

# **WATER QUALITY PROGRAM UPDATE**

**Water Quality Subcommittee**

**December 19, 2025**

# **ACTION REQUESTED**

**No action is requested. This item is for information and discussion.**

## **PREVIOUS ACTION**

**Staff make presentations on the Water Quality Planning Program at each quarterly meeting of the Water Quality Subcommittee.**

# REGIONAL COORDINATION WORK

## Regional Riparian Setback Legislation Review 2024

- Approximately 75 attendees
- Presentation well received
- Questions and comments from audience
  - Will help the finalization of the report



## Ohio Transportation Engineering Conference

Please join us in Columbus for OTEC 2025:  
October 14 & 15

# REGIONAL COORDINATION WORK

## County Sanitary Engineers Association of Ohio (CSEAO) Winter Conference

- December 5, 2025 - Columbus
- NOACA staff and Ohio EPA were asked to present by Jeremy Sinko, Medina County Sanitary Engineer
- Presentation was entitled “Understanding 208 Plans: Their Role in Wastewater Planning and Projects”



# REGIONAL COORDINATION WORK

## Western Lake Erie Harmful Algal Bloom (HAB) Seasonal Assessment

- Issued December 4, 2025
- HAB season severity 2.4 (out of 10); average area of 411 square miles = Mild Bloom
- The Microcystis bloom started in early July – far western Maumee Bay – later than prior seasons
- Bloom was not fully established until early August – later than prior seasons
- Peaked in late August, declining in early September – earlier than prior seasons
- Stayed closer to shore – from Stony Point, MI to east of Port Clinton, OH

**NCCOS** NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE SCIENCE SERVING COASTAL COMMUNITIES

### Western Lake Erie HAB Seasonal Assessment

Bulletin 08 - 2025-12-04

**Summary:** The 2025 western Lake Erie cyanobacterial bloom had a severity index (SI) of 2.4, which is considered a mild bloom. The 2025 severity fell towards the lower end of the seasonal forecast (2-4; issued June 28), which uses an ensemble of different models, each of which includes phosphorus loading into the western basin during the spring and early summer (March-July) to predict upcoming summer cyanobacterial bloom severity. The SI is determined from satellite imagery used to monitor cyanobacterial biomass by first combining and compositing daily images to 10-day composites. The SI is then determined from the three 10-day composites with the maximum amount of biomass.

The *Microcystis* bloom started in early July in far western Maumee Bay. Unlike most recent years (2020-2024) when the bloom was well developed in July, in 2025, the bloom slowly intensified and did not fully establish until early August. The bloom reached peak biomass and area in late August before declining rapidly in early September, unlike other recent years when the bloom did not decline until the end of September. A weak bloom did persist until ending in late October following seasonally cooler temperatures and mixing from stronger winds. Through the season, the bloom stayed closer to the U.S. coast, primarily from Stony Point, MI to east of Port Clinton, OH.

Overall, the 2025 bloom (SI of 2.4; average bloom area of 411 square miles) was less intense than the 2024 bloom (SI of 4.2; average bloom area of 620 square miles). In the last decade, the 2025 bloom severity was most similar to 2019 (SI of 2.7; average bloom area of 474 square miles), and was only slightly more intense than the mildest bloom (2020, SI of 1.9).

Since 2009, NCCOS has used satellite data from sensors across three different satellite missions to monitor the severity and impacts of the annually occurring bloom. Following the 2024 bloom season, NCCOS reprocessed the full time series (2000-2024) with updated satellite calibrations, improved algorithms and additional data, generating a more complete, consistent and continuous data set for HAB monitoring in the lake.

#### Predicted Bloom Severity

None (SI: 0-1) Mild (SI: 1-3) Moderate (SI: 3-5) Severe (SI: 5-7) Very Severe (SI: 7-10)

**Fig. 1.** Bloom severity index (SI) for 2000-2025. The SI is based on satellite imagery used to identify the amount of cyanobacterial biomass over the three 10-day composites with the greatest biomass. The 2025 bloom had a severity of 2.4, which is considered a mild bloom.

#### Cumulative Total Bioavailable Phosphorus

**Fig. 2.** Cumulative total bioavailable phosphorus (TBP) loads for the Maumee River (Waterville, OH). Each line denotes cumulative load for different years. 2025 is in orange.

#### Total Bioavailable Phosphorus

**Fig. 3.** Total bioavailable phosphorus (TBP) load accumulated from the Maumee River near Waterville, OH through the spring loading period (March-July). The right axis denotes the TBP load from selected previous years.

