

**MINUTES
219th Meeting of the Technical Committee
Embassy Suites Cincinnati-RiverCenter
Covington, Kentucky
February 12-13, 2019**

Chairman Bruno Pigott, Presiding

Call to Order

The 219th meeting of the ORSANCO Technical Committee was called to order by Chairman Pigott at 1:00 pm on Tuesday, February 12, 2019. Six states, three federal agencies, and four Commission advisory committees were represented (for Roster of Attendance see on page 13).

Minutes of 217th Committee Meeting

ACTION: Motion passed to accept the minutes of the 218th Technical Committee meeting.

Chief Engineer's Report

Director Harrison reported on the Corps of Engineers-KY- Ohio River Basin Alliance (ORBA)-Planning Assistance to States project. The Corps requires 50-50 matching funds, and he thanked Kentucky for their matching contribution of \$150,000 for the project. ORSANCO is collaborating with ORBA, KYDEP, and the Corps of Engineers to establish an Ohio River Basin Restoration Strategy which will include a master plan of priorities for the Ohio River Basin, and which might ultimately culminate in the Ohio River Basin having national priority status similar to that of the Great Lakes and Chesapeake Bay initiatives. The Commission will be considering this initiative at their meeting on Thursday.

Dr. David Wicks provided an overview of a proposed project which would be a recreation component of the overall project. He is a Co-Chair of the Ohio River Recreational Trail Committee. The proposed recreational trail would initially extend 277 miles from Portsmouth, OH to Westport, KY, and it would address multiple recreational uses. It would involve designation as a National Water Trail through the National Park Service.

USEPA Office of Research and Development Research Priorities

Chris Impellitteri provided an overview of the USEPA's proposed research priorities for 2019-2021. Their Safe and Sustainable Water Resources Research Program addresses the Clean Water Act and Safe Drinking Water Act in the major areas of watersheds, nutrients/HABs, and water treatment and infrastructure. Watershed research topics include: Assessment, Monitoring, and Management of Aquatic Resources; Improved Aquatic Resource Mapping; and Human Health and Aquatic Life Criteria. Nutrients/HABs research topics include: Assessment and Management of Harmful Algae Blooms; Science to Support Nutrient-Related Water Quality Goals; and Assessment and Management of Nutrients. Water Treatment and Infrastructure research topics include: Drinking Water/Distribution Systems; Per- and Polyfluoroalkyl Substances (PFAS); Wastewater/Water Reuse/Integrated Stormwater Management; and Technical Support.

US Geological Survey Super Gage Monitoring Network

Pete Cinotto provided an overview of the Super Gage Monitoring Network for the Ohio River Basin. Super Gages are fixed station, continuous monitors which include a water quality sonde, a Nitrate+Nitrite sensor, an Acoustic Doppler Velocity Meter for computing river discharge, and satellite telemetry for data transmission. There are three of these gages on the Ohio River mainstem and five on major tributaries. The monitoring data has been used to calculate mean loads and yields for Nitrogen, Phosphorus, and mean suspended sediments. The USGS and testing a new prototype mobile super gage that is deployed by boat. It collects continuous data for water temperature, specific conductance, pH, dissolved oxygen, turbidity, and Nitrate+Nitrite. It has been utilized on seven major Ohio River tributaries and the Mississippi River.

Biological Programs Update

Review of ORSANCO 2017 Assessments

ORSANCO staff presented the final assessment results for the three pools sampled in 2017 for fish and macros (macros) (New Cumberland, Meldahl, and Newburgh). The fish survey results indicating that all three pools were in 'Fair' or better condition were previously approved during the prior BWQSC meeting held in December of 2017. Consideration of the final pool assessment was postponed due to a delay in the return of the macro data. Results were received by ORSANCO staff in June of 2018, when staff were in the midst of NRSA and biological surveys. Import, QA/QC procedures, and final assessments of the macro data were not completed until the after the conclusion of field activities in late Fall 2018.

Both the fish and macro assemblages of New Cumberland indicated the pool to be in 'Fair' condition. Meldahl was similarly found to be in 'Fair' condition using the macro results whereas the fish indicated it was in 'Good' condition. The BWQSC concluded the macro results of Newburgh pool should remained unassessed due to the negative impact of flow on Hester-Dendy (HD) collections (ORSANCO deploys HDs at a ten feet depth, hence HD-Deep, or, HDD). This consensus was reached after staff presented an analysis of flow versus HDD colonization success.

Using data from the CASCADE flow model (1986-2016) staff generated Harmonic Mean Flow (HMF) values for every modeled location on the Ohio River (234 nodes) during the colonization months of September and October; effectively generating a 30 year average flow observed in the period during which HDDs were deployed. The HMF of each node observed in any one year was then compared to the overall 30yr HMF. This percent of HMF ($\%HMF = (\text{Annual HMF}/30\text{yr HMF}) * 100$) for a given year represented how that year's flow regime compared to normal conditions (30yr HMF). Staff showed that beyond 250% Harmonic Mean Flow the number of individuals that colonize an HDD is severely depressed. Using several flow data sets, staff showed that Newburgh pool experienced multiple events that exceeded the 250% HMF benchmark. The BWQSC concluded that the elevated flow regime observed during September and October of 2017 precluded the collection of comparable macro samples from Newburgh pool. Because the macro results were qualified, Newburgh was only assessed using the fish results which indicated the pool to be in 'Good' condition. This final pool assessment, along with the other two pools, were approved by the BWQSC and will be posted to ORSANCO's website.

