergency Response Programs Update – ORSANCO staff
11. Monitoring Strategy – Jason Heath, ORSANCO Staff

ADJOURN/RECONVENE WEDNESDAY MORNING (February 12, 9:00 A.M.)

12. New Draft Federal Recommended Criteria for PFAS – Jason Heath, ORSANCO Staff
13. TEC Member Roundtable Reports
14. Ohio River Basin Restoration Initiative – Jordan Lubetkin, National Wildlife Federation

OTHER BUSINESS

- Comments by Guests
- Announcement of Upcoming Meetings
June 10-12, 2025 – Morgantown, WV

ADJOURNMENT (NOON)

*Attachment

MINUTES
236th Meeting of the Technical Committee
Four Points by Sheraton
Charleston, WV
October 8-9, 2024
Chair Scott Mandirola, Presiding

Call to Order

The 236th meeting of the ORSANCO Technical Committee was called to order by Chair Scott Mandirola, at 1:00 p.m. on Tuesday, October 8, 2024. Seven states, three federal agencies, and all six advisory committees were represented (for Roster of Attendance see on page 13). Chair Mandirola welcomed all to ORSANCO's dual in-person and virtual meeting of the Technical Committee.

Minutes of 235th Committee Meeting

ACTION: Motion passed to accept the minutes of the 235th Technical Committee meeting.

Chief Engineer's Report

Director Harrison reported that an ORBA Restoration Plan report, addressing that ORSANCO states' concerns, is expected to be ready early next year. In the meantime, federal legislation is being drafted that would move the initiative forward. He indicated his desire to continue working on the restoration initiative, and he thanked TEC for their service to the Commission.

USEPA's New Recommendations for Contaminants to Monitor in Fish and Shellfish

Lisa Larimer, with EPA HQ, discussed the updated list of recommended contaminants to monitor in fish and shellfish and results from recent fish tissue studies conducted as part of the National Aquatic Resource Surveys. She covered the comprehensive EPA-recommended list of contaminants to monitor in fish and shellfish, including analytical methods for the new additions, toxicity values for the new additions and how they can be used in consumption advisories, and results from the National Aquatic Resource Surveys. New contaminants added include microcystins, select flame retardants, lead, select PFAS, and amphetamine.

Identifying Sources of Microplastics in the Aquatic Environment

Amy Bergdale, USEPA Region 3, discussed EPA Region 7's Regional-ORD Applied Research Program's project on detecting microplastics in urban watersheds, as well as other approaches Region 3 is using to help in the detection and analysis of microplastics. Microplastics are ubiquitous in the Chesapeake Bay watershed. Paper published in 2020 on a surface water study on 30 sites in the watershed was completed by Trash Free Maryland. 100% of those samples contained microplastics. A subset of samples were further analyzed for composition and found the most common composition was polyethylene at (32%) followed by polypropylene (13%).

Other studies have demonstrated microplastic prevalence in tidal and nontidal waters. An action team was established to develop a uniform classification system and terminology, develop eco-risk assessments for the Potomac River, and develop a monitoring and science strategy. This resulted in a framework for monitoring plastics being developed in 2024.

Three Rivers Waterkeeper Plastics Monitoring in the Upper Ohio Basin

Heather Hulton VanTassel, with Three Rivers Waterkeeper, discussed their plastics monitoring efforts on the Ohio River, and other programs. They operate in the Pittsburgh vicinity for water monitoring and patrolling, conduct community outreach and education programs, and environmental advocacy by holding polluters responsible. They created baseline plastics monitoring data at twenty five sites on the Ohio, Allegheny, and Monongahela rivers, and continue to track those sites.

Occurrence of Per- and Polyfluoroalkyl Substances in West Virginia's Public Water Supplies

Mitch McAdoo, with USGS, West Virginia Science Center, will give an overview of projects conducted by USGS, in cooperation with WVDEP and WVDHHR, to understand the occurrence and distribution of PFAS in West Virginia's Public Water Supplies. Finished drinking water studies in West Virginia are being completed while source tracking studies are being developed. The Ohio River alluvial aquifer in West Virginia was sampled in 2019, and PFAS was found almost all sites. Results of the source water study of 279 sites indicated the presence of at least one PFAS at twenty four percent of sites. Most of the source water in West Virginia is potentially susceptible to PFAS contamination if a source of PFAS exists within the source area, and the Ohio River Valley is the most vulnerable region to PFAS contamination in West Virginia for surface water and groundwater. A follow up finished drinking water survey is currently being completed at 110 additional drinking water supplies.

Summary of Stream Gages and Monitoring in the Ohio River Basin

Jeff Frey, USGS, IN-KY-OH Science Center, discussed an ongoing project to develop a dashboard to highlight all streamgages within the Ohio River Basin, as well as who leverages those gages for water quality and water hazards. The USGS operates approximately 11,600 stream gages nationally. Uses of the information include flood forecasting, water use, ecological monitoring, operation of dams, locks, and reservoirs, navigation, emergency management, and infrastructure design and monitoring. There are very few of these gages on the Ohio River. Jeff also discussed a variety of USGS tools for water resources management, including Water Data for the Nation, Water Alert, Flood Event Viewer, real-time Flood Impact maps, and StreamStats.

