

**32nd Annual Sustainability and Environmental
Health & Safety Symposium**

**Water Quality Issues in Ohio, Indiana &
Kentucky**

March 2023

**Tiffani Kavalec
Division of Surface Water**



DSW Personnel

- Vacancies reduced significantly
- David Emerman – NEDO Chief



NPDES/208/Wet Weather

Ashley Ward - EE5 Asst Chief				
Mun NPDES/208	Ind NPDES/Coal, CAFO, GPs, PPU	CRM	Comp-liance	Enforce- ment
Walter Ariss	Cole Miller	Tyler Liston	Bill Palmer	Larry Reeder

WQ/TMDL/Lake Erie/NonPoint/Grants

Archie Lunsey - Asst Chief

Standards,
Credible
Data, Fish
Consumption
, QAQC,
RULec
Melinda
Harris

Assessment & Modeling

Mari Piekutoski

Lake Erie,
319,
Nutrients

John & Josh

Fiscal

Jennifer
Martin

401/Biosolids/PTI/Stormwater

Joby Jackson - Asst Chief

**401 &
Miti-
gation**

**Anna
Kamnyev**

**Biosolids,
Dredge,
CCR EE4**

**Betsy
Sheerin**

**PTI,
Pretrea
tment,
Op Crt**

**HSTS,
Erin
Sherer**

**Storm Water
Mgr**

Jason Fyffe

2024-2025 Budget

- Continuation Budget from 2022-2023
- Increased Requests in Federal Grants
 - Passthrough Subgrants
 - GLRI
 - Hypoxia Task Force
 - 604(b)

Water Quality Standards (WQS) Triennial Review



Why a Triennial Review?

- Required by Clean Water Act
 - States must hold public hearings to review all their standards every 3 years
 - States must consider public input all WQS rules
 - States must consider latest science
 - Not a rulemaking – it informs priorities for future rulemakings

Priority options

Option	Rule #	Rule title and subtopic if applicable
A.	3745-01-01	Purpose and applicability
B.	3745-01-04	Criteria applicable to all waters
C.	3745-01-05	Antidegradation - NPDES discharges
D.	3745-01-05	Antidegradation - Special high-quality waters
E.	3745-01-05	Antidegradation - Best available demonstrated control technology
F.	3745-01-06	Mixing zone demonstration and sizing requirements
G.	3745-01-07	Beneficial use designations and biological criteria (e.g.: Coldwater Habitat definition)
H.	3745-01-35	Aquatic life and wildlife criteria - U.S. EPA recommended and Ohio EPA developed criteria for parameters finalized since the last rulemaking
I.	3745-01-37	Water quality criteria for recreation use designations and aesthetic conditions
J.	3745-01-39	Site-specific modifications to criteria and values
K.	3745-01-40	Methodologies for development of aquatic life criteria and values
L.	3745-01-41	Methodology for deriving bioaccumulation factors
M.	3745-01-42	Methodologies for development of human health criteria and values for the Lake Erie drainage basin
N.	3745-01-43	Methodology for the development of wildlife criteria for the Lake Erie drainage basin
O.	3745-01-44	Whole effluent toxicity provisions

Online Survey

Please rank your top five choices - indicate one option each for first priority, second priority, etc. You may also indicate any number of items that you feel should not be a priority (not required).

	First	Second	Third	Fourth	Fifth	Not a priority
3745-01-01 Purpose and applicability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3745-01-04 Criteria applicable to all waters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3745-01-05 Antidegradation - NPDES discharges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3745-01-05 Antidegradation - Special high quality waters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3745-01-05 Antidegradation - Best available demonstrated control technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3745-01-06 Mixing zone demonstration and sizing requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3745-01-07 Beneficial use designations and biological criteria (e.g.: Coldwater Habitat definition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3745-01-35 Aquatic life and wildlife criteria - U.S. EPA recommended and Ohio EPA developed criteria for parameters finalized since the last rulemaking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

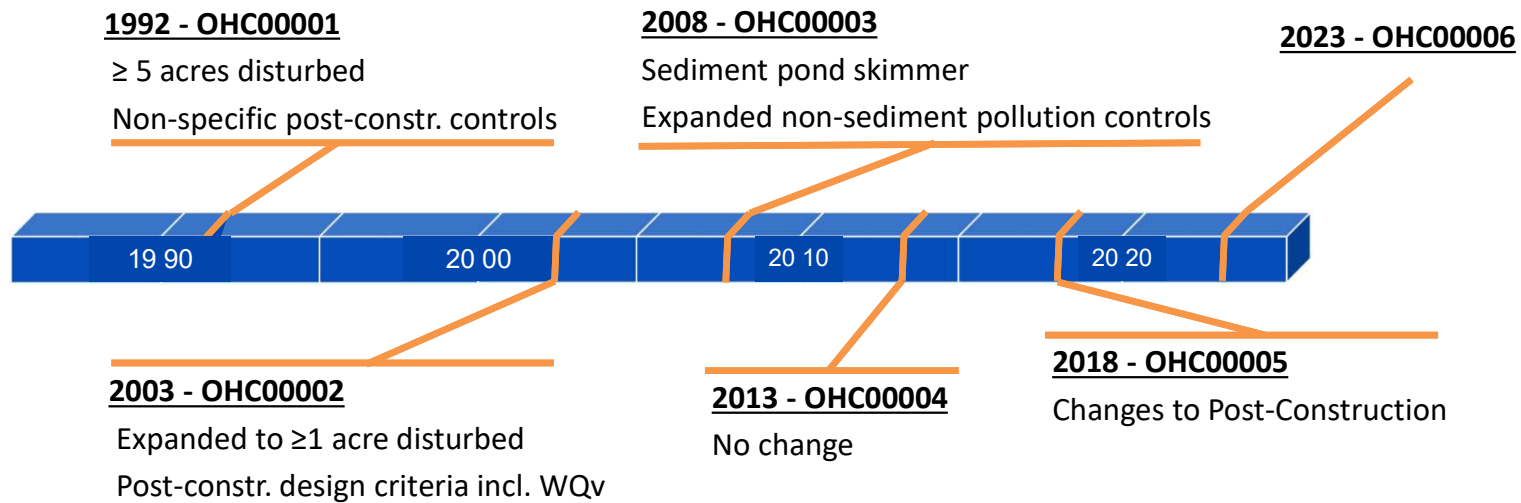
Status

- Public hearing was held January 18, 2023
- Comment period ended January 31, 2023
- DSW staff will:
 - consider comments and rankings
 - release final report on our website