Review of ORSANCO 2018 Sampling Activities

ORSANCO detailed the fluctuating Ohio River conditions experienced throughout the 2018 field season. The two probabilistic pools (Emsworth and Pike Island) experienced an extended period of elevated spring and early summer flows. The early July electrofishing surveys occurred as these elevated flows were declining. Though conditions were within sampling constraints (stage <2' above normal and Secchi >15") at the time of survey, both pools exhibited decreased catch rates. Suppressed catch rates can be observed in periods during and immediately after high flows as fish seek refuge and/or take advantage of new habitats.

Emsworth fish survey results indicated that the pool was in 'Fair' Condition, matching the 2012 survey from last cycle. Pike Island was similarly found to be in 'Fair' condition, which is one condition rating lower than the last time it was surveyed in 2012. The main reason for this lower rating was the previously mentioned decrease in

number of individuals collected. The CPUE metric (Catch Per Unit Effort, i.e. how many individuals are collected in the 500m site) average score was 7.0 in 2018, nearly 10 times lower than in 2012 (69.7 average). Given the remaining 12 fish metrics exhibited limited variation from the prior survey, the results indicated that the fish assemblage remained in stable condition and that flow regime was the main factor causing the decrease in observed score. The ephemeral nature of the decrease in individuals sampled was further supported by the fixed station results.

Eighteen fixed stations are sampled river-wide annually in the month of August, three-four weeks after the probabilistic pools. Aside from serving as a means to track long term fish assemblage trends the data from these sites are used to confirm or refute any observed patterns in the probabilistic data. Unlike the 2018 probabilistic sites, flows were normal and relatively stable for a four-week period prior to the fixed station surveys. Statistical analysis revealed that fixed station catches were significantly higher than those observed at the probabilistic pools, primarily due to greater numbers of small fishes (e.g. gizzard shad and minnows). The increased presence of these smaller fishes later in the year during a period of normal flow indicates that their absence at the probabilistic sites was likely due to high flow avoidance rather than decreased survival/fecundity resulting from other parameters.

Macro sampling was completed in both Emsworth and Pike Island pools, with 100% and 60% HDD retrieval respectively. Both pools had extended periods of extremely high flows during the six week colonization period. Elevated flows directly attributed to decreased retrieval rates in Pike Island. Furthermore, HDDs from both pools exhibited high water effects (e.g. moved out of target area, sedimentation, and excess debris). Results from the 2018 pools should be available in early March, at which time ORSANCO staff will hold a conference call with BWQSC members to discuss macro index results and finalize 2018 pool assessments. An RFP for macro speciation and enumeration services was completed in January of 2019. As part of the request labs were informed that all future contracts will include a late fee for data returned after 110 days of sample receipt. This should ensure future results are received in a timely fashion to allow for assessment completion and dissemination prior to the beginning of the following field season.

A fifth year of paired Sestonic Nutrient and Dissolved Oxygen (DO) data were collected alongside the macro data from the pools, with 100% of the DO continuous sensors being retrieved. The DO sensors exhibited similar effects of high flows as the HDDs (e.g. sedimentation and movement). The DO data have been offloaded and are undergoing QA/QC procedures. Submerged Aquatic Vegetation surveys were conducted at each of the probabilistic sites. These data will be used to further investigate the effects of native and exotic vegetation on ORSANCO's biological surveys and indicators. A total of 17 fish tissue samples were collected and submitted to the lab for analysis. Data are expected in February 2019.

Other Initiatives/Research

Per approval of the BWQSC in 2016, staff repurposed field effort associated with one pool survey to participate in the USEPA-led National Rivers and Streams Assessment (NRSA), a part of the larger National Aquatic Resources Surveys (NARS). ORSANCO was offered 99 total events from the states of Kentucky, Ohio, Pennsylvania, and West Virginia for completion between 2018-2019. Ryan Hudson (ORSANCO Contractual Biologist) provided an overview of the data ORSANCO staff were tasked with collecting and the locations of the 60 events that were sampled between May and the end of September, 2018. In total, Ryan Hudson along with a combination of six full-time ORSANCO staff (Ryan Argo, Bridget Borrowdale, Daniel Cleves, Stacey Cochran, Rob Tewes, and even Greg Youngstrom) and 6 seasonal biologists (Bridget Fallis, Kris Howard, Jenn Howell, Taylor Sasak, Vanessa Vest and Mack White), spent 17 weeks sampling 3-4 sites per week for numerous instream, riparian, and biological data. All data were successfully delivered to USEPA contractors via app-based submission prior to the end of 2018. ORSANCO staff have entered all fish-related data into ORSANCO's internal fish database, from which requests can be made. All remaining abiotic, macro, and periphyton data must pass QA/QC procedures before being made available to the public on USEPA's NARS webpage (www.epa.gov/national-aquatic-resource-surveys/data-national-aquatic-resource-surveys). Staff presented the locations of the remaining 38 sites (one site was unsampleable and the overdraw fell to the responsibility of another agency) to the subcommittee and requested members notify staff of any additional data needs from the proposed sites.