Freshwater Mussel Propagation, and Mussel Surveying and Abundance, in the Ohio Basin in Pennsylvania

Andrew Phipps, with USFWS, White Sulphur Springs National Fish Hatchery, and Rick Spear, with PA DEP, discussed the following. The PA DEP had funding from a sand and gravel dredging mitigation fund, and the PA DEP had a need to restore freshwater mussels species that were lost in Pennsylvania stream and rivers due to aquatic life kills and other human perturbations. PA DEP partnered with USFWS in White Sulphur Springs, WV, to provide funding for them to propagate common freshwater mussels as well as some rare mussels in Pennsylvania, such as Pistolgrip, Round Hickory and Salamander Mussels.

Long-Term Water Quality Trends in Indiana Streams

Jessica Weir, with IDEM, reported that water quality records from the fixed station monitoring program at Indiana Department of Environmental Management provide a consistent analysis of long-term water-quality trends at 56 sites across Indiana. Trends were observed in 12 measures of nutrient, metal, and ion concentrations for the 10-year period 2011 to 2020. Noteworthy changes include the widespread decreases in sulfate concentrations and significant declines in nitrate concentrations along the West and East Fork White River basins. There were widespread increases in dissolved solids and suspended solids concentrations in the rivers and streams of Indiana. Organic nitrogen and zinc concentrations both followed a similar pattern with increases in the northern half of the state and decreases in the southern half of the state. This study is available to the public to view in an interactive Story Map and provides new insights into the status of water quality in Indiana.

Ohio River Basin Water Quality Trading Program Update, and States' Round Robin Updates on Regulation of Nutrients and Status of Nutrient Reduction Efforts

Jessica Fox and Jeff Thomas, with EPRI, provided a status report on the Ohio River Basin Water Quality Trading Program. Since its inception in 2012, the Ohio River Basin Water Quality Trading project, developed by the Electric Power Research Institute (EPRI) and a strong collaboration of power companies, wastewater utilities, farmers, state and federal agencies, and environmental organizations, has prevented over 300,000 pounds of nutrients from entering the waters of the Ohio River Basin through agricultural best management practices supported by private funding. Based on solid scientific foundations, this project has the potential to result in a multi-industry market that could accelerate cost-effective water quality improvements and provide important

ancillary ecological benefits. As compliance drivers remain on the horizon in Ohio, Kentucky, and Indiana, project partners have been exploring innovative opportunities for this robust framework to be used to meet individual or corporate stewardship goals and other purposes. This presentation provided a status update on the project and highlighted various opportunities that are being explored to allow the project to realize its full potential.

Report of the Monitoring Strategy Committee

The committee met on August 27 to review the updated draft ORSANCO Monitoring Strategy, and to discuss and set priorities for future monitoring initiatives. Staff presented a summary of input from the committee on priorities for future monitoring initiatives. Staff was requested to reconvene the committee to reconsider monitoring priorities related to updating 305b assessment data for PCBs and dioxin which currently are designated as causing Ohio River impairment, based on old monitoring data.

Stream Impairment Compilation Map of the Ohio River Basin

The stream impairment maps of the Ohio River Basin were presented at the June Technical Committee meeting. At that time, it was pointed out that many of the impairments are caused by bacteria levels exceeding recreational standards, and that much of what can be done to control bacteria levels is already being done. Therefore, it was requested that ORSANCO develop new maps which exclude bacteria impairments. Bridgett Borrowdale presented and compared these maps against the maps that include bacteria impairments. No definitive direction was provided regarding the appropriate use of such maps associated with the ORBA Restoration Initiative.

Report of 2024 HABs and Algal Conditions in the Ohio River

Greg Youngstrom, ORSANCO staff, provided a summary of 2024 HABs and algal conditions in the Ohio River. There was a localized microcystis bloom in the Louisville area, as well as upstream of Louisville around the Kentucky River confluence in August. Kentucky issued a public recreation advisory for the area, while Louisville water did not experience effects on treated, finished water. ORSANCO's HABs predictor model did not indicate any threats on the Ohio River.

Update Regarding ORSANCO's Communication Plan

Annette Shumard provided an overview regarding the status of developing ORSANCO's communication plan. This year Annette started conducting in person meetings with communication staff from each member state and strategic partners in order to create a basin wide communication plan intended to incorporate a collaborative approach that ensures consistent joint messaging for member states, internal staff, general public, and stakeholders. Staff is seeking input from TEC on the development of this plan.

Member Updates and Interstate Water Quality Issues

Illinois

Scott Twait reported the following:

PFAS Permit Progress

As of 5/30/24 the NPDES permit program is issuing permits that have PFAS monitoring requirements (quarterly) and requirements for BMPs/PMPs. The count includes the major municipal, major industrial, as well as the minor industrial facilities within the targeted industrial SIC codes.

- Approximately 12 NPDES permits - issued with PFAS requirements.
- Approximately 86 NPDES permits - renewals that are out on public notice with PFAS requirements being proposed.

2024 Integrated Report

The 2024 Integrated Report was submitted to USEPA for approval on October 3rd. The Agency is now awaiting USEPA's approval.