NPDES Construction Stormwater General (CGP) Permit Renewal OHC000006



History of CGP



OHC000006 Schedule

- OHC000005 Expires **April 22, 2023**

Estimated Schedule	Action
May 19, 2022	ESO Notification
June 2, 2022	Virtual ESO Meeting
July 1, 2022	ESO Input Due
December 5, 2022	Draft GP Public Noticed
January 23, 2023	Draft GP Info Sess./Public Hearing
January 30, 2023	Draft GP Comment Period Ended
March 2023	Provide Proposed GP to USEPA
April 23, 2023	OHC000006 Issued/Effective

Permit Changes

- **Storm water** has been changed to **stormwater** throughout permit
- Typos and grammatical errors; Electronic Recordkeeping; Notice of Termination; Post-Construction Requirements

Renewing Coverage

- If needing to continue coverage, existing permittees must renew coverage by **October 19, 2023**
 - Submit a renewal Notice of Intent (NOI)
 - Renewal NOI application fee based upon acreage
 - No renewal application fee if previous coverage was issued on or after **April 23, 2022**

Priority Projects – Euclid

- R5 Phosphorus Reduction Efforts on LE point sources
- US EPA Specific Objections to Euclid's Proposed NPDES Permit Renewal
 - November 2, 2021
 - Requested a hearing w/ R5 Administrator Shore
- R5 Permitting Branch has been grasping at numerous point source phosphorus permit limit reductions efforts

US EPA Real Time Review Process

- Ohio's NPDES universe includes **292 majors & 2,920 minors**
- In FFY 2021, US EPA identified these **nine** permits for “real time review”:

<u>Permit number</u>	<u>Name</u>	<u>Type</u>	<u>Expiration Date</u>
OH0020541	City of Nelsonville	POTW	Modification 10/27/2020
OH0064009	Summit County Environmental Services	POTW	10/31/2020
OH0052922	City of Bucyrus	POTW	11/30/2020
OH0028240	Zanesville City of	POTW	1/31/2021
OH0031062	City of Euclid	POTW	2/28/2021
OH0028118	Willard, City of	POTW	2/28/2021
OH0049999	Eastern Ohio Regional Wastewater Auth	POTW	6/30/2021
OH0027740	City of Toledo	POTW	8/31/2021
OH0003891	Aleris Rolled Products	NON-POTW	1/31/2021

- **US EPA's real time review process should NOT be the avenue to set regional, nutrient permitting strategies**



Priority Projects – Euclid

The specific objection proposes for the facility to achieve a concentration of 0.007 mg/L. A concentration of 0.007 mg/L is not technically sound or legally justifiable.

- Would not result in a measurable change in Lake Erie.
- **Achieving 0.007 mg/L is not technically feasible.**
- Euclid just invested in a new plant.
- Any additional investment would be expensive and for little to no environmental impact.

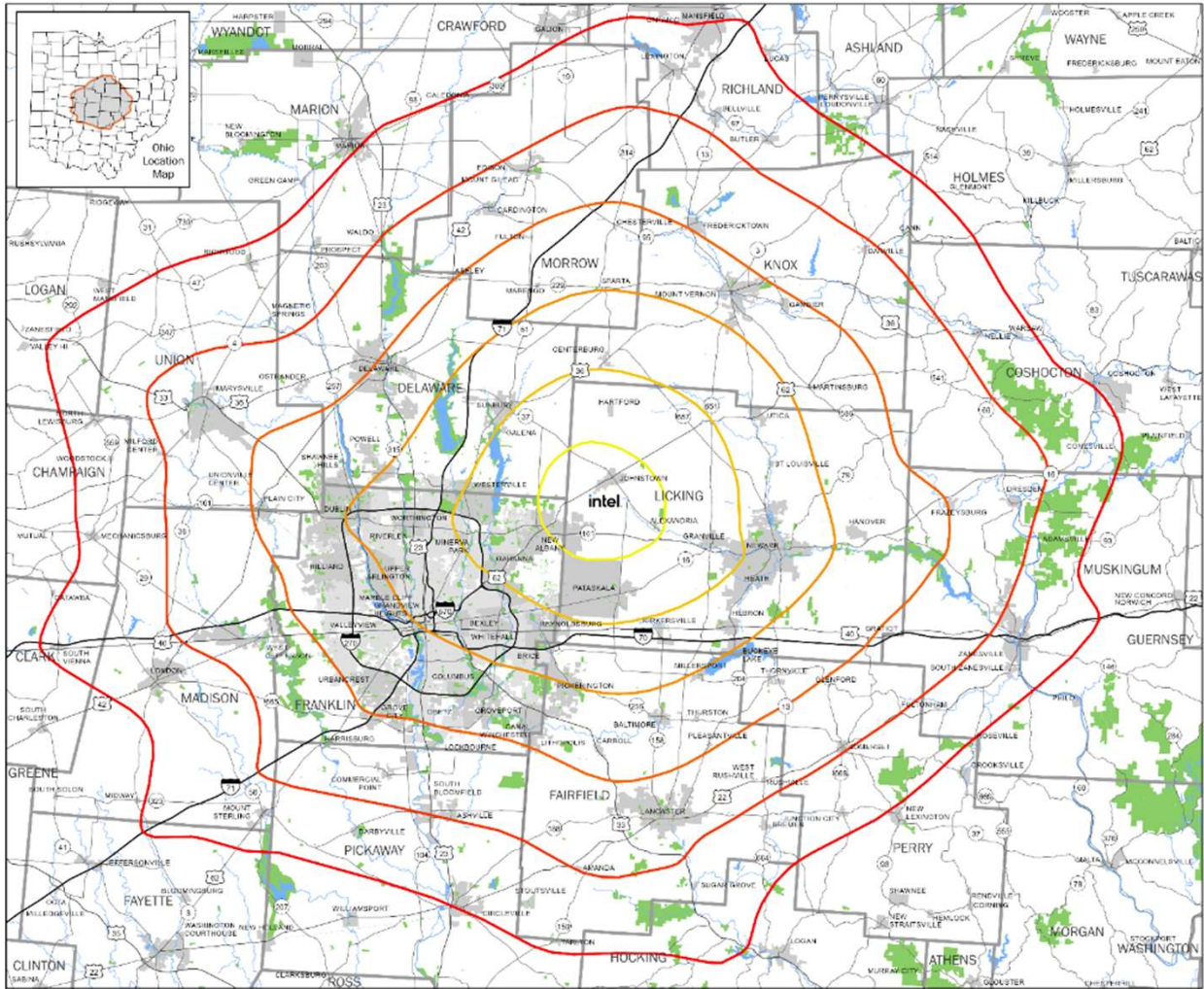
Region 5 approached Euclid and Ohio proposing a limit of **0.5 mg/L** to settle the specific objection.

- Would not result in a meaningful reduction.
- Neither Ohio EPA nor Euclid knows what the new plant will be able to perform once it has been fully operating for some time.
- 0.5 mg/L would be a policy stance that we do not believe is legally or scientifically defensible.

