



227th Technical Committee Meeting

Commissioner Bruno Pigott, Chairman

Presiding

October 6, 2021



The meeting will begin at 8:00 A.M. Below are a few tips to effectively navigate the meeting:

- *Confirm that your first and last name is entered correctly in the GoToMeeting software.*
- *Mute your microphone at all times unless speaking.*
- *Disable your camera unless you are a Technical Committee member.*
- *The presenter will prompt participants for verbal questions, or use the Chat feature.*
- *Detailed GoToMeeting instructions and important information can be found in the previously emailed document, "ORSANCO Virtual Technical Committee and Commission Meeting Instructions."*
- *If you need assistance during the meeting, please call our office at 513-231-7719 ext. 100.*



Chairman's Welcome & Roll Call

Commissioner Bruno Pigott
Chairman, Technical Committee

TEC Members Roll Call



- IL – Scott Twait *
- IN – Eileen Hack *
- KY – Katie McKone *
- NY – Melanie Stein *
- OH – Audrey Rush *
- PA – Kevin Halloran *
- VA – Melanie Davenport*
- WV – Scott Mandirola *
- USACE – Erich Emery*
- USCG – Josh Miller *
- USEPA – David Pfeifer *
- USGS – Jeff Frey *
- CIAC – Vacant
- PIAC – Cheri Budzynski
- PIACO – Betsy Mallison
- POTW – Alex Novak
- WOAC – Angie Rosser
- WUAC – Bruce Whitteberry
- Chairman – Commissioner Pigott *
- Executive Director – Richard Harrison *

* Voting member

Agenda for the 227th Meeting of the Technical Committee



TECHNICAL COMMITTEE MEETING AGENDA

CHAIRMAN'S WELCOME AND ROLL CALL (8:00 A.M.)

ACTION ITEMS AND REPORTS

1. Action on Minutes of 226th Technical Committee Meeting*
 2. Chief Engineer's Report
 3. Ohio EPA's First Far-Field Nutrient TMDL (Western Lake Erie Basin)
 4. PFAS Project Status
 5. Report of the 305b Work Group
 6. TEC Member Roundtable Reports
-

OTHER BUSINESS

- Comments by Guests
 - Announcement of Upcoming Meetings
-

ADJOURNMENT (NOON)

Agenda Item 1:

Request for action on minutes of the 226th Technical Committee Meeting



Chairman Pigott

The minutes were emailed with the agenda package on September 16,
2021



Agenda Item 2: Chief Engineer's Report

Executive Director Harrison



Agenda Item 3:

Ohio EPA's First Far-Field Nutrient TMDL (Western Lake Erie Basin)

Tiffani Kavalec

Agenda Item 4:



Ohio River Ambient PFAS Survey

Dinkins, Heath

Project Oversight

- PFAS Work Group
 - States
 - Federal – USEPA, USGS, USACE
 - Water Utilities
 - ORSANCO Advisory Committees
 - ORSANCO Commissioners
- All aspects of the project reviewed by work group, reported in detail to ORSANCO's Technical Committee, and regular updates to Commission.