Ambient Sampling

Prior to 2023, the Agency sampled all 147 ambient stations 9 times/year. In January 2023, the Agency reduced sampling from 97 ambient sites from 9 times/year to quarterly due to staffing issues and kept 50 sites at 9 times per year to support the NLRs loading calculations. Starting next year, the Agency will be returning to sampling all the ambient stations 9 times/year.

Coal Combustion Residuals (CCR)

The Agency is expecting to do another rulemaking to incorporate the Federal updates. There are some questions on authority, so the attorneys are looking at the issue.

Indiana

Gabrielle Ghreichi is the new Indiana representative to the Technical Committee, replacing Brad Gavin, and she reported on the following items:

Water Quality Standards

- We are working on our 2024 WQS review priorities list. We are considering adopting EPA's 2018 aluminum criteria, adopting aquatic life criteria for a few pesticides and biocides, updating Indiana's human health criteria derivation methodology in both the Downstate and Great Lakes part of our WQS rules, and are also re-evaluating our limited use designated use streams. Our public hearing to solicit feedback on list of priorities will be on December 11, 2024. The public hearing will be part of the Environmental Rules Board meeting that takes place on December 11, 2024.
- Aquatic Life methodology rulemaking update: IDEM is getting close to finalizing proposed rulemaking language for this rulemaking. IDEM is working to adopt the Great Lakes aquatic life methodology state-wide.
- U.S. EPA reviewed the Indiana 2024 303(d) List of Impaired Waters and issued a [partial approval](#) on May 17, 2024. In its partial approval, U.S. EPA concluded that IDEM's 303(d) list is not fully consistent with the requirements of Section 303(d) of the Clean Water Act and EPA's implementing regulations based on IDEM's decision to not list several waterbodies for certain metal pollutants. U.S. EPA initiated a 30-day public comment period for their changes, which ended on July 16, 2024. No comments were received, and U.S. EPA issued a final action on the Indiana 2024 303(d) list on September 11, 2024. That information is available on our website: [IDEM 2024 303\(d\) List](#)
- N-STEPS nutrients project with EPA and TetraTech is moving along. We are working on evaluating all our nutrients-related water chemistry data, fish, macroinvertebrates and diatom datasets to evaluate potential relationships between nutrient levels and aquatic life impacts. IDEM will use this study to potentially re-examine how it assesses the impact of elevated nutrients on Indiana's warm water aquatic life use.

PFAS in Drinking Water

- Update on PFAS DW Sampling Project Phase 4 (Surface water sampling of water bodies containing drinking water intakes):
 - IDEM received an Emerging Contaminants Grant extension to study PFAS in Indiana surface water bodies that are used for drinking water
 - Initial samples were collected near the surface water intakes
 - 32 Surface Water Systems and a total of 44 intakes
 - 3 systems had PFOS or PFOA detects above Drinking Water MCLs for finished drinking water
 - Resamples have been collected and we are waiting for results.
 - Coordinating with OLQ to locate potential causes of detections above Drinking Water MCLs
 - 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 October, IDEM will finish sampling for the special project titled "Farmers Helping Hellbenders Initiative" in the Blue River and Indian Creek watersheds in the Ohio River basin. Water chemistry was collected monthly for 1 year, pesticides (including neonicotinoids) sampled monthly through October, and macroinvertebrates sampled once July - August. The sampling was conducted in collaboration with Purdue University and the Natural Resources Conservation Service's (NRCS) Regional Conservation Partnership Program (RCPP),
- IDEM's Fish Tissue program is wrapping up sampling in the Lower Wabash River Basin (from Lafayette to the confluence with the Ohio River). In 2025, the Ohio River Basin tributaries will be sampled. For more information or specific requests please reach out to Tim Fields (TFields@idem.in.gov).

- NPS Management Plan: Submitted a final draft to EPA. Updates to through 2029. No major changes to monitoring components; NPS Plan impacts our 319 funding, not our 205j funding, which is being used to fund ORSANCO monitoring from IDEM's end.
- IDEM and ORSANCO had an overlapping site on the Tippecanoe River upstream of SR 18 that was sampled this summer for the National Rivers and Streams Assessment (ORSANCO) and the Stream Regional Monitoring Network (IDEM). Dylan Brown (IDEM) worked with Ryan Hudson (ORSANCO) to coordinate sampling, so the events took place at least two weeks apart. IDEM conducted fall sampling for macroinvertebrates and fish community on September 3rd.
- IDEM finished probabilistic monitoring in the Upper Wabash River Basin for 2024 and will be sampling in the Lower Wabash River Basin for 2025. 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.

Kentucky

Katie McKone reported the following:

Kentucky's 2024 Integrated Report was submitted to the U.S. Environmental Protection Agency (EPA) on September 13, 2024. EPA approved Kentucky's 2024 303(d) list on October 3, 2024. During the public comment period, we received a comment regarding the development of a bacteria TMDL for the Ohio River, with appropriate recognition of CSO communities and their long-term pollution control plans. In response to this comment and in acknowledgement of the high priority placed on addressing bacteria impairments in DOW's Clean Water Act Section 303(d) Prioritization Framework, DOW raised the topic of the Ohio River Bacteria TMDL at the June 2024 ORSANCO Technical Committee Meeting.