In 2018 staff conducted two special studies at the request of our member states. While conducting probabilistic surveys in Pike Island Pool, staff conducted a special macro survey at Steubenville WWTP on behalf of OEPA in conjunction with an observing third-party contractor. The survey required staff to conduct habitat surveys, collect

ambient water quality measures and deploy and retrieve five HDDs; four surrounding plant outfalls and one reference location upstream of the facility. The purpose was to determine WWTP effluent effects on surrounding macro communities. Three of the five HDDS were retrieved. One of the lost samples was from the reference location, data from which can be easily substituted for HDD data from any of three ORSANCO probability samples collected upstream of the study location. Samples were preserved and sent to a third-party laboratory for identification and enumeration. As one of the unrecovered samples was located directly at one of the target outfalls, the city is considering repeating the study in 2019. Due to a lack of logistical overlap, staff currently do not plan to be part of a second round of sampling in 2019.

The second special study took place while conducting probabilistic surveys in Emsworth Pool near ALCOSAN. Working in conjunction with PADEP, this exercise required staff to use existing probabilistic HDDs and deploy one additional HDD upstream and downstream of and directly at the facility in addition to conducting habitat surveys. The purpose was gather baseline data in preparation for ALCOSAN's upgrade permit application. Crews also assisted PADEP staff in sediment and ambient water quality collections.

A co-operative agreement between ORSANCO and USACE-Louisville District was reached that included additional parameter collection at the 10 fixed stations within the Louisville District. Louisville District funded the water and sediment chemistry analyses, in addition to multi-habitat macro samples collected by ORSANCO staff at the time of electrofishing. These data add to an existing dataset from 2007-2011 (funded by the USEPA Environmental Monitoring and Assessment Program – EMAP) that was used in abiotic gradient generation vital to the creation of the Ohio River Macro Index (ORMIn). The USACE support helps maintain the ability of staff to further test and refine these products in the future.

Staff updated the subcommittee on Ohio River Mussel Database. ORSANCO was awarded an Electric Power and Research Institute (EPRI) agreement in October 2017 to help enhance and update an existing Ohio River mussel database (which has not been maintained since it was developed in 2000). The agreement also funded a mussel survey of Newburgh pool, which yielded several new taxa and nearly 3-times the number of individuals than a prior survey conducted in 2012. A technical brief detailing the updates to the database was completed in April of 2018 and is available at www.epri.com (Product ID: 3002013900). The database will be appended to and maintained by ORSANCO staff and is publicly available to via data request.

Proposed 2019 Field Activities

As previously mentioned, the BWQSC supported ORSANCO staff reducing the number of pools surveyed in the field seasons of 2018 and 2019 to two pools. R.C. Byrd and Smithland pools were proposed and agreed upon by the BWQSC as the two pools for survey in 2019. Along with Dashields and Hannibal, these two are the only pools not surveyed since 2013. Of the four pools, R.C. Byrd and Smithland are in closest proximity to remaining NRSA activities, allowing staff to maximize field efficiency. Furthermore, selecting these pools allows for more downstream coverage from the previous year as Dashields and Hannibal pools are in close proximity to the 2018 pools (Emsworth and Pike Island).

The BWQSC was content with 2018 field season progression regarding additional studies and decided to employ the same plan for the 2019 field season. First, they requested that staff attempt to sample the full suite of 18 fixed stations. Secondly, the subcommittee recommended that staff continue to collect paired water quality and sediment at biological sites. Lastly, it was concluded that any additional sampling within scheduled survey pools would be best determined by ORSANCO and the concerned state/federal agencies. Overall, the subcommittee recognized that these special studies are secondary to 2019 field season primary objectives (complete 2 pool surveys and 38 remaining NRSA sites), and are to be completed as resources allow.

Flow Data

A large portion of discussions during the meeting involved flow and how to address its effects on biological data. Staff detailed that this process is confounded by the varying degrees to which flow data are available, coupled with the fact that each dataset is generated by a unique model. Staff presented the various datasets available to ORSANCO. The National Oceanic Atmospheric Administration's (NOAA) National Weather Service (NWS) provides daily data at 25 locations that ORSANCO staff enter into an internal database. The NOAA/NWS dataset begins in 1998 and is added to daily. The United States Geological Survey (USGS) has approximately 30 stations on the Ohio River from which data can be queried, however data availability can vary temporally and

longitudinally. The Cascade dataset is from a now-retired USACE model that produced daily values at 234 nodes on the Ohio River. ORSANCO would receive the data from the USACE at various times throughout the year and add it to an internal database that covers 1986-2016. The Cascade model was retired in 2016 in favor of a joint agency model initiated by the USACE and NWS, the Hydrologic Engineering Center-River Analysis System (HEC-RAS) Ohio River Community model. The HEC-RAS model generates data for 1,000+ points on the Ohio River, but does not overlap with (begins in 2017), nor is it currently translatable to the Cascade dataset.