Study Objective

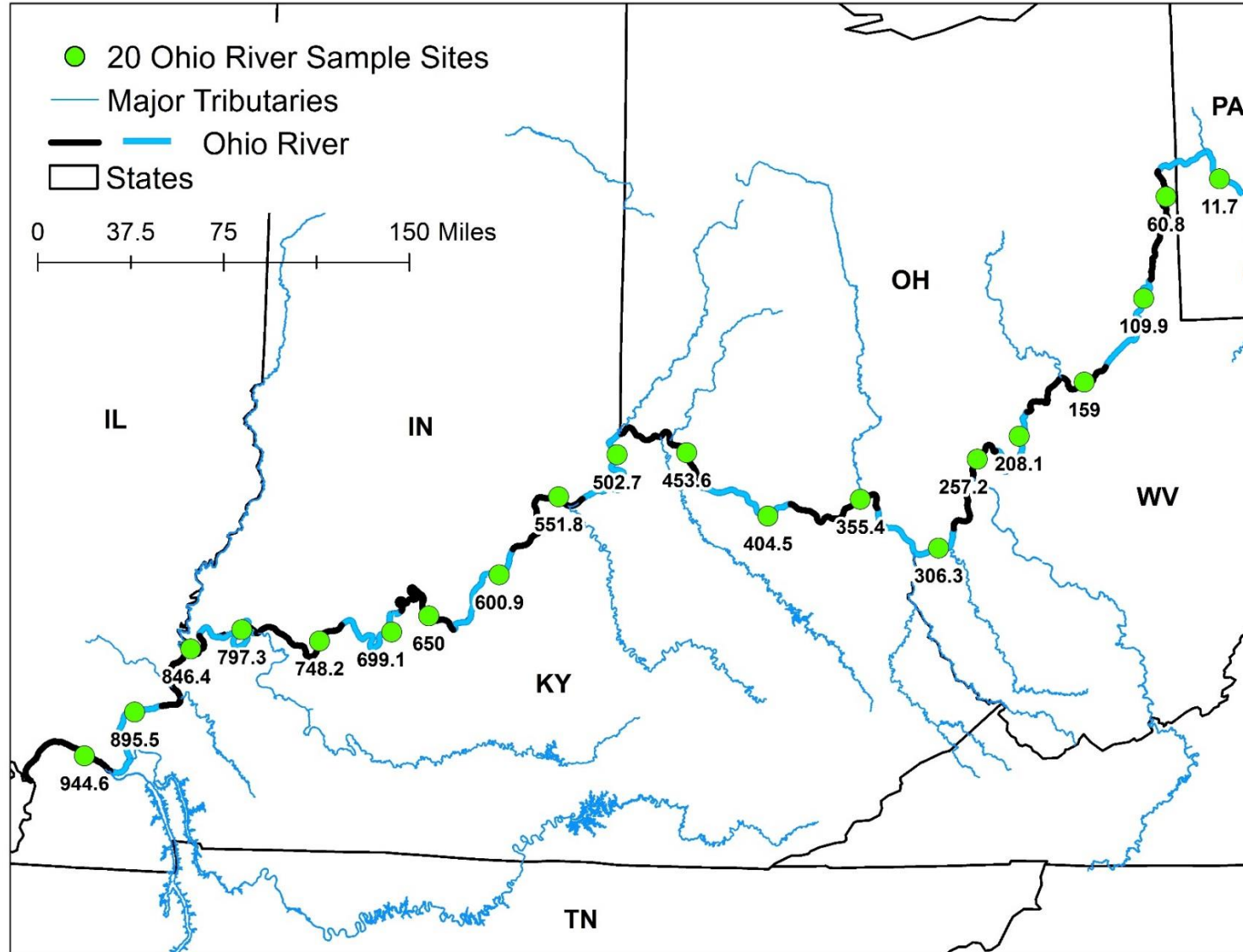
- Characterize ambient conditions relative to PFASs in the Ohio River at 20 locations
 - Two rounds of sampling (different seasons)
 - Probabilistic-systematic approach used for site selection.
 - Outside of any regulatory mixing zones.
- The survey is not intended to focus on drinking water, but rather develop ambient baseline conditions for the Ohio River.
- Results may inform states, EPA, utilities & other interested parties on Ohio River ambient water quality conditions. The Commission is developing a communication plan.

Survey Design

- PFAS Sample Collection
 - 20 Ohio River ambient sites
 - 2 tributaries (Allegheny & Monongahela)
 - 9-point discrete sample collection at 3 sites
 - Conduct test run with field blanks (Spring 2021)
- Survey Timing
 - Round #1: Summer 2021
 - Round #2: Fall 2021
 - Each round requires 6 weeks to complete