A follow up meeting with EPA Regions 4 & 5, Kentucky DOW, and ORSANCO was subsequently held on Friday, August 23, 2024, to discuss the current status of the multi-agency, basin-wide TMDL effort. At this meeting, DOW learned that the workgroup has no plans to resume work or allocate resources to the completion of this TMDL. Considering this new information, the TMDL priority ranks for the bacteria-impaired Ohio River mainstem segments have been moved from High to Medium on the 2024 303(d) list, and the Prioritization Framework has been revised to make it clear that TMDLs for the Ohio River mainstem segments are not currently planned for completion under the Kentucky Statewide Bacteria TMDL framework. DOW will begin evaluating a range of approaches to these needed TMDLs.

Kentucky's [2024 Integrated Report](#), which includes our full responses to comments received, and the [2024 305\(b\) workbook](#) are now available online, and linked in this state update.

Related, Kentucky's final 2025-2026 TMDL Submittal Schedule and Vision Priority Commitments were submitted to EPA, where new listings from 2024 could be considered.

2024 Triennial Review

- Public Notice of 2024 Triennial Review released on August 15, 2024, and ended on October 4, 2024
- Public Listening Session was held on August 29, 2024
- Initiation of administrative regulation promulgation process (KRS Chapter 13A) anticipated during summer 2025
- EEC intends to update:
 - Domestic Water Supply Intake Locations (401 KAR 10:026; Table B)
 - Surface waters with Outstanding State Resource Waters Designated Use (401 KAR 10:026; Table C)
 - Surface waters categorized as Exceptional Waters (401 KAR 10:030; Table 2)

PFAS

We are partnering with EPA ORD in Cincinnati on a powdered activated carbon study with some of our public water systems that may have only occasional exceedances of the PFAS MCL thresholds. We are hoping this study will provide helpful guidance and protocols to assist systems in evaluating if powdered activated carbon may be an effective and more affordable treatment option for PFAS in certain circumstances.

During the public comment period on the 2024 303(d) list and prioritization framework for impaired waters, we received a comment regarding the development of a bacteria TMDL for the Ohio River, with appropriate recognition of CSO communities and their long-term pollution control plans. The comment urges Kentucky to develop a TMDL using its statewide approach. The Kentucky Division of Water will need to appropriately address this comment, and in order to do so, we'd like to request ORSANCO coordinate a meeting with the appropriate EPA regions and Kentucky DOW to discuss the current draft TMDL and options for Kentucky's development of TMDLs for bacteria impaired segments along the Ohio River.

Ohio

Melinda Harris reported on the following items:

Water Quality Monitoring and Assessment

- 2024 field season wrapped up. We conducted surveys in the following Ohio River Basin watersheds:
 - Upper Scioto and Olentangy River watersheds in Central Ohio
 - Central Ohio River tributaries (Cross Creek, Short Creek, Wheeling Creek, McMahan Creek, Captina Creek, Sunfish Creek and other direct Ohio River tributaries)
 - Sampling in 2024 will focus on recreation use, drinking water reservoirs, unverified beneficial use designations and sampling around the Buckeye Reclamation Landfill. Sampling in 2025 will focus on aquatic life use attainment, drinking water reservoirs, fish tissue, sediment, and chemistry sampling.

Water Quality Standards

- Currently working on:
 - Variances – completed Interested Party Review comment period on the draft rule revisions and currently responding to comments
 - Revisions include updates consistent with U.S. EPA's 2015 federal variance requirements, update of multiple discharger mercury variance, and addition of a new multiple discharger variance for ammonia for lagoon systems
 - The multiple discharger mercury variance will only be applicable in the Lake Erie drainage basin
 - Nutrient Assessment Procedure (NAP) – Completed Early Stakeholder Outreach and working on draft rule language. This new rule will contain the methodology used by Ohio EPA to determine if a stream or large river is impaired or threatened by nutrients.
 - Also conducting preliminary outreach on a Nutrient Implementation rule, which we expect to start working on this fall. This rule will describe the process for including nutrient limits in NPDES permits when there is not a TMDL in place
 - Antidegradation – Currently open for Early Stakeholder Outreach review. Considering review and update of special waters across the state and moving this portion of the rule **into a separate rule to allow for easier future updates.**

H2Ohio Rivers Fund

- PFAS sampling of 29 large rivers at 151 sites across the state started in fall 2023 and has been completed. Ohio EPA expects to receive a report of the sampling by the end of the year.

NPDES Program Updates

- MSDGC Consent Decree: The Defendants submitted timely Phase 2B schedule of the Wet Weather Improvement Plan (WWIP) that is under consideration by the Regulator Team which includes affordability concerns. Highlights of the proposed plan includes capital improvement projects at Little Miami and Mill Creek WWTPs as well as a 100 MGD High Rate Treatment System (HRT) at the Little Miami WWTP that is expected to allow treatment of flows that are currently bypassed at the WWTP during wet weather events. It is expected that in a successive phase to phase 2b of the WWIP, a HRT at Muddy Creek WWTP will be constructed. These WWTP HRTs represent a change in approach from the original 2010 approved WWIP in that in lieu of remote HRTs in the collection system, larger HRTs at WWTPs (Little Miami/Muddy Creek/Mill Creek) are proposed and have been conceptually accepted by the regulator team.