Priority Projects

- Intel

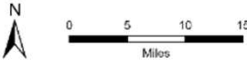




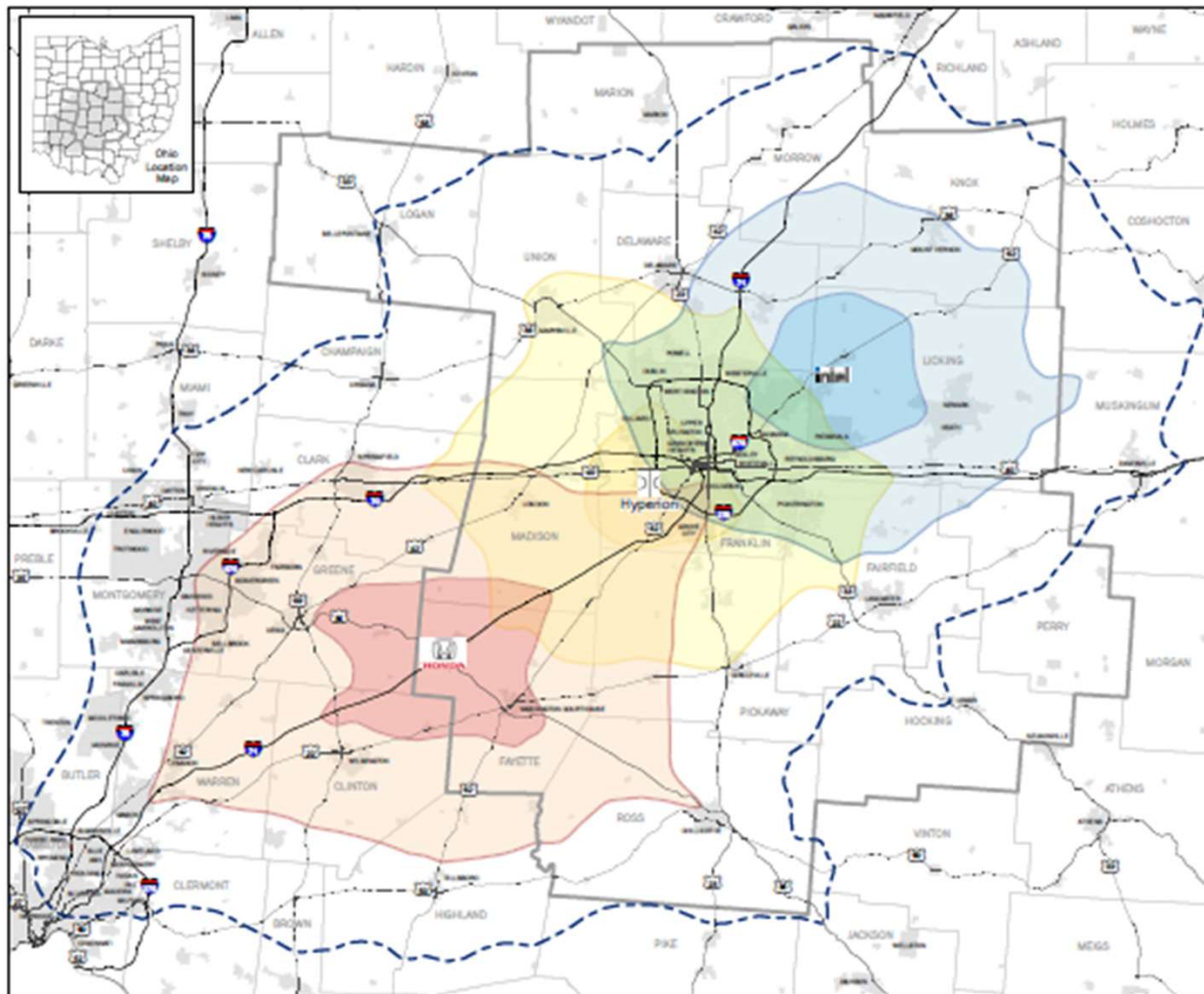
Intel Site Driving Times

- intel Intel Site**
- Travel Time in minutes
- 60
 - 50
 - 40
 - 30
 - 20
 - 10
 - Park/Open Space

Note:
 Travel assumed by car.
 Travel times are approximate from Intel site out at 5pm.
 Buffers generated using ESRI Network.



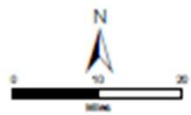
The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
 IN AUGUST REQUESTS@intel.com Intel.Plan@intel.com
 4/28/2022



Major New Development Driving Times

- Intel**
 - 20 minutes
 - 40 minutes
- Honda**
 - 20 minutes
 - 40 minutes
- Hyperion**
 - 20 minutes
 - 40 minutes
- Within 60 minutes of a Development
- MORPC Area
- City/Village

Note: Travel assumed by car. Travel times are approximate from Intel, Hyperion, and Honda sites out at 5pm. Buffers generated using 60/60 network current conditions.



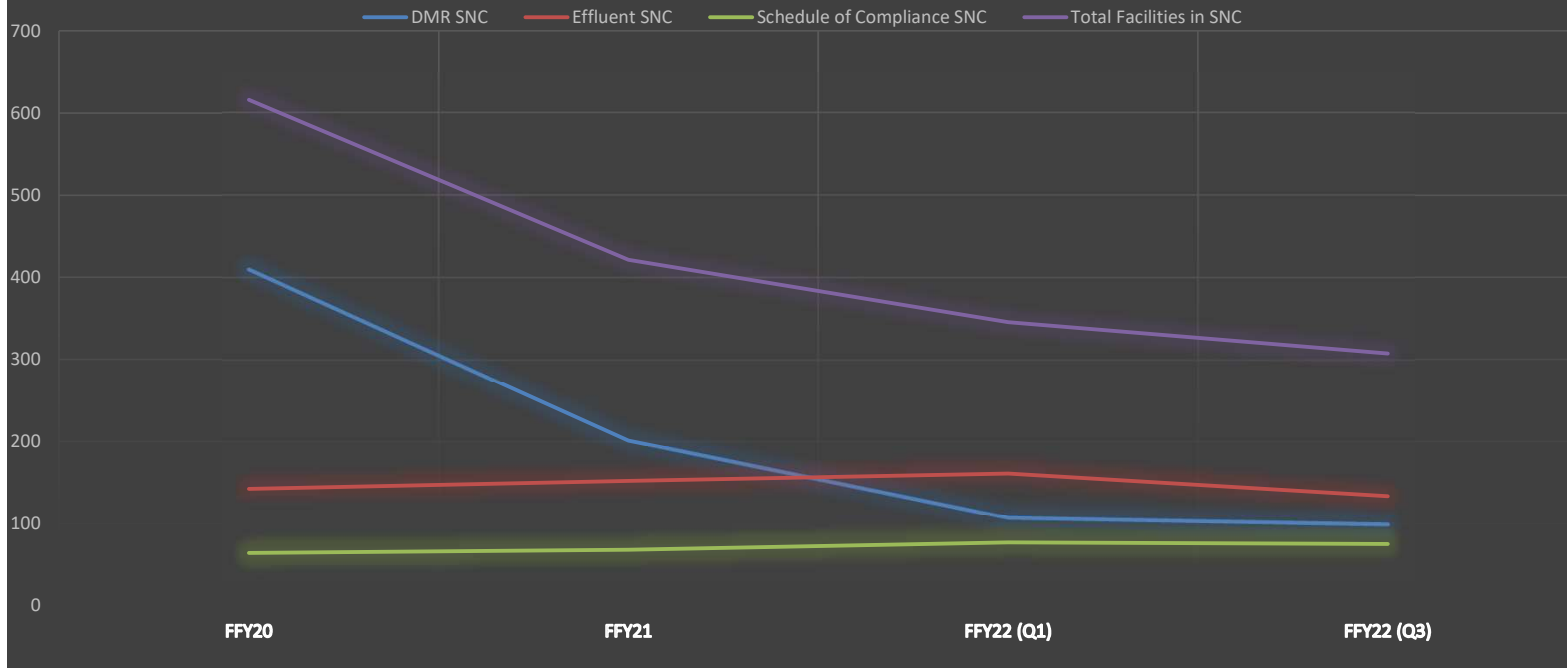
The information shown on this map is compiled from various sources made available to us which we believe to be reliable. It is not intended to be used as a substitute for a professional map. MORPC/City of Columbus/2/14/2023