To date, staff do not have a means to efficiently collect continuous flow measurements from each biological site. The only dataset providing >20 years of data is the NWS dataset. However, as derived from only 25 locations (primarily Lock & Dam projects), analyses require the aggregation of site-level information to the pool-level. Decreasing resolution can decrease the ability to detect changes within biological datasets. For this reason, staff have largely used the Cascade dataset when analyzing any relationships with biology as it provides the most resolute and extensive data. For post-2016 events, this introduces another issue as staff are identifying relationships with one dataset and must then translate benchmarks to another dataset for comparison. The BWQSC recognized these difficulties and the need for comprehensive flow data paired with biological sites; offering their assistance and identifying additional sources of data. In the interim, the BWQSC recommended that staff continue to generate flow metrics from the data available for use in investigating its effects on ORSANCO's biological indicators.

Recommendations

1. Accept all three 2017 pool assessments. The assessments indicated the macro and fish assemblages in New Cumberland and Meldahl were in 'Fair' or better condition. The Newburgh Pool assessment was based only on the fish survey, which was in 'Good' condition. High flow events during the macro colonization period precluded the collection of comparable samples from Newburgh Pool.
2. Accept the 2018 fish survey results which indicated the Emsworth, and Pike Island pools were in 'Fair' or better condition.
3. Conduct 2019 probabilistic sampling in Robert C. Byrd and Smithland pools.
4. Proceed as planned to sample the remaining 38 NRSA events in 2019 in lieu of 1 biological pool survey.
5. As resources allow in 2019:
 - a. maintain current fixed station effort (18 sites)
 - b. collect paired water quality and sediment at biological sites
 - c. conduct additional sampling within the two probabilistic pools as directed by relevant state and federal agencies
6. Continue investigating the effects of abiotic/biotic factors (e.g. flow, *Hydrilla*, seasonality, etc.) on both the modified Ohio River Fish Index (*mORFIn*) and Ohio River Macro Index (*ORMIn*)

HABs Update

Chris Nietch, US EPA Office of Research and Development, presented on the results of an effort to develop a HAB risk characterization tool. The tool uses level gages to compare the current conditions to those experienced during the 2015 HAB event. A visualization scheme has been developed using R Shiny, and a method for making it web-accessible is being investigated. ORSANCO staff are collecting data from other sources to expand the tool. These sources include water utilities, data from HAB monitoring stations, and USGS super gauges. Once this data is collected it will be evaluated for use in the risk characterization tool.

Staff provided an update on HAB activities. ORSANCO has received 604(b) funds from West Virginia to support the US EPA risk characterization tool and from Indiana to install 2 HAB monitoring stations along the Indiana section of the Ohio River. These stations are expected to go online in June, 2019.

In December 2016, US EPA proposed Ambient Water Quality Criteria of 4 ug/L for microcystin and ug/L for cylindrospermopsin. Due to additional studies reviewed during the comment period these numbers are expected to change to 8 ug/l for microcystin and 16 ug/L for cylindrospermopsin.

Ohio River PFAS Study

Chris Impellitteri provided an overview of the EPA's PFOA Stewardship Program, which is a voluntary program to reduce emissions with participation by eight major international companies. He then discussed PFAS contamination issues in the Cape Fear River Basin. The EPA participated in a PFAS contamination study in the

Parkersburg, WV area which identified elevated levels of PFOA in the Ohio River. Results of the study may inform the selection of Ohio River sampling sites for ORSANCO's upcoming surveys.

Staff then presented outcomes of the ORSANCO PFAS Workgroup meeting to develop a water quality survey design for the Ohio River. Objectives of the survey are to characterize Ohio River ambient conditions for PFAS and GenX compounds with twenty sites under two seasonal conditions. The USEPA will be conducting the analytical work and has been assisting with a probabilistic survey design. Staff has been compiling sample collection protocols from states and is developing a sampling QAPP/SOP. The workgroup will continue to meet in developing a survey design for the Ohio River.

Mercury Mass Balance Project

Staff presented preliminary results of a Mercury Mass Balance for the Ohio Basin. The project utilized mercury water quality data to develop instream mercury loads for fifteen major tributaries and four Ohio River stations, atmospheric data to develop mercury deposition loads to the watershed, and discharge monitoring data to develop point source mercury loads for the basin. Based on interim data, at the most downstream Ohio River site, point sources account for less than five percent of the instream Ohio River mercury loading. Staff will be working with the states to quality assure the point source data utilized in the project. A draft report is anticipated prior to the June TEC meeting and a final report in October, 2019.

Source Water Protection Program Update

Staff provided an overview of the ongoing activities associated with the Commission's Source Water Protection and Emergency Response programs. This included a review of the Commission's key roles in spill response which include notification of water utilities and response agencies, coordination of response activities, time-of-travel modeling, water quality monitoring and analytical support. A progress report was also provided for a contaminant source inventory pilot project which seeks to develop a GIS database tool to assist water utilities in assessing potential water quality risks. This effort is primarily funded by US EPA with additional support from Greater Cincinnati Water Works and the Northern Kentucky Water District. The expanded study area for this initial effort extends over 100 miles from Portsmouth, Ohio to Cincinnati.