#### Comparative Bloom Severity

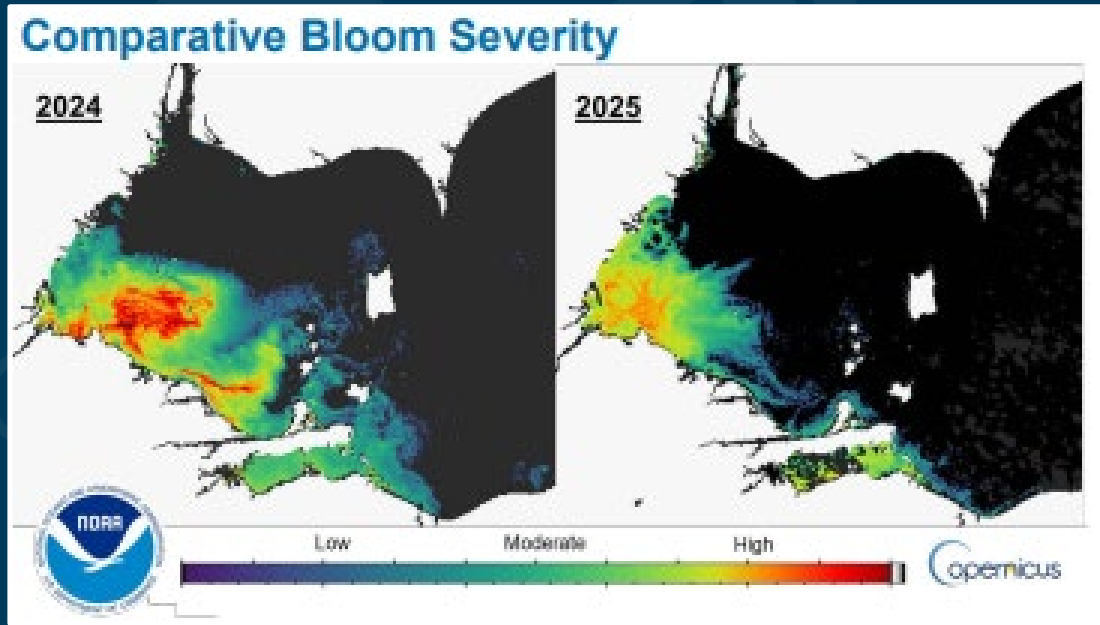
**Fig. 4.** The 10-day maximum bloom severity in 2024 (Aug. 10-19) and 2025 (Aug. 18-29). Bluish-green to dark blue indicates low cyanobacterial concentrations. Sandusky Bay exhibited a mixed cyanobacteria bloom in 2025 that contained higher concentrations of the toxin Microcystin than past years, which peaked in July-August.

For more information visit: [coastal.science.noaa.gov/science-areas/habs/hab-forecasts/lake-erie/](https://coastal.science.noaa.gov/science-areas/habs/hab-forecasts/lake-erie/) or [ncwqr@noaa.gov](mailto:ncwqr@noaa.gov)

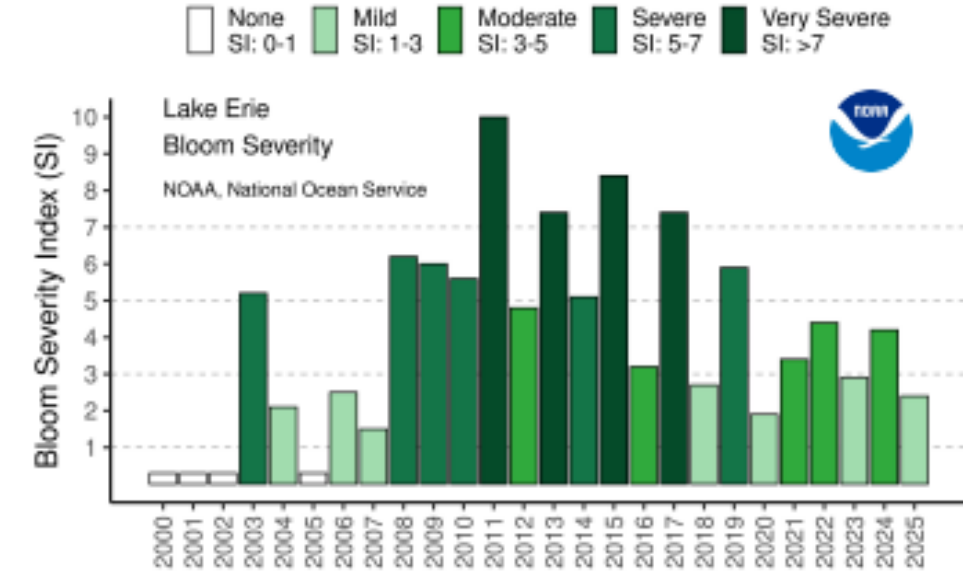
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# REGIONAL COORDINATION WORK

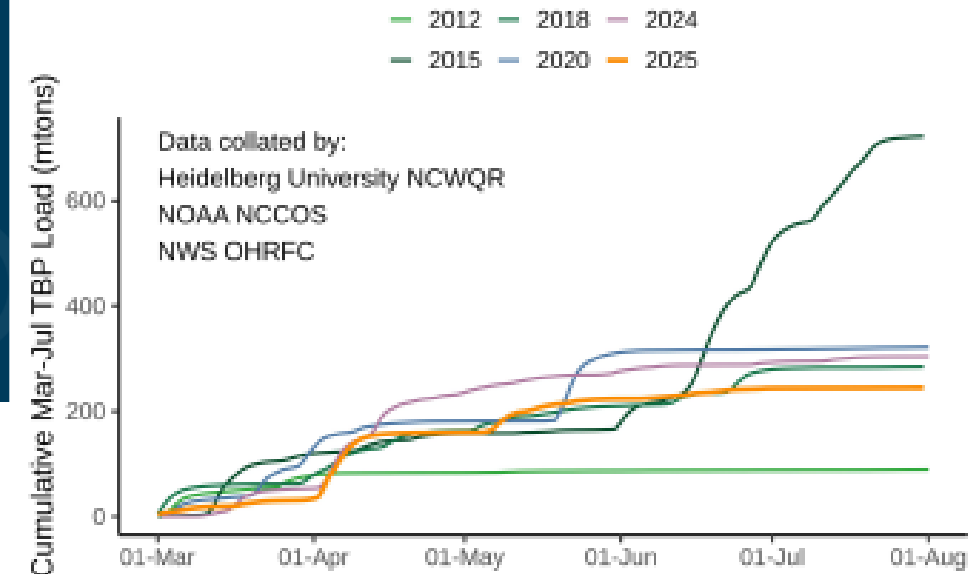
- 2025 Season = SI 2.4 (out of 10) – 411 square mile area
- 2024 Season = SI 4.2 (out of 10) – 626 square miles



### Predicted Bloom Severity



### Cumulative Total Bioavailable Phosphorus



# OVERALL WORK PROGRAM (OWP)

## Support Water Quality Subcommittee (WQS) & provide quarterly updates

- Continue to participate in Black & Cuyahoga River Areas of Concern (AOCs): Advisory Committees

## Black River AOC Advisory Committee

- Black River AOC Advisory Committee meeting (October 22, 2025)
  - One BUI remains:
    - Degradation of Benthos
  - NPS-IS planning continues for three HUC12s
    - Black River, Lower West Branch, Jackson Ditch-East Branch Black River
    - Public meeting and online surveys identify critical areas.



# OVERALL WORK PROGRAM (OWP)

## Cuyahoga River AOC Advisory Committee

- Cuyahoga River AOC Advisory Committee meeting (October 20, 2025)
- GIS Story map of Management Action Projects <https://cuyahogaoc.org/post-3483/>
- Four BUIs remain:
  1. Degradation of Fish and Wildlife Populations
  2. Degradation of Benthos
  3. Restrictions on Navigational Dredging
  4. Loss of Fish Habitat

The screenshot displays the Cuyahoga River AOC website. At the top, the logo for the Cuyahoga River AOC is visible. Below it, the heading reads "Cuyahoga River AOC Projects to Move Toward Delisting". The main text explains that the Great Lakes are important for people, wildlife, and clean water, but some areas have been very polluted, mostly before laws were created to protect water resources. These places, called Great Lakes Areas of Concern (AOCs), need special attention to restore their water quality, habitat, contaminated sediment, and biological communities. The United States and Canada are working together to clean up these areas. In the US, the Environmental Protection Agency (EPA) leads the effort to improve conditions in AOCs to predetermined standards, with the goal of 'delisting' them as an AOC.

Each AOC is given specific areas for improvement, which are individually called beneficial use impairments (BUIs). Each state identifies the steps needed to fix each BUI and effectively clean up its affected areas. In Ohio, the state has set goals and methods to track progress and decide what actions are needed to improve conditions to meet standards. The Cuyahoga River is one such AOC, and many people in northeast Ohio have come together to work to clean up the Cuyahoga, this group is known as the Cuyahoga River AOC Advisory Committee. The projects below, also known as 'management actions', have been identified and are in various stages of design and implementation to address the Cuyahoga River's BUIs, with the goal of delisting the river so that it is no longer an Area of Concern.