Pennsylvania

Kevin Halloran reported on the following:

1. Triennial Review of Water Quality Standards proposed rulemaking published in the PA Bulletin in October 2023.

DEP presented the draft final-form rulemaking to the Agricultural Advisory Board (AAB) in April and the Water Resources Advisory Committee (WRAC) in May. WRAC voted to support the final-form rulemaking to the Environmental Quality Board (EQB). DEP expects to present this rulemaking at the October EQB meeting.

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. DEP presented a proposed rulemaking for stream re-designations to the EQB in September. The rulemaking will allow re-designation of numerous streams that PFBC classifies as Class A wild trout streams to High Quality streams under DEP's regulations. The EQB adopted the regulation for publication as a proposed rulemaking. DEP anticipates publication of the proposed rulemaking in the *Pennsylvania Bulletin* November 2024. Upon publication, the public comment period will open for 45 days, and the EQB will hold at least one public hearing to receive testimony and comments on the proposed rulemaking.
3. DEP presented the draft final-form rulemaking for some updates to our site-specific water quality criteria regulations (Chapter 93, section 93.8d) to the Water Resources Advisory Committee (WRAC) in May and to the Agricultural Advisory Board (AAB) in June. WRAC voted to support presentation of the final-form rulemaking to the EQB, and DEP expects to present this rulemaking to the EQB in the 4th quarter of 2024.
4. PFAS update: all community public water suppliers are sampling, started putting sampling requirements in NPDES permits.
5. ALCOSAN update. Completed most of the new headworks. Submitted permits applications for Ohio River tunnel, plan to start next year.

Virginia

Jeffrey Hurst reported the following:

Selenium Update

Since our last meeting, the Virginia State Water Control Board (SWCB) directed staff to proceed to a Notice of Public Comment (NOPC) for promulgation of a site-specific aquatic life criterion for selenium for several tributaries to Knox Creek in Buchanan County, which is in the Big Sandy watershed. This rulemaking is in response to a petition from Clintwood JOD, LLC to amend the Water Quality Standards regulation to incorporate EPA's most recent selenium criteria recommendation. A notice was published in the October 7, 2024 issue of the Virginia Register with a 60- day comment period. A public hearing at the Buchanan County Public Library is scheduled on November 14, 2024. State Water Control Board member and ORSANCO Commissioner, Lou Ann Wallace, is scheduled to chair the hearing. Information on this regulatory action is available at: <https://townhall.virginia.gov/l/ViewAction.cfm?actionid=6387>

Regulatory Update

- Notice of Intended Regulatory Action (NOIRA) has been issued and published on September 23, 2024, to start the Administrative Process for the Biosolids Storage amendments required under HB870. This will revise language, update definitions, citations, and references throughout the regulation.

- Nutrient Trading Regulation (9VAC25-820) expires 2026, and DEQ will be opening that regulatory process up in the coming year.

PFAS Assessment and Source Reduction Efforts Update

During the 2024 General Assembly session, an effort to address potentially significant sources of PFAS in public water system's raw water sources was passed and implemented this past summer. HB 1085 requires every public water system to assist Virginia DEQ by transferring to the Department quarterly validated monitoring results that indicate PFAS exceedances, as defined by the bill. The legislation further requires DEQ to develop and implement a plan to prioritize and conduct PFAS assessments for identifying significant sources of PFAS in water bodies that are also sources of public water. This bill also establishes a PFAS Expert Advisory Committee to assist DEQ and our Virginia Department of Health in its PFAS related efforts, and requires DEQ to annually report back to the Governor and General Assembly by October 1st of each year on its findings.

- *EPA method 1633. Thresholds are based on EPA's drinking water regulations.*
 - *MCL (enforceable levels) 4 PPT for PFOA and PFOS, 10PPT for PFHxS, PFNA, and GENx.*

West Virginia

Scott Mandirola reported the following:

Upcoming Legislative Session starts February 12.

WQS triennial review proposal for 2025

- E Coli is being proposed for change from fecal
- Addition of an alternative aquatic life use based on the completion of a UAA
- Addition of 7 HH criteria currently not in the rule. 54 of the 96 2015 EPA updates were included in the last TR, these 7 new parameters are currently in permits because there is RP based on the NPDES permitting guidelines for the particular Industrial Codes.
- Rules will be in LRMRC in Nov

NPDES Fee rule is being updated

- 75% increase, hasn't been increased for Industrial permits since 1999, municipalities since 1992.
- If no fee increase the program will run out of money by August 2025.

Air rules

5 rules are being updated to incorporate new federal requirements (IBR)

Haz waste Rule

One rule being updated to incorporate new federal requirements (IBR)

Permit action

- Chemours reissuance for Washington works facility is in, the company is modifying the application currently
- Chemours has been issued a second permit for a second PFA production line which has been in production since September 1. Three carbon bed treatment is required on this line to achieve 99.999 percent removal for GenX and PFOA .

PFAS Protection Act status

- USGS contract testing 106 additional finished water sources, results should be back shortly.
- WV has received a 1 million dollar grant from EPA to do public outreach for emerging pollutants in disadvantaged communities (PFAS). It has been awarded 3 virtual and one in person meeting have been held for planning with the participating NGO'S. The first outreach meeting in the communities should be held shortly
- Reporting of PFAS use by industries completed on 12/31/23. The 6 industries that have reported the use or manufacture of PFAS compounds have had their permits modified to include quarterly monitoring for PFAS, as per the Act.