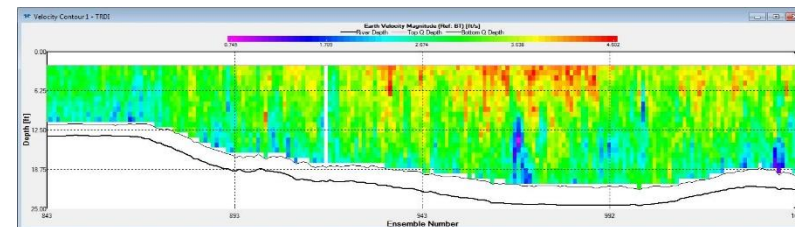


Systematic-Probabilistic Approach



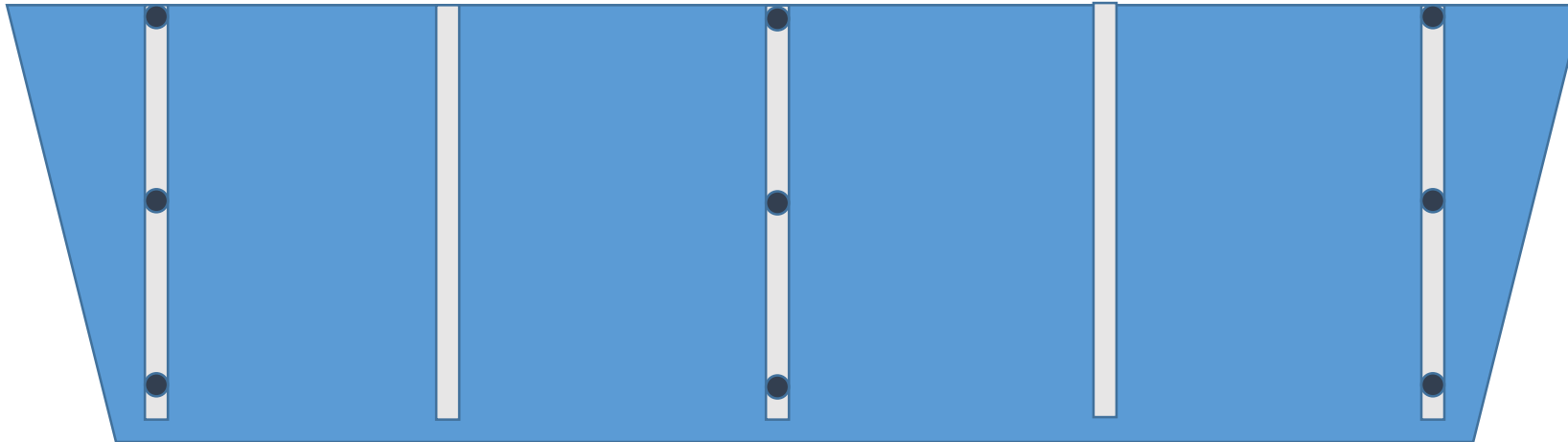
Sample Collection Methodology

- Use EDI (Equal Discharge Increment) method for all Ohio River and tributary sampling locations
 - Flow-weighted, depth integrated cross-sectional sampling provides for a more representative sample collection method
- Discrete samples to be collected at 3 existing sampling sites
 - Analyze discrete samples separately to gain understanding of vertical and lateral distribution of PFAS in the water column



Discrete Sampling at 3 Transects

- Below diagram represents one transect from the 20 selected sites.
- 9 discrete samples will be collected using a peristaltic pump and silicone tubing
- The purpose is to investigate how PFASs are distributed in the water column.
- Discrete samples will be collected on the same day as the EDI composite sample.



Sample Analysis

- Analysis performed by US EPA contractor Battelle Laboratories
- Newly developed DoD lab method (LC-MS/MS)
- 28 PFAS analytes (includes Gen-X)
- QA/QC Samples
 - Equipment blanks – 1 per site
 - Replicates and Matrix Spikes – 3 per round
 - Field blanks & Trip blanks – 1 per week

Since Last Update

1. Round #1 Completed

- June 15 – July 21, 2021
- 20 Ohio River + 2 tributary sites
- Discrete sampling at 3 sites
- Still awaiting final analytical results
- Preliminary results indicate low levels present
- Only 5 of 28 analytes detected >LOQ

2. Round #2 begins next week

- September 28 – October 28, 2021
- Increasing number of discrete sampling sites to 5