Staff also presented a summary of the Water Users Advisory Committee's efforts to evaluate options and develop recommendations to the Commission concerning the instrument replacement strategy for the next generation of the Organics Detection System. A number of factors were evaluated including potential contaminants of concern, instrumentation options, and monitoring system design options. The Water Users Advisory Committee's recommendations provide several tiered options for the Commission to use as a replacement strategy guide which considers critical monitoring needs while being mindful of available resources to support the system. The recommended design options ranged from expanding the current system capabilities at two locations to include semi-volatile organic compounds to reducing the number of gas chromatograph mass spectrometers (GC/MS) supported by the system from nine to a minimum of four GC/MS units. A scoring matrix was also developed to aid in prioritizing GC/MS sites in the event reductions were necessary in the future.

Member Updates and Interstate Water Quality Issues

Ohio

Tiffani Kavalec reported Laurie Stevenson was appointed Director of OEPA in January, 2019, and that Craig Butler will be serving as her proxy on the Commission. The Division of Surface Water is about to public notice proposed rules to adopt USEPA's human health water quality criteria as well as ORSANCO's criteria for the Ohio River where more stringent than OEPA's criteria. They will be proposing a new definition for the protection of cold water habitats which includes cold water plants as an indicator, as well as water temperature criteria.

United States Environmental Protection Agency

Andrew Tschampa reported that EPA work schedules have been compressed due to the recent furlough. The EPA Administrator will be making a public announcement tomorrow regarding a plan to move forward with development of MCLs for PFAS. All USEPA regions will be undergoing a realignment to put all enforcement programs covering the various media into a single division. Region 5 has asked the Ohio River Basin states if

they would like to complete their own pathogen TMDL for the Ohio River, and thus far, Ohio has responded that they would prefer a federal TMDL for the Ohio River.

Watershed Organizations Advisory Committee (WOAC)

Rich Cogan reported that the committee has been working heavily on input regarding the Pollution Control Standards review and they hope to have continued dialog with the Commission with regards to a new proposal which may be forthcoming.

Power Industry Advisory Committee

Cheri Budzynski reported that they are anticipating EPA's release of proposed Effluent Limit Guidelines rules in the spring, 2019. The National Utility Group has argued that biological treatment should not be a requirement for all facilities. Regarding Waters of the US rule, there is a split among the states on the application of two different definitions of the rule. In addition, the USEPA in December released revised aluminum criteria for the protection of aquatic life which includes site-specific implementation.

Public Information Advisory Committee

Betsy Mallison reported that PIACO will be meeting in the afternoon, and one of the topics on their agenda is to discuss funding opportunities for ORSANCO's mobile the aquarium.

Kentucky

Katie McKone reported the following:

Water Quality Standards – Triennial Review

- Conducted four listening sessions across the state to Provide an Opportunity for Public Comment on Water Quality Standards (WQS) located in 401 KAR Chapter 10, proposed revisions to 401 KAR Chapter 10, and National Recommended WQS Criteria
- Decided not to adopt EPA's ammonia or revised Human Health Criteria at this time. We are still determining impacts of revised ammonia criteria to regulated entities and will be forming a work group to tackle possible State developed human health criteria.
- Aligning the Water Quality Standards with the policy decisions made regarding CSOs consistent with the Clean Water Act CSO Policy
- How to permit residual Combined Sewer Overflows (CSOs) after full implementation of approved Long Term Control Plan (LTCP)
 - DOW is proposing to allow use of Financial Capability Assessment from LTCP to demonstrate substantial and widespread economic and social impact in the development of a Use Attainability Analysis (UAA)
 - DOW is proposing to temporarily suspend recreational criteria during residual CSO events for CSO receiving stream segments listed in 401 KAR 10:026
 - Unlikely to be approved unless linked to an approved UAA
- Adding 52 OSRW segments or watersheds, KY Arrow Darter watersheds, Big Sandy Crayfish segment as well as 3 segments for T&E mussels
- Special Use Waters
 - Adding 29 Exceptional Waters based upon finding an excellent fish or macroinvertebrate community
 - Clarifying that the cabinet shall have the authority to establish more stringent instream water quality criteria if necessary to protect the exceptional aesthetic, ecological, chemical, physical, or scientific value of an OSRW.
 - DOW is proposing to protect Exceptional Waters as Tier 2 waters under antidegradation regardless of other identified impairments
- Selenium:
 - Proposing to adopt EPA's 2016 recommended criteria of 11.3 mg/kg dry weight for fish fillet for bottom feeder or predator fish > 12 inches in length which will reduce cost of compliance and assessment analysis
 - Proposing to remove Kentucky's egg/ovary value of 19.3 mg/kg* dry weight
 - *EPA did not approve the egg/ovary criterion
- Cadmium: Update to EPA's 2016 recommended criteria but retain as total recovered (not dissolved)

- Carbaryl (Sevin): proposing to adopt EPA's 2012 recommended criteria
- Copper: proposing to allow use of a site-specific Copper Biotic Ligand Model
- Submitted a comment draft of our proposed changes to EPA for preview and expect feedback soon. We anticipate filing later this spring as long as any issues identified by EPA are resolved.
- Convening a workgroup to evaluate Human Health water quality criteria

2018/2020 305(b) Assessments

- In the process of moving to production of our new assessment database
- Assessment process will begin this spring
 - Basin Management Units of focus will be Salt/ Licking, 4 Rivers, and Green/Tradewater
- Complete KATTS development and move to production.