Priority Projects – Gorge Dam

<https://vimeo.com/765084677>



Ohio Yearly Average SNC Trends



Federal Fiscal Year (FFY)	DMR SNC	% DMR SNC	Effluent SNC	% Effluent SNC	Sched SNC	% SoC SNC	Total Facilities in SNC	% Total SNC
Current (Q3)	98	3.1%	143	4.4%	81	2.5%	333	10.1%
FY22 (Q1)	107	3.3%	161	5.0%	77	2.4%	345	10.8%
FY21	201	6.3%	152	4.8%	68	2.1%	421	13.1%
FY20	410	12.8%	142	4.4%	64	2.0%	616	19.2%

*Percentage based off total Ohio Individual NPDES permit universe



PTI - ePlans

The screenshot displays the PTI - ePlans software interface. At the top, there is a ribbon menu with tabs for File, Home, Plan Review, Plan Review Tasks, Document, and Tasks. Below the ribbon is a toolbar with various icons for document management and review tasks. The main workspace is divided into several panels:

- Available Projects:** A table listing various projects with columns for Name, Project ID, Alternate ID, and Entry Date.
- Project Information:** A panel showing details for the selected project, including Project Name, Project ID, Alternate ID, Project Group, Site Address, Reviewer Due Date, and Review Cycle Due Date.
- Project Documents:** A list of documents associated with the project, including E-DMR TEST FAC and Revision #.
- Plan View:** A large central area displaying a detailed architectural plan sheet for a DMR test facility. The plan includes a site layout with buildings, parking areas, and surrounding infrastructure. It also features a legend, a table of specifications, and a construction schedule.

The interface also shows a 'Project View' sidebar on the left, which includes options for viewing project information, plans and documents, review cycle documents, approved plan documents, documents pending delete, and related projects.





HB 175 Key Features

- **Bil effective July 21, 2022**
- "Waters of the state" does not include an ephemeral feature for which the United States army corps of engineers lacks the authority to issue a permit under 33 U.S.C. 1344. (i.e Fill in Ephemeral streams are only regulated by the state under Section 401 of the Clean Water Act).
- Section 6111.313 and 6111.314 includes several, specific options for ephemeral stream mitigation as well as monitoring criteria
- Within two years of the effective date of the bill (by July 21, 2024) The director of environmental protection shall review and adopt all substantive wetland, stream, or lake mitigation standards, guidance, criteria, scientific methods, processes, or other procedures or policies that are currently used by the interagency review team or in the evaluation of 401 water quality certifications



HB 175 Implementation

- July 21, 2022
 - Recruited contractor to assist with administrative objectives
- June – Sept. 20, 2022
 - Conducted Pre-Early Stakeholder Outreach
- September 30, 2022
 - Public Noticed Intent to Develop Rules
- October 2022-March 2023
 - Conducting Early Stakeholder Outreach
- March 2023 – August 2023
 - Draft Rules
- Sept. 30, 2023
 - Public Notice Draft Rules/Interested Party Review