ORSANCO Ohio River PFAS Study

River and QA Sample Collection Schedule

Round 2

	Date	Sample Location ORM	Primary Sample	Discrete Cross-section Samples	Field Replicate	Equipment Blank	Field Blank	Trip Blank	Matrix Spike/MS Duplicate	Total Samples
Week #1	9/28/2021	943.90	1	0	0	1	0	0	0	2
	9/28/2021	894.60	1	0	0	1	1	0	0	3
	9/29/2021	845.31	1	0	0	1	0	0	2	2
	9/30/2021	796.50	1	0	0	1	0	1	0	3
Week #2	10/4/2021	747.45	1	0	0	1	0	0	0	2
	10/5/2021	698.40	1	0	0	1	0	0	0	2
	10/5/2021	649.35	1	0	0	1	0	0	0	2
	10/6/2021	600.48	1	9	0	2	0	0	0	12
	10/7/2021	551.25	1	9	0	2	1	1	0	14
Week #3	10/11/2021	502.25	1	0	0	1	1	0	0	3
	10/12/2021	453.15	1	0	0	1	0	0	0	2
	10/12/2021	404.71	1	0	0	1	0	0	2	2
	10/13/2021	355.05	1	9	1	2	0	0	0	13
	10/14/2021	306.00	1	9	1	2	0	1	0	14
Week #4	10/18/2021	257.60	1	9	1	2	0	0	0	13
	10/19/2021	207.90	1	0	0	1	0	0	0	2
	10/20/2021	159.22	1	0	0	1	0	0	0	2
	10/20/2021	109.60	1	0	0	1	1	0	0	3
	10/21/2021	60.75	1	0	0	1	0	1	0	3
Week #5	10/26/2021	11.76	1	0	0	1	0	0	2	2
	10/26/2021	AL8.2	1	0	0	1	0	0	0	2
	10/27/2021	MO11.9	1	0	0	1	1	1	0	4
	Totals		22	45	3	27	5	5	6	107

Observations from Round 1 Preliminary Data

- 5 of 28 PFAS were above the laboratory level of quantification (~ 5 PPT).
 - PFOA (8 sites)
 - HFPO-DA (GenX) (9 sites)
 - PFBA (1 site)
 - PFBS (3 sites)
 - PFPeA (5 sites)
- 12 of 28 PFAS were above the detection level.
- PFOA & GenX had the largest number of samples above LOQ.
- GenX had the highest value (32ppt).
- There were detections of 1 or more PFAS at every site.
- 9 discrete samples collected at 3 sites – not much stands out in terms of PFAS distribution in the water column.

Preliminary Data: QA Results

- Equipment blanks were collected with every sample
 - 1 PFAS detected <1ppt at each of 2 sites.
 - PFHxA & PFPeA
- 4 sets of replicates all had good agreement.
- Preliminary data is subject to an external review prior to being considered final.
- 2 samples arrived at the lab out of temperature range. We did not repeat based on EPA recommendation.

Questions or Comments?



Agenda Item 5: 305b Workgroup Update

Assessment Methodology Review

Ryan Argo

227th TEC Meeting - Virtual

October 6th, 2021

305b Assessment Methodology Review

- March 2021 – Staff provided workgroup members a summary of methodologies and 2020 report to review
- August 2021 – Virtual meeting to discuss comments and proposed revisions to current methodologies and potential generation of a new HAB assessment approach
- Adopted changes largely focused on assessment thresholds
 - e.g. designating different thresholds for toxic & conventional pollutants

305(b) ALU Assessment Methodology - Updated

Fully Supporting

- Conventional Water Pollutant - <10% criteria exceedance for any one water pollutant
- **Toxic Water Pollutant - No exceedances or 1 exceedance**
and/or
- Biota - *mORFI*n and *ORMI*n scores are greater than or equal to 20.0
 - (i.e. a condition rating of 'Fair', 'Good', 'Very Good', or 'Excellent')

Partially Supporting - Impaired

- Conventional Water Pollutant - >10% and <25% criteria exceedance for any one water pollutant
- **Toxic Water Pollutant - >1 exceedance, AND ≤10% of samples**
and/or
- Biota - one of the indices scores 'Fair' or better (>20.0)
and, the other index scores 'Poor' (10.0 - 19.9)

Not Supporting - Impaired

- Conventional Water Pollutant - >25% criteria exceedance for any one water pollutant
- **Toxic Water Pollutant - >1 exceedance AND >10% of samples**
and/or
- Biota - pool in which both indices score 'Poor' (<20.0)
or, in which either index scores 'Very Poor' (<10.0)

Public Water Supply Use Assessment Methodology - Updated

Fully Supporting

- Conventional Water Pollutant - <10% criteria exceedance for any one conventional pollutant
- **Toxic Water Pollutant - No exceedances or 1 exceedance**
- Survey/USEPA DB - and there are no finished water MCL violations caused by Ohio River water quality