DEP has submitted its UIC primacy package to EPA for approval.

EPA has overlisted additional streams for impairment on WV submission of the integrated report. DEP is working with EPA on an updated assessment tool to resolve this issue in the future.

US Army Corps of Engineers

Erich Emery reported the following:

The Ohio Basin experienced a dry year this year with 5-50% of typical rainfall in many parts of the basin. Extreme and exceptional drought conditions persisted in parts of Ohio and West Virginia, with the remainder of the basin in moderate to severe drought. Stream flows were in the 10-25th percentile range, while reservoir water levels were low. Only minor HABs events were identified in Corps reservoirs this year.

Dr. Patrick Ray presented to TEC on the effects of reservoir flow augmentation on Ohio River low flows during times of drought. A manuscript on this work has been published, and they are now completing an economic analysis of this work.

The Corps Drought Contingency plan for the Ohio Basin was presented to TEC with a request for comments/input, and that plan is currently undergoing a final review.

US Geological Survey

Jeff Frey and Pete Cinotto reported the following:

- ***Lowflow/Streamstats report*** for Ohio has been approved and will be published soon in collaboration with OWDA/OEPA. We will send the citation when it is released.
- ***3D printer for supergages saves money*** - using it to make protective bars for our Supergages wipers that saves us \$1800 per monitor (we have two back at the company now)
- ***Large Scale Particle Imagery Velocimetry (LSPIV)*** on the Ohio River at Cincinnati - uses cost-effective camera images and machine learning to measure surface velocity (through the identification and tracking of particles) and, subsequently, compute discharge. This will be the first time it will be tried on a river as large as the Ohio River.
- ***Water information from space (WISP) USGS gage data linked to NASA Surface Water and Ocean Topography (SWOT)***. Will improve coverage of stage data as technology matures. Currently, SWOT has around a 16 day latency and errors increase as streams decrease in size with best results in rivers greater than about 50m in width.
- ***Trail cameras*** - being used to develop discharge gages in smaller headwater streams using low-cost trail cameras and machine learning algorithms to determine discharge through a series of ranked images creating an image / discharge rating curve.
- ***LoCAS network at Jenkins KY*** - uses LoCAS monitors, in conjunction with a USGS gage network, provide a cost-effective, 'fit for purpose' alert system for areas with flashy flooding issues and limited finances to put in full streamgages and where that level of data is not required by the mission. These LoCAS systems protect lives and critical infrastructure; the public can be notified by the LoCAS systems to using the USGS Water Alert.

US Environmental Protection Agency

David Pfeifer reported the following:

USEPA has finalized national recommended aquatic life criteria for certain PFAS compounds.

Region 5 is currently reviewing ORSANCO's draft monitoring strategy document and will provide comments this month. The region is also reviewing ORSANCO's closeout reports for 106 base and monitoring grants covering 2022-24.

Chemical Industry Advisory Committee

Kathy Beckett reported the following:

The Chemical Industry Advisory Committee has met via email over the past several months. Certain members indicated they would be submitting comments to the monitoring plan. The CIAC will continue to monitor issues and invites other committees to reach out when we might assist.

Power Industry Advisory Committee

Cheri Budzynski reported the following:

USEPA has issued multiple final rules that impact the power industry. These rules have been challenged by states and industry. Most of the challenges are pending in the DC Circuit Court with the exception of the ELG rules which have been consolidated in the Eighth Circuit Court.

Public Information Advisory Committee

Betsy Mallison Bialosky reported the following:

PIACO met this week. It was a brainstorming session and we discussed the strategic communication plan. We also discussed working more closely with the tech committee on key issues, many of which we had presentations on yesterday. The strategic communication plan is slated to be presented at the February Commission meeting.

Watershed Organization Advisory Committee

Heather Hulton VanTassel reported the following:

Thank you for the time and consideration when it comes to hearing from the Watershed Organizations across the Ohio River Basin. We would like to thank ORSANCO for expanding their focus on plastics and PFAS as emerging contaminants and increasing efforts around those contaminants.

We look forward to helping advocate for the Ohio River Basin Restoration Plan and federal designation as a collective. We would like to emphasize the importance of recognizing the threats and challenges of our basin, including legacy and current industrial pollution in our watersheds. While it can be politically challenging to bring light to these ongoing pollution sources, we cannot come together as a watershed to resolve these issues without first addressing the problem. The Ohio River Basin is worth restoring and protecting, and addressing industrial pollution is a necessary step towards progress.

We are still working through the Monitoring Network and Assessment Strategy. However, we would like to provide some initial feedback for consideration. We are glad to see ORSANCO addressing PFAS as an emerging contaminant. Nevertheless, it would be helpful to confirm the reporting level for this assessment strategy. We also recognize that many people within ORSANCO understand the intricacies of the way ORSANCO monitors and assesses our waters; however, we request a more detailed and clear methodology so that those not involved can fully understand the efforts underway. We also recommend taking advantage of the abundance of data collection ORSANCO and consider providing a publicly accessible dataset that is readily available without request. Thank you for your time and consideration of the Watershed Organizations.