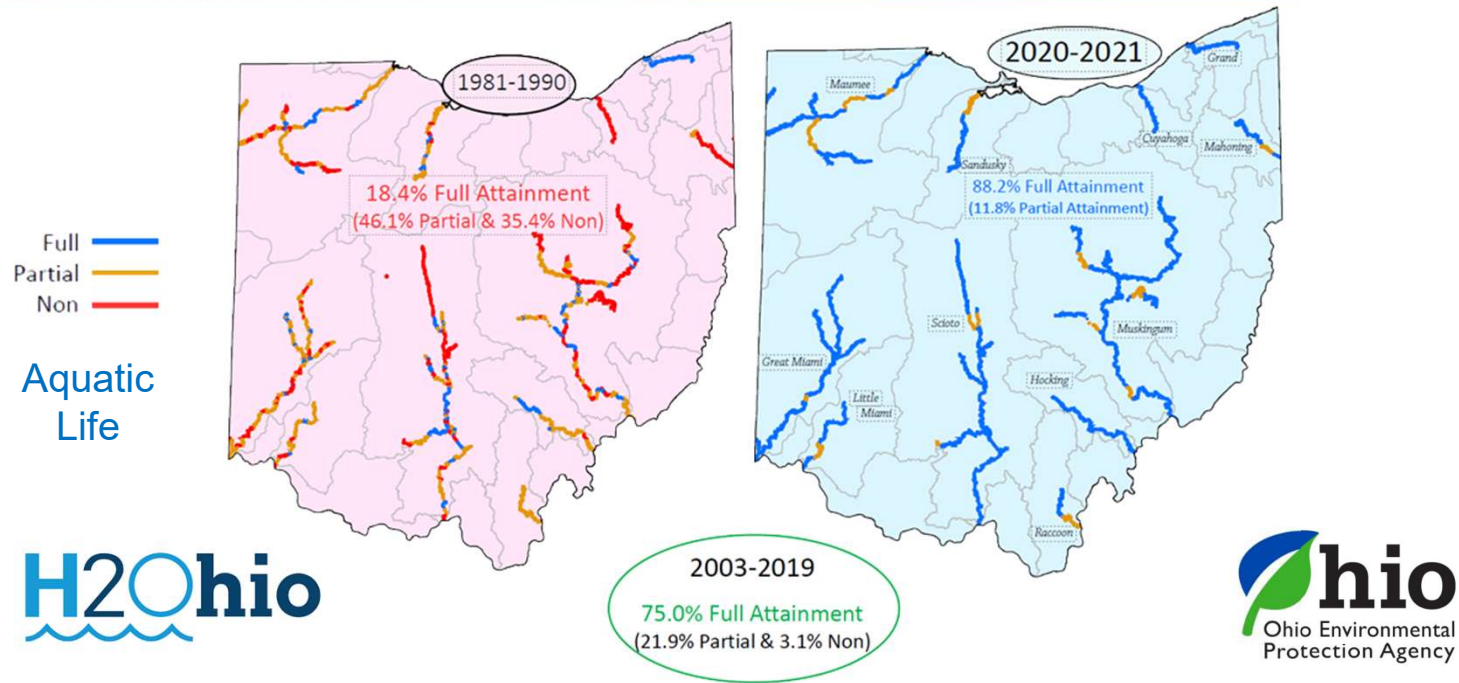


HB 175 Plan for Implementation Cont'd

- December 31, 2023
 - Common-Sense Initiative Office
- April 1, 2024
 - Joint Committee on Agency Rules and Reference (JCARR)
- May 2, 2024 (approximate)
 - Public Hearing
- May 21, 2024
 - JCARR has Public Hearing
- **July 21, 2024 – Deadline pursuant to HB 175**

H2Ohio

Rivers Initiative



Emerging Contaminant Assessment

THE GOAL

Assess the status of rivers for contamination from emerging contaminants.

THE PURPOSE

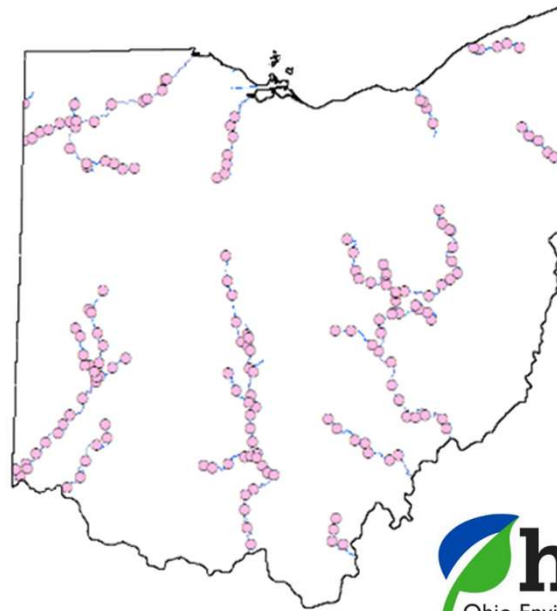
While assessment of potential threats from emerging contaminants to both Ohio's public and private drinking water systems have been underway since 2020, Ohio EPA is also required to assess and report on the quality of Ohio's waters. Using draft water quality criteria from U.S. EPA, Ohio EPA will hire a contractor to sample water and fish tissue for emerging contaminants from representative locations in major rivers throughout the state.



H2Ohio

Rivers Initiative

<i>Water Column</i>	164
<i>Invertebrate whole-body</i>	164
<i>Invertebrate Community Assessment (ID and number of macroinvertebrates)</i>	164
<i>Fish whole-body</i>	164
<i>Fish Muscle</i>	164



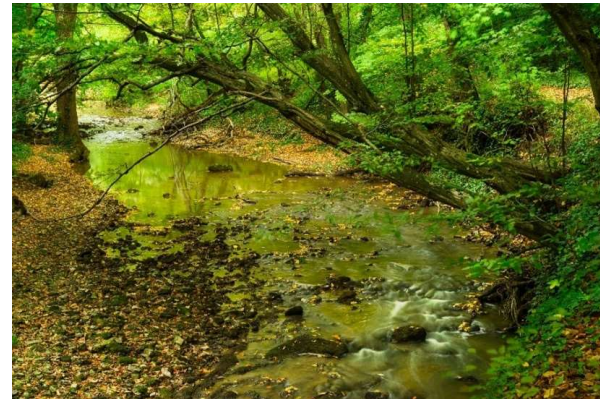
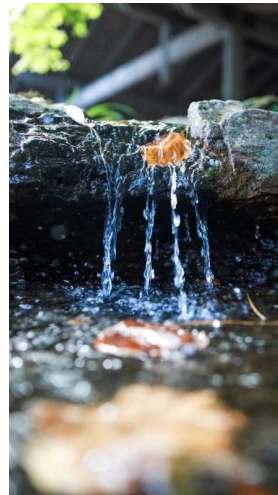
River Restoration

THE GOAL

Prioritize and fund river restoration in areas with impairments through stream restoration, habitat creation, and contaminated sediment removal.

THE PURPOSE

Portions of Ohio's rivers and streams have modified and/or degraded conditions such that aquatic life uses do not meet the minimum goals of the Clean Water Act (CWA). Ohio EPA has prioritized three large river tributaries that, with habitat restoration, have the potential to recover to higher quality status. The goal of this program will be to remove water quality impairments to improve their ecosystems and put these waterbodies on a path to exceptional warmwater habitat and/or a scenic river designation that will undoubtedly contribute to Ohio's economy.



H2Ohio

Rivers Initiative

Stream	Drainage Area	Gradient	QHEI	Narrative
1 Duck Creek	7.3	18.87	25	Culverted stream channel can be naturalized
2 Wilson Creek	18.0	3.16	43	Trapezoidal ditch with potential for self-forming channel
3 Mile Creek	18.5	1.60	28	Low gradient may require habitat enhancements
4 Honey Run	10.9	2.82	41	Trapezoidal ditch with potential for self-forming channel
5 Plum Creek	22.0	2.24	40	Trapezoidal ditch with potential for self-forming channel
6 Riley Creek	12.1	3.97	37	Natural features exist; pollution abatement needed (may have been addressed)
7 Brights Ditch	28.4	5.63	35	Trapezoidal ditch with potential for self-forming channel
8 Red Run	4.3	5.13	31	Small drainage area requires habitat enhancements
9 Celery Creek	13.4	10.30	22	Trapezoidal ditch with potential for self-forming channel
10 Still Fork Sandy Creek	47.0	2.96	39	Better livestock practices to reduce sedimentation



Road Salt Management

THE GOAL

Decrease salt contamination and maintain safety and service levels.

THE PURPOSE

Salt from deicing chemicals applied to roads and parking lots for winter travel safety has been building up in soils and water tables for several decades and is now spilling over into our rivers and drinking water supplies. To reverse this trend, this effort will provide education and outreach to help local governments modernize their snow removal fleets through cost-sharing incentives, new technologies and adoption of best management practices developed to maintain safety and service levels while decreasing the amount of salt application by 50%.