Statewide Bacteria TMDL

- The Division of Water submitted the Kentucky Statewide Total Maximum Daily Load for Bacteria Impaired Waters on January 28, 2019 to EPA Region IV. EPA will issue a decision within 30 days.

2019 Monitoring

- Ambient next work (streams and lakes) is focusing within the Salt and Licking Basin Management Units this year
- Probabilistic will be monitoring on a statewide scale
- Numerous watershed studies, reference reach trends network sites, and fish tissue sampling also occurring.

Permitting

- Developing a technology-based approach for including nutrients limits in some permits
- Re-issue General Permits: KYG4 (coal); KYG50 transportation; KYR10 (construction stormwater); KYG15 (airports); KYG11 (concrete & asphalt); KYG84 (non-coal mining); and the industrial KNDOP GP
- Improve the electronic submittal process for construction permits and increase the percentage of construction permit applications to 25%.
- Use Permit by Rule and Registered Permit by Rule to address no impact and minor impact activities in regulatory floodplains, respectively.

Infrastructure Updates

- Working on legislation to require EEC to study alternate sources of water infrastructure funding and identify other regulatory tools (e.g. operational permits, asset management) to better address issues with struggling water and wastewater systems.

ORBA

- Ohio River Basin Alliance (ORBA) is the outcome of the October 2009 Ohio River Basin summit that was co-led by the US Environmental Protection Agency (EPA), USACE, ORSANCO, and the former Ohio River Basin Water Resources Association.
- ORBA has identified high priority regional challenges that may provide a framework for the collaborative development of an Ohio River Basin-wide Strategy, modeled after similar efforts such as the Great Lakes or Chesapeake Bay Restoration initiatives.
- The objectives of the Ohio River Basin wide Strategy are to:
 - Identify collaborative organizations for water resources management;
 - Identify and document challenges, priorities, and strategies developed by collaborating organizations;
 - Identify and fill gaps with respect to water resources management
 - Develop an action plan to prioritize strategies into a comprehensive Ohio River Basin-wide strategy
- Kentucky DOW contributed \$150,000 as match.

Indiana

Eileen Hack reported that IDEM is updating their metals rulemaking for cadmium and selenium and expect to issue a final notice this year which will not include aluminum. In the next rulemaking they anticipate updating the aquatic life methodology for the Ohio Basin as well as EPA's 2015 updates to its national recommended water quality criteria. They have formed a group to begin exploring aquatic life ammonia criteria. Regarding nutrients, one of the USEPA's case studies involving nutrient modeling for criteria development involving nitrogen and Microcysis is being conducted in Indiana.

They are also working on assuming the federal 404 permitting program. For probabilistic monitoring this year, they will be working in the Ohio River Basin. Regarding NPDES permitting issues, three large cooling water intakes on the Ohio River are in various stages of addressing 316a thermal criteria and 316b impingement/entrainment requirements.

Illinois

Scott Twait reported that John Kim has been appointed Director of the Illinois EPA. They have established a Nutrients Science Advisory Committee to address numeric nutrients criteria, which issued a report in December that is current out for public comment. They are developing a sampling strategy for public water intakes regarding PFOS and PFOA. They are working with EPA to develop a simplified approach regarding ammonia.

Pennsylvania

Kevin Halloran reported that the consent decree regarding ALCOSAN's CSO long term control plan should be finalized soon. Regarding their standards triennial review, they are currently working on a response to public comments and hope to have the update finalized by the end of 2019. The Shell petrochemical facility under construction in Monaca, PA is expected to come on-line with full production beginning in spring, 2021, with wastewater discharges beginning in the spring of 2020.

West Virginia

Scott Mandirola reported that WVDEP is currently in legislature with their standards rule. The proposal includes use of harmonic mean flow for carcinogens, allowance of overlapping mixing zones, use of the biotic ligand model (BLM) for copper criteria, use of the water effects ratio (WER), and it's unclear what will be the outcome from the 60 updated human health criteria in the proposal. WVDEP has been working with Honeywell to develop discharge objectives for the Hanlin-Allied-Olin superfund site along the Ohio River in Moundsville, WV, regarding its pump and treat facility for mercury-contaminated ground water

United States Army Corps of Engineers

Erich Emery reported that they are partnering with the University of Cincinnati on a ground-truthing project while flying a plane with hyperspectral imagery over two of their reservoir projects. Objectives of the project is to learn how satellite hyperspectral imagery can improve the situational awareness for their 83 reservoir projects in the Ohio Basin. They have developed new algorithms for using satellite imagery for phycocyanin, chlorophyll a, and turbidity. They are taking a retrospective look at their reservoirs to see how their trophic status has changed using remote sensing data. They are working on a project with the University of Cincinnati and University of Alabama to develop an "r" package that will generate results for phycocyanin, chlorophyll, and turbidity, and allow for various atmospheric corrections. They are also developing a viewer with the project to simplify understanding the data.