Water Users Advisory Committee

Erica Pauken reported the following:

ODS Network

Staff gave a status update was on the Organics Detection System (ODS). Still waiting for the laboratory at Parkersburg to finish their renovations to install the new GCMS system. Louisville purchased their own GCMS system, so ORSANCO's system was moved to Paducah, which is an upgrade from FID detection to GCMS. Staff has been working on the application to receive the CDS funding that Senator Sherrod Brown (OH) was awarded on ORSANCO's behalf.

Harmful Algae Bloom Update

A presentation on the status of algae and Harmful Algal Blooms (HAB) in the Ohio River was given by ORSANCO staff member Greg Youngstrom. Aulacoseira Bloom started in Maysville June 14, and again in Louisville on June 24. There was a Microcystis bloom on July 25 near Carrolton, but it did not last. On August 1, there was Microcystis in Louisville over 400 ug/L toxins (the recreational advisory is 8ug/L). The advisory was lifted on August 22. There were no other detections from Huntington to Louisville during this time.

Benthic Cyanobacteria Study with USEPA

This is a nationwide study to test the theory of benthic algae feeding blooms. ORSANCO is working with the Cleveland Water Alliance, who has done their work on the Great Lakes, to set up a network of low cost sensors to remotely monitor the river with parameters such as Chlorophyll, pH, temperature, conductivity, turbidity, and oil in water. They found several potential locations throughout the greater Cincinnati and Northern Kentucky area. The Cleveland Water Alliance has a library of sensors that can be borrowed as well.

Louisville Water Company- Taste & Odor, Algae, Methylisoborneol (MIB) & Geosmin

WUAC Chairman Chris Bobay gave a presentation regarding Louisville water Company's challenges with MIB and Geosmin taste and odor issues occurring in the Louisville area, as early as April. These events appeared to be unique to the Louisville area; Chris showed the group their response efforts with their community and the treatment techniques they used to mitigate the situation. They used a combination of different strategies from taste & odor panels, GCMS analysis and PAC dosing strategies.

Microcystis was also an issue in the Louisville area and caused concern because Louisville's was holding an Ironman event that involved swimming in the Ohio in the area that there were detections of microcystin toxin present on August 17th. Prior to the event, The KYEP and KYDPH issued a recreational health advisory. The recreational water quality advisory for microcystin is 8 ug/L.

Source Water Protection

ORSANCO staff, Lila Ziolkowski and Jamie Tsiominas, gave a 2023 Spills recap. Petroleum releases and unknown sheens are the predominant incident reports ORSANCO receives. Vessel related, fixed facility, and vehicle/train related were the most common sources and Equipment and operator failures remain the most common cause of releases based on NRC report data. Allegheny, McCracken and Hamilton Counties were the top counties in 2023 with most frequent spill reports. Nearly 70% of the time the amount released to water is not disclosed.

ORSANCO Education Programs/ FORE Overview

Sarah Segars, ORSANCO's Public Information and Outreach Coordinator, spoke to the group about current activities with the Foundation for Ohio River Education (FORE). This included overviews on the River Reach Floating classroom & Canoe program, RiverWatchers Citizen Science Volunteer monitoring program, the Mobile aquarium, and River Sweep Cleanup Initiative (the last sweep event is on October 25th). Specific educational opportunities are designed to reach students in underserved communities. Awarded grants help defray the costs for students to attend in schools where there are free/reduced meals programs. This year, there have been 39 events with outreach connecting to 12,793 individuals.

PWSA Use and Application of WaterSuite

Frank Davis from Pittsburgh Water and Sewer gave a demonstration on the WaterSuite tool from Corona Environmental. Initially funded by USEPA, this product is now available through a fee-based subscription service. This product compiles publicly available datasets to provide a comprehensive tool that collects information on chemical storage, potential threats and risks in zones of concern near utilities. Some WUAC participants are using this tool in their Source Water Protection programs.

Use of PAC in PFAS Removal

Chris Bobay, Louisville Water Company, gave a presentation for about Powder Activated Carbon (PAC) for PFAS removal. They discovered a seasonal pattern with PFOA individual samples above final MCL. Highest peaks seen between September to October each year. Could this be a low flow trend? GAC costs around \$265.9 million, but annual PAC carbon is about \$4.9 million. They also found wood-based PAC is most effective on PFOA removal and long chain PFAS, but not great for Gen X removal. All PAC types help with taste and odor compounds though. They also found that coagulants have negative effects for removal of PFOA by causing interference.

Louisville Water has also purchased an LC-MS-MS made by Waters brand, which gives them a 1 day lag time for sample results (running method 533). KYDEP also has LC-MS capability (Agilent brand) which is a good back up resource to have in Kentucky.

Next Meeting

The Committee will meet again on January 28 and 29th 2024.

POTW Advisory Committee

Jim Gibson reported the following:

The most recent POTW Advisory Committee Meeting was held on September 18, 2024 with representatives from Huntington, Cincinnati, NKY, Louisville, and Evansville.

The main agenda item was a discussion of USEPA's newest guidance affecting CSO Communities titled: *Draft Guidance for Future NPDES Permitting of Combined Sewer Systems*. While not all communities represented are party to a federal consent decree, all have CSO's and are implementing Long-Term Control Plans or regulated through their NPDES permit. The meeting provided an excellent forum for CSO communities along the Ohio River to share their experiences. While some communities are well along with their LTCP implementation, others are still further from the finish line. Regardless, there was universal resistance to the draft guidance document. 8 CSO communities in Kentucky prepared joint comments to USEPA, and both Ohio EPA and the Indiana Department of Environmental Management submitted comments on behalf of their respective states. All requested the withdrawal or rescission of the document and called for collaborative dialogue with the States and communities regarding CSO control policy and their continued financial burden.