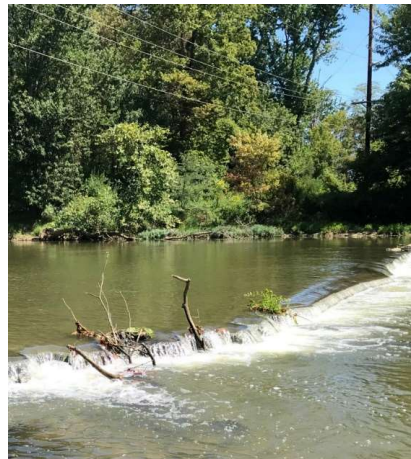
Dam Removal

THE GOAL

Ohio EPA, in concert with ODNR and ODA, proposed to remove aging and non-functional low head dams to improve safety and the health of our large rivers.

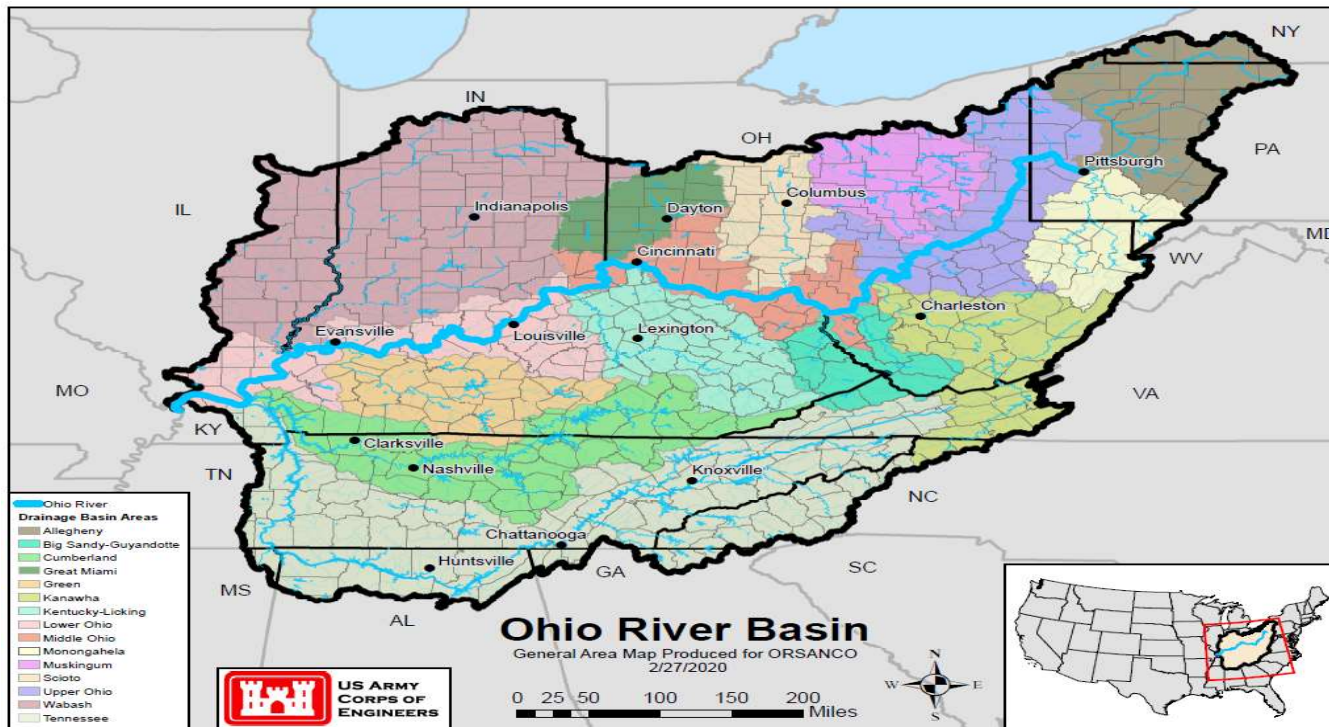
THE PURPOSE

Low head dams once served to harness energy for grain mills, or to store water for drinking water supply. Now, these dams are old and risk potentially catastrophic failure, causing a danger to humans, restricting the natural movement of fish, and impeding the normal processing of nutrients and sediment as the water moves downstream. This effort targets nine existing low head dams for removal.



Ohio River Valley Water Sanitation Commission (ORSANCO)