Partially Supporting - Impaired

- Conventional Water Pollutant - >10% and <25% criteria exceedance for any one pollutant (toxic or conventional), and there was a corresponding finished water MCL violation caused by Ohio River water quality, OR
- **Toxic Water Pollutant - >1 exceedance, but ≤10% of samples, OR**
- Survey - Frequent intake closures due to elevated levels of pollutants are necessary to protect water supplies and comply with provisions of the Safe Drinking Water Act (meet MCLs), OR
- Survey - Frequent “non-routine” additional treatment was necessary to protect water supplies and comply with provisions of the Safe Drinking Water Act (meet MCLs)

Not Supporting - Impaired

- Conventional Water Pollutant - >25% criteria exceedance for any one pollutant, AND
- **Toxic Water Pollutant - >1 exceedance AND >10% of samples, AND**
- Survey - There was a corresponding finished water MCL violation caused by Ohio River water quality

Contact Rec. Use Assessment Methodology - Current

Fully Supporting

- Water - $\leq 10\%$ *E. coli* criteria exceedance

Partially Supporting - Impaired

- Water - $> 10\%$ and $\leq 25\%$ *E. coli* criteria exceedance

Not Supporting - Impaired

- Water - $> 25\%$ *E. coli* criteria exceedance

Contact Recreation Use Assessment



- Most stringent state criteria used for assessment for any particular stretch
- Vast majority of river is assessed based on historical ***E. coli*** longitudinal surveys
 - 15 historical river-wide longitudinal surveys (2003-2008)
 - Criteria assessed as percentage of *individual samples*
- Contact recreation data from the past 5 years collected Apr-Oct in the 6 largest CSO communities –
 - Assessed as percentage of *monthly geo mean* exceeding criteria
- *Ongoing review of how ORSANCO applies each specific criteria*

Fish Consumption Use Assessment Methodology - Updated

Fully Supporting

- **Water - No exceedances or 1 exceedance** (PCBs and Hg)
or
- Fish Tissue - The average consumption-weighted MeHg conc. for a pool ≤ 0.3 mg/kg

Partially Supporting - Impaired

- **Water - >1 exceedance, but $\leq 10\%$ of samples**(PCBs and Hg)

Not Supporting - Impaired

- **Water - >1 exceedance AND >10% of samples**(PCBs and Hg)
or
- Fish Tissue - The average consumption-weighted MeHg conc. for a pool > 0.3 mg/kg

305b Workgroup Recommendations

1. Update Longitudinal Bacteria (*E. coli*) Dataset

- 305b assessment based on current program samples from 6 largest CSO communities b/w Apr-Oct
 - Heavy reliance on historical data (2003-2008) collected during an intensive longitudinal survey
- Goal: Update/Replace the historical dataset used for 305b assessments to extent practicable
- Establish a workgroup to assist in the development of a monitoring design and propose to TEC

2. WV requests adding fecal coliform collections from sites along WV portion of the Ohio River

- WV only has a fecal coliform standard with which to assess Recreational Use

305b Workgroup Recommendations

3. Update the aqueous PCB and Dioxin datasets (1997-2004)

- Less priority than Bacteria Monitoring
 - All values were greater than two magnitudes higher than the criteria
 - The origin sources and nature of these parameters suggest these values haven't likely changed significantly
- Goal: Update/Replace the historical dataset to extent practicable, in the future

4. Postpone development of an Ohio River HAB assessment methodology

- ORSANCO possesses limited algal bloom data
 - 4 monitoring stations (D.O, pH, conductivity, temperature, chlorophyll, phycocyanin)
 - Data used along with USEPA HAB Risk Tool in the application of the ORSANCO HAB Plan
- Most mainstem states are not in development of HAB assessment methodologies
- Recommend: Continue to detail ORSANCO's HAB Management Plan and any HAB occurrence in future 305b reports

Agenda Item 6:

TEC Members Reports

- IL – Scott Twait
- IN – Eileen Hack
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Other Business:

- Comments by Guests
- Announcement of Upcoming Meetings
- Adjourn

Chairman Bruno Pigott