Water Users Advisory Committee

Bruce Whiteberry reported that the committee met in mid-January. The two main topics included standards and the ODS renovation. WV American Water recently conducted a "desk top" emergency response exercise, and the WUAC received a report on lessons learned which was beneficial to members. A dye time of travel study was performed to simulate a spill from an interstate bridge located immediately upstream of the Cincinnati and Northern Kentucky intakes.

Virginia

Melanie Davenport reported that the VA legislature has recommended a phased implementation plan for their newly adopted ammonia criteria. The legislature is also proposing coal ash pond closure procedures. VA is developing chlorophyll-a criteria for the Chesapeake Bay TMDL.

Pollution Control Standards Update

Staff provided an overview of the status of review of the pollution control standards. In June of 2015, the Commission established an ad hoc committee to review its role in water quality standards. The ad hoc committee developed a set of five alternatives for its future role in standards, along with a preferred alternative and a minority report. The preferred alternative essentially removes all criteria and mixing zone requirements from the standards. The minority report discusses the downside of the preferred alternative and suggests that an enhanced role by ORSANCO in harmonizing states' implementation of standards for the Ohio River is needed.

In October, 2017, the Commission authorized its Pollution Control Standards Committee to open an initial public comment period on the five alternatives under consideration. The public comment period opened on January 10 and concluded on February 24. Staff made its normal public notifications of the public comment period and held two informational webinars. The Commission received 797 public comments that were opposed to revisions based on Alternative #2 and 17 comments in favor of Alternative #2. A second public review period was held June 26 through August 20, 2018, with a formal hearing on July 26 to receive input on specific revisions to the standards. Comments received during the second public review included: 10 comments in favor of the proposed revisions and 5,776 comments opposed to the proposed revisions. All information and comments have been placed on the Commission's website.

At its October, 2018 meeting, the Commission deferred action on the proposal to allow the PCS Committee additional time to consider public input. The PCS Committee and a working group of the committee met several times to consider alternatives.

Comments by Guests

Rich Cogen – The recommendations [according to] the document that was shared by Richard Harrison is dated January 31st that the PCS Committee recommendation, key considerations, stated that we are less than two weeks from that particular document. By the way, I want to thank Richard Harrison and the Commissioners who spent time meeting with us, different members of WOAC, as well as having conference calls to receive feedback, we greatly appreciate that outreach effort. But with less than two weeks from the recommendations from PCS to draft a proposal for consideration at tomorrow's Commission Meeting, we [members of WOAC] believe that to build consensus, not just with the Commissioners themselves but also the public's, that we don't have a repeat of the thousands of public comments that were received on alternative 2 that were against the proposal, that there should be more time, more deliberation involved. While it is subjective as to how much time is needed to draft a proposal, that the Commission tomorrow adopt the recommendations of the PCS Committee, and then spend the next couple of months drafting a proposal for consideration at the June meeting. And then, after feedback from the different Committees, not just WOAC, but all the subcommittees, just as they did last year for all the different alternatives, then a better proposal can perhaps result, and, in June, it can then be adopted and sent out for public comment. Thank you Mr. Chairman.

Angie Rosser (WV Rivers Coalition) – You heard Scott point out human health criteria updates, which I have much admiration for what he does year after year, and you have also heard that West Virginia has chosen to apply a West Virginia rate rather than a national rate, which is half of the national average, and that gives us a different set of numbers. We are also anticipating, as Scott said, that there will be more state-specific inputs like body weight and water consumption. The conundrum that it raises for me, for this unique situation on the Ohio River, is that West Virginia [has] an obesity problem, and bigger bodies will have a different number than folks across the river who might have less body mass. So I can understand that we are talking about state-specific numbers being different based on characteristics of the river as the river changes up and down the length. But we [talk] about different characteristics of people's physical bodies or behavior characteristics, and we are coming up with

different numbers based on that, it can become problematic when you are dealing with the length of a river and what kind of criteria is used on which side. I just mention that because it has been on my mind, as this body is considering the PCS and where to go with that, and even though EPA does recommend that states use local data for these human health criteria, again, we are going to face every state having a different number, and what effect that [has in] terms of body weight, for example. Thanks for considering that.

Ariel Miller – As I read these recommendations, it sounds as if you would like any pollution control standards to be recommended but not required for the states [of ORSANCO]. Am I reading it correctly? [Response: Yes, you are.] Thank you.

Judy Petersen – Just looking at the recommendations, I would say [that I] look forward to a robust public comment on those because this is significantly different than any one of the five proposals that people commented on in the past. And, again, I would just encourage Commissioners to keep in mind something I have maintained for many years. Now, as I have come to Commission meetings, that the value of having a Commission like ORSANCO that does set standards, even if they are not required, that are strongly recommended, for all the states. ORSANCO is still, as far as I know, the model. If you are going to things like the Upper Mississippi Basin Commission, that has looked at ORSANCO and ORSANCO's ability to set standards that apply across the entire river, up and down...when states share a river like the Ohio or Mississippi, this Commission is the envy of all those other kinds of commissions. And in part, it is because of your joint ability to meet and discuss the river, and your ability to come together and put together standards for the river that all the states, even if they don't adopt every one of them, would at least be able to justify why their standard is different than what ORSANCO would recommend for the river. And I would just encourage you, before you give up that authority, that ability...to really think seriously about it. But again, I look forward to commenting on whatever does come out, and I just encourage you again to really think twice about that authority. Just let the public vie in and [consider the] trust that you maintain [for the public] that you may be giving up.