Ohio River Basin

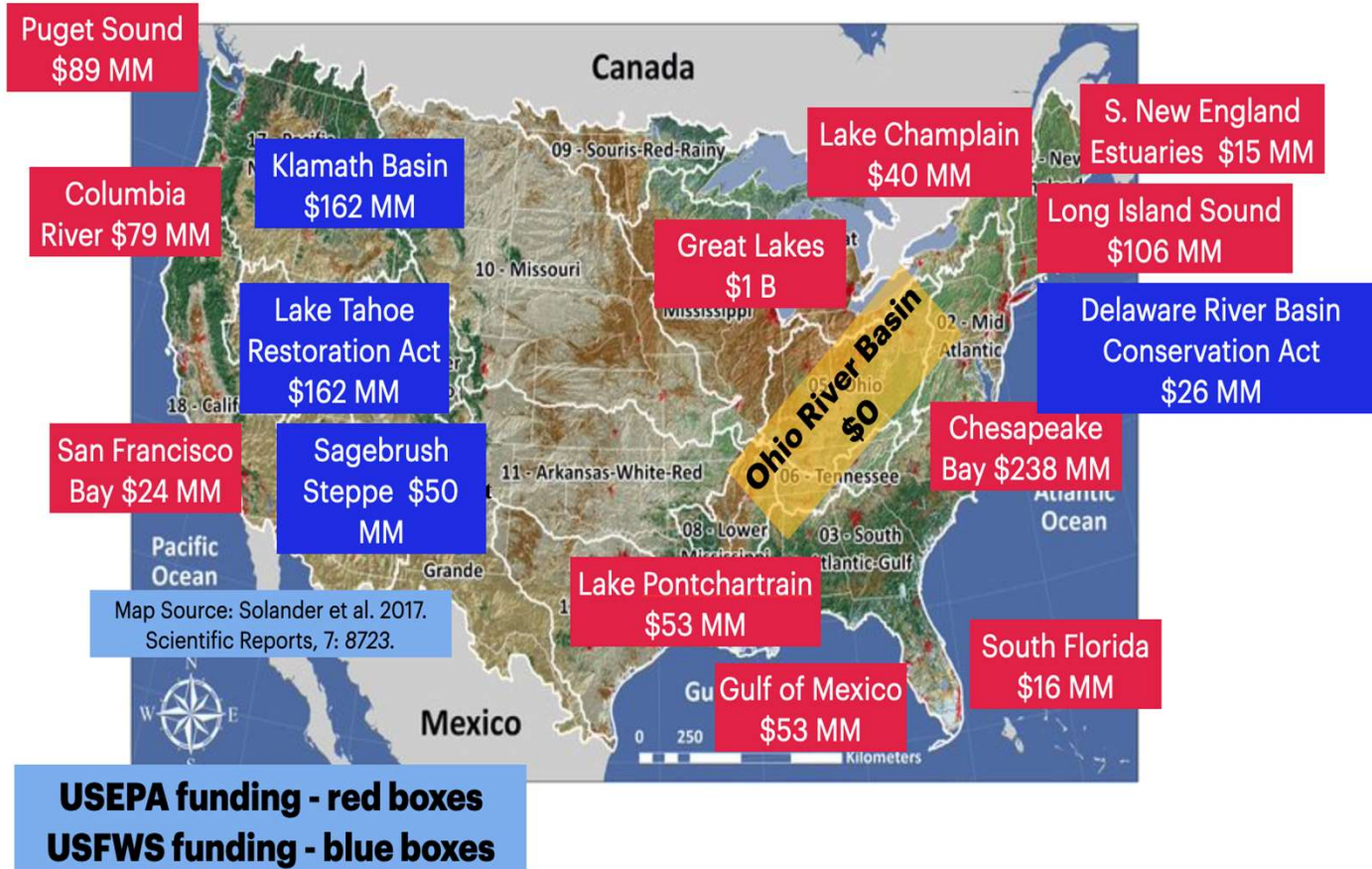


5% of US mainland
(205,00 square miles)

25 million population
Parts of 14 states



Geographic Ecological Restoration Funding in Infrastructure Investment and Jobs Act



**Tiffani Kavalec, Chief
Division of Surface Water**

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Office of Water Quality (OWQ) 2023 Overview

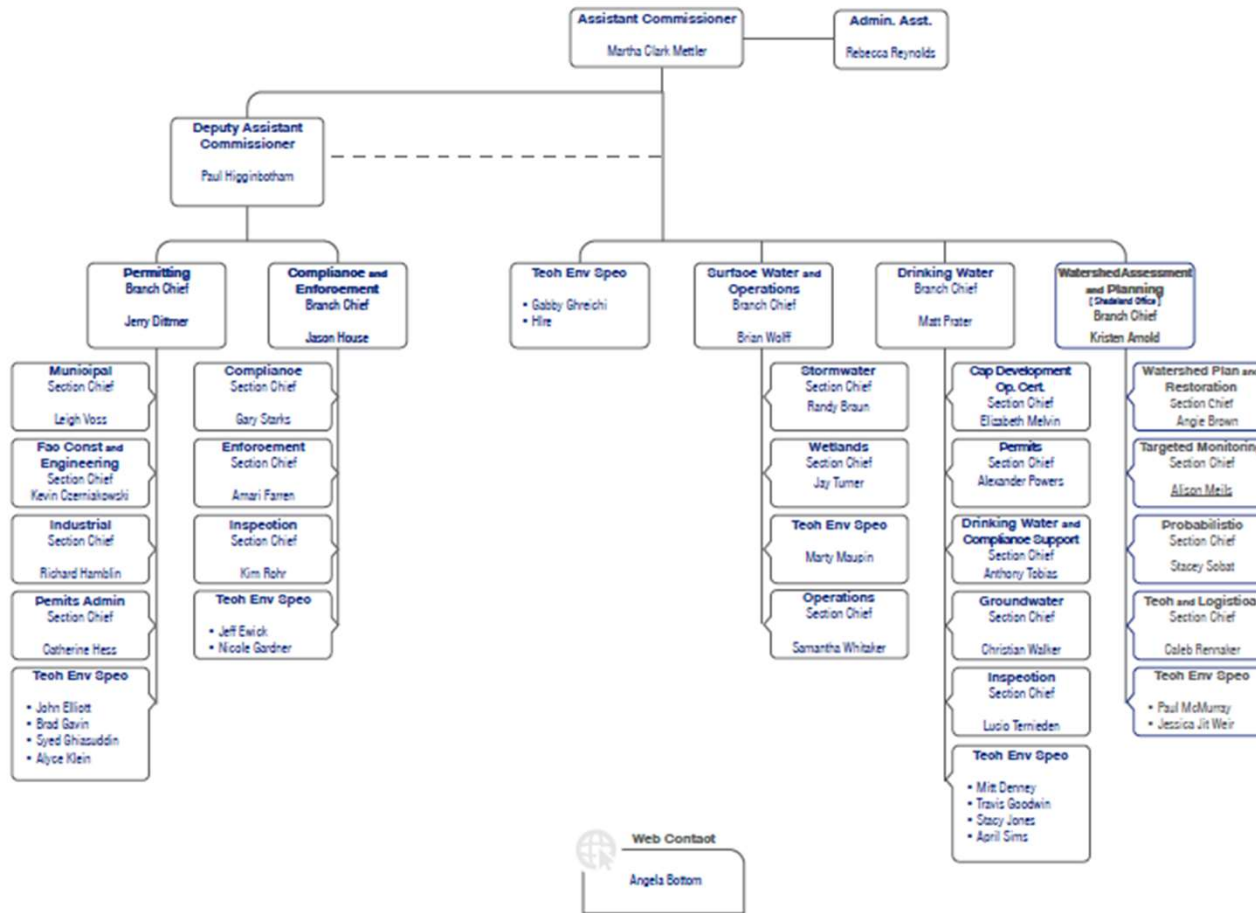
Martha Clark Mettler
Assistant Commissioner



Paul Higginbotham
Deputy Assistant Commissioner



OWQ Leadership Team





Water Quality Standards (WQS) 2023 Initiatives

- Complete next steps to revise downstate WQS methodologies
- Review numeric nutrient criteria needs/options in light of overall nutrient reduction information/strategies
 - Implementing a 1 mg/l total phosphorus state treatment technology limit
 - Requiring nitrogen sampling at large WWTPs
- Evaluate U.S. EPA criteria recommendations:
 - Ammonia criteria; Recreational criteria; Aluminum criteria
 - It is important to understand the implementation challenges associated with each
- Track U.S. EPA draft criteria development work:
 - PFAS – ambient criteria and ELGs



Compliance & Enforcement Branch

2023 Initiatives

- Continue with the rulemaking process to update the wastewater operator certification rule
- Begin the development of IDEM provided training for the wastewater operator certification exam for Class I, II, A and B
- Complete all inspection commitments and, at the same time, meet the agency metric for delivering inspection reports within seven days
- Continue to pursue reduction of Significant Noncompliance (SNC) rates at NPDES permitted facilities
- Implement a new web-portal system for submission of sanitary sewer overflow and bypass reports



Drinking Water Branch

2023 Initiatives

Goal: Ninety-nine percent (99%) of the population served by Community Public Water Systems (PWSs) in Indiana receive water that meets all health standards