The Advisory Committee is not endorsing a particular POTW's or state's position, rather desiring to inform the commission of the activities on this topic.

The committee had hoped to also hear the details of a demonstration project for low-cost water quality sensors with internet access points that ORSANCO is working on with the Cleveland Water Alliance and Limno-Tech. The internet access points, which includes the installation of 7 gateways in the Cincinnati area, are low bandwidth, line of site, and can handle the input from up to 1,000 sensors. Once installed, agencies can be provided an account that could access their own sensors attached to the gateways (at utility buildings, schools, etc.). Unfortunately, the project team representatives could not make the meeting, so we have rescheduled this topic to be discussed at our next meeting in January.

Looking ahead, we discussed a possible joint meeting of the POTW and Water Users Advisory Committees in May 2025. This would be a 2-day meeting in person where the main topic of concern would be possible PFAS regulations.

Next meeting is scheduled for Thursday, January 23, 2025.

Next Technical Committee Meetings

The next Technical Committee meeting will be in Covington, KY, on February 11-12, 2025, followed by June 10-11, 2025, in Morgantown, West Virginia.

Comments by Guests

There were no comments by guests.

Adjournment

The 236th meeting of the ORSANCO Technical Committee was adjourned by Proxy Commissioner Mandirola at 11:58 a.m. on Wednesday, October 9, 2024.

Approved:

Proxy Commissioner Scott Mandirola

Roster of Attendance

Technical Committee

| | |
|--|------------------------------------|
| Chairman | Commissioner Proxy Scott Mandirola |
| Illinois | Scott Twait |
| Indiana | Gabrielle Ghreichi |
| Kentucky | Katie McKone |
| New York | Not Present |
| Ohio | Melinda Harris (virtual) |
| Pennsylvania | Kevin Halloran |
| Virginia | Jeffrey Hurst (virtual) |
| West Virginia | Scott Mandirola |
| US Army Corps of Engineers | Erich Emery (virtual) |
| US Coast Guard | LTJG Connor Sullivan |
| US Environmental Protection Agency | David Pfeifer (virtual) |
| US Geological Survey | Jeff Frey |
| Chemical Industry Advisory Committee | Kathy Beckett |
| Power Industry Advisory Committee | Cheri Budzynski |
| Public Interest Advisory Committee | Betsy Mallison Bialosky |
| POTW Advisory Committee | Jim Gibson |
| Water Users Advisory Committee | Erica Pauken |
| Watershed Organizations Advisory Committee | Heather Hulton VanTassel |
| ORSANCO Chief Engineer | Richard Harrison |
| Staff Liaison | Jason Heath |

Commissioners/Proxies

Tommy Branin, Douglas Conroe, George Elmaraghy, David Flannery, Toby Frevert, Sarah Jon Gaddis (virtual), Bruce Herschlag, John Hoopingarner, James Jennings, John Kupke (virtual), John Lyons (virtual), David Miracle, Ron Potesta, Lou Wallace, Mike Wilson

Staff

Ryan Argo, Bridget Borrowdale, Alexis Brandenburg (virtual), Nick Callahan (virtual), Daniel Cleves (virtual), Stacey Cochran (virtual), Jennifer Coldiron, Sam Dinkins, Tracey Edmonds (virtual), Richard Harrison, Jason Heath, Riley Lanfear (virtual), Sarah Segars (virtual), Annette Shumard, Adam Scott, Rachel Toney (virtual), Jamie Tsiominas (virtual), Greg Youngstrom (virtual), Lila Ziolkowski (virtual)

Guests

| | |
|----------------------------|---------------------------------------|
| Amy Bergdale (virtual) | US EPA |
| Pete Cinotto | US Geological Survey |
| John Dever | WV DEP |
| Jessica Fox | EPRI |
| Joyce Gentry | Benchmark Safety Health Environmental |
| John Hirschfield | Westlake Chemical |
| Tiffani Kavalec (virtual) | Ohio EPA |
| Jim Lazorchak (virtual) | US EPA |
| Rayna Laiosa (virtual) | The Chemours Company |
| Lisa Larimer (virtual) | US EPA |
| Heather Mayfield (virtual) | Mayfly Consulting |
| Mitch McAdoo | USGS |
| Mindy Neil | WV DEP |
| Andrew Phipps | US Fish & Wildlife Service |
| Nick Reif | KY Division of Water |
| Charlise Robinson | WV Rivers Coalition |
| Rick Spear | PA DEP |
| Daymond Talley (virtual) | Louisville MSD |
| Jeff Thomas | EPRI |

Jason Wandling
Maxwell Walker
John Wathen (virtual)
Jessica “Jit” Weir
MSTC Adam White
Bruce Whitteberry (virtual)

WV DEP
US Coast Guard – MSU Huntington
US EPA
IDEM
US Coast Guard – MSU Huntington
Greater Cincinnati Water Works

DRAFT