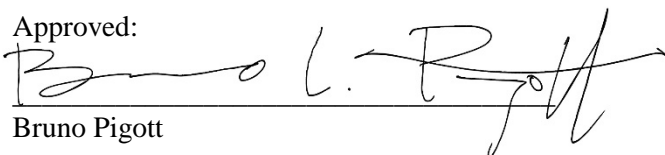
Marylynn Waitman (Environmental Coalition, Huntington Area) – I have two things to say. One, that I really would like to see, if there is ever an expansion in monitoring stations, one somehow put in between Point Pleasant and Huntington. The one at Huntington is not sufficient to notify those of us in Huntington of a spill, because we were not notified of the [?] incident through West Virginia American Water. The other thing, getting on to the Pollution Control Standards, we are a member organization of the Clean Water Act too, so we have been looking at this throughout the whole history and then [again] today. Listening to Scott's comments and Angie's comments...they are being way too polite about the whole trying to see what's going on in West Virginia. I'll say, in my plain language; it terrifies me. Because what they're essentially talking about is taking us back to the 1980's standards for our monitoring systems. Folks, in my opinion, you don't want to leave it up to West Virginia to monitor the waters. We need ORSANCO standards to stay in place. Thank you.

Amy Meyer (Ohio Environmental Council) – I wanted to thank the Commission [for] actually slowing down and taking some time and talking with us. We hope that, going forward, we know that there will be a discussion later today...that whatever you guys come back with, there will be robust dialogue before it goes to the public. Thank you.

Adjournment

The 219th meeting of the ORSANCO Technical Committee was adjourned by Chairman Pigott at 12:25 am on Wednesday, February 13, 2019.

Approved:



Bruno Pigott

Prepared by Jason Heath, P.E., BCEE with contributions from Ryan Argo, Sam Dinkins, and Stacey Cochran.
(Recording of proceedings available at Commission Headquarters)

PowerPoint presentations from this meeting are available on the Commission website at www.orsanco.org.

Roster of Attendance

Technical Committee

Chairman	Commissioner Bruno Pigott
Illinois	Scott Twait
Indiana	Eileen Hack
Kentucky	Katie McKone
New York	Not present
Ohio	Tiffani Kavalec
Pennsylvania	Kevin Halloran
Virginia	Melanie Davenport
West Virginia	Scott Mandirola
US Army Corps of Engineers	Erich Emery
US Environmental Protection Agency	Andrew Tschampa
US Geological Survey	Pete Cinotto
Power Industry Advisory Committee	Cheri Budzynski
Public Interest Advisory Committee	Betsy Mallison
Water Users Advisory Committee	Bruce Whitteberry
Watershed Organizations Advisory Committee	Rich Cogen
NPDES Subcommittee	Brad Gavin
ORSANCO Chief Engineer	Richard Harrison
Staff Liaison	Jason Heath

Commissioners/Proxies

Stuart Bruny, Craig Butler, Doug Conroe, Charles Duritsa, George Elmaraghy, David Flannery, Peter Goodmann (proxy), Aaron Herzig (Counsel), John Hoopingarner, John Kupke, Ron Lovan, Scott Mandirola (proxy), Jennifer Orr (proxy), Bruno Pigott, Ron Potesta, Sanjay Sofat, Mike Wilson and Davitt Woodall.

Staff

Ryan Argo, Dave Bailey, Bridget Borrowdale, Danny Cleves, Lisa Cochran, Stacey Cochran, Sam Dinkins, Richard Harrison, Jason Heath, Ryan Hudson, Heather Mayfield (FORE), Taylor Sasak, Bridget Taylor, Rob Tewes, Greg Youngstrom, Lila Ziolkowski.

Guests

Nathan Alley	Sierra Club
Melanie Arnold	Kentucky Division of Water
Don Bialosky	PA DEP
Robin Blakeman	WOAC
Bill Boria	PIACO
Henry Connor	PIACO
Heather Davis	National Wildlife Federation
Madeline Fleisher	WOAC
Jason Flickner	WOAC
Chris Impellitteri	ORD-USEPA
Cheryl Johncox	Sierra Club
Amy Klei	Ohio EPA
Marie Kocoshis	Sierra Club
Lauren McDonald	Kentucky Division of Water
Kristy Meyer	Ohio Environmental Council
Ariel Miller	Shomrei Olam Jewish Environmental Advocates of Cincinnati
Chris Nietch	ORD-USEPA
Judy Petersen	PIACO
Randi Pokladnik	OVEC
Angie Rosser	WOAC
Ted Schneider	Goldenberg Schneider
Janet Smith	LWV (retired)
Lesley Sneed	Kentucky Division of Water

Harry Stone
Jeff Thomas
Tom VanArsdall
David Wicks

Ohio River Basin Association
EPRI
KY Department of Fish and Wildlife
River City Paddle Sports