- Track and respond to proposed changes in federal statute/rule regarding lead and PFAS
- Prepare systems for lead service line inventory requirements
- Improve the Drinking Water Watch website to make it more user-friendly and transparent
- Continue working with certified labs for electronic submission of data
- Complete sanitary surveys on time at all PWSs - average turnaround time is two days
- Work with systems on submitting monthly report of operations (MROs) electronically
- Continue source water protection (SWP) efforts
- Continue PFAS sampling project at all CWSs – Phases 1 (medium) and 2 (small) completed, and Phase 3 (large) in progress
- Review and update operator exam study guides to help improve operator exam scores



Permits Branch

2023 Initiatives

- Train significant number of new staff in NPDES permit writing/stream modeling and provide cross-training and mentorship opportunities
- Research/assess emerging wastewater treatment and collection technologies
- Continue external workgroups and combined sewer overflow (CSO) program development focused on post-long term control plan (LTCP) implementation
- Continue work on updates/rulemaking for NPDES applications as required to comply with U.S. EPA's NPDES Application and Program Updates Rule
- Continue development of a new administrative NPDES master general permit (MGP) for coal mining and abandoned mine land (AML) activities to replace the existing, out-of-date permit-by-rule
- Respond to any legislative directives affecting NPDES permitting- i.e. potential permitting of surface water discharges from individual homeowner systems state-wide
- Work to keep up with the increase in workload created by the additional federal funds from the Bipartisan Infrastructure Law



Surface Water & Operations Branch

2023 Initiatives

- Stormwater
 - Assist with transition of coverage to new general permits for construction stormwater and MS4s
 - Update the online permit submittal system (nViro)
 - Update the stormwater manual to reflect changes to the general permits
 - Continue the process to update the industrial stormwater general permit
- Wetlands
 - Interpret and implement changes to the definition of Waters of the U.S.
 - Continue the process for developing online application submittals
 - Encourage the use of the Indiana Waterways [Permit] Inquiry Request tool found at <https://www.in.gov/waterways/>





Watershed Assessment & Planning Branch

2023 Initiatives

- Distribute \$3 million in nonpoint source grant funds and manage 75 projects
- Complete work on the Black Creek TMDL
- Institute online QAPP tool and resources for external partners and the public
- Complete the following surface water monitoring projects:
 - Fixed station at 165 sites across the state;
 - Probabilistic monitoring in the Great Miami River basin;
 - Fish tissue contaminant monitoring in the Upper Wabash River basin;
 - Watershed characterization monitoring in Big Raccoon Creek;
 - Cyanobacteria monitoring at 18 DNR lakes with 21 beaches and the Ft. Harrison dog park;
 - Reference site monitoring in watersheds across the state; and
 - Performance measures monitoring in targeted watersheds.
- Develop coolwater indices of biotic integrity for macroinvertebrates and fish
- Participate in the U.S. EPA regional stream monitoring network via collection of continuous stream and weather data to evaluate impacts of extreme weather on aquatic life use
- Update the Indiana Nonpoint Source Management Plan



Contact Information

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Biographical Information

Kathryn E. Gasior, Associate, Dickinson Wright PLLC
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Kathryn Gasior, an Associate in the firm's Troy office, focuses her practice on Public Sector Law. She also has experience in a wide variety of civil matters including constitutional law, labor and employment, and commercial litigation.

Education

Arizona State University, Sandra Day O'Connor College of Law, J.D., 2021

- Willem C. Vis International Commercial Arbitration Moot Team
- magna cum laude
- Order of the Coif
- Trial Advocacy Certificate
- CALI Excellence for the Future Award
- Federal Courts - Individual Rights in Constitutional Law, Professional Responsibility, Law & Foreign Policy in Washington D.C.

The Ohio State University, B.S., Environmental Public Health, 2016, cum laude

Tiffani Kavalec, Chief, Division of Surface Water
Ohio EPA, PO Box 1049, Columbus, OH 43216-1049
614-644-3538 Fax: 614-644-2745 tiffani.kavalec@epa.ohio.gov

Tiffani has been the chief of the Division of Surface Water since 2015 which ensures the compliance with the federal Clean Water Act. Surface Water issues permits to regulate wastewater treatment plants, factories and storm water to reduce the impact of pollutants. Her division also develops comprehensive watershed plans aimed at improving polluted streams. They also sample streams, lakes and wetlands, including fish, aquatic insects and plants, to determine the health of Ohio's surface waters.

Tiffani started with Ohio EPA in 1995 and spent most of her time in the Division of Environmental Response and Revitalization (DERR) overseeing the Site Assessment, Enforcement, Federal Facilities, Natural Resource Damages, and Voluntary Action Programs. Tiffani graduated from Indiana University's School of Public and Environmental Affairs with a B.S. in Environmental Science and Public Policy. She also has several Master's credits from the University of Findlay's Environmental Management Program.

Biographical Information

**Martha Clark Mettler, Assistant Commissioner, Office of Water Quality
Indiana Department of Environmental Management
100 N. Senate Ave, IGCN, Suite 1255, Indianapolis, IN 46204
(317) 232-8402 mclark@idem.in.gov**

Martha Clark Mettler is the Assistant Commissioner of the Office of Water Quality (OWQ) at the Indiana Department of Environmental Management (IDEM). In the position since 2015, Ms. Mettler co-leads and oversees the approximately 170 staff who implements the Safe Drinking Water Act and Clean Water Act programs in Indiana. Martha has been with IDEM in the Office of Water Quality since 1995.

Martha has a Master of Planning in Environmental Planning from Indiana University and a Bachelor of Science in Public Affairs from Indiana University.

**Carey Johnson, Director, Kentucky Division of Water
300 Sower Blvd., Frankfort, KY 40601-6571
Carey.Johnson@ky.gov**

Carey is an experienced environmental professional in the government administration industry and skilled in Program/Project Management, Strategic Planning, Leadership, and Relationship Building. Over 19 years of experience in Floodplain Management and Flood Hazard Mapping. His activities include: Kentucky Silver Jackets, the Kentucky Hazard Mitigation Council, the Technical Mapping Advisory Council (TMAC), the National Dam Safety Review Board, the Ohio River Basin Alliance (ORBA), and the Ohio River Sanitation Commission (ORSANCO).

Founding member and past chair of the Kentucky Association of Mitigation Managers (KAMM) and current chair of the Association of State Floodplain Managers (ASFPM). Certified Floodplain Manager (CFM) Experienced environmental professional in the government administration industry.

Carey has been with the Kentucky Division of Water for over 20 years, serving as the Director since May 2021 and Assistant Director from November 2018 to May 2021.

From the University of Kentucky, Carey has a MS in Plant and Soil Science and a B.S. in Plant and Soil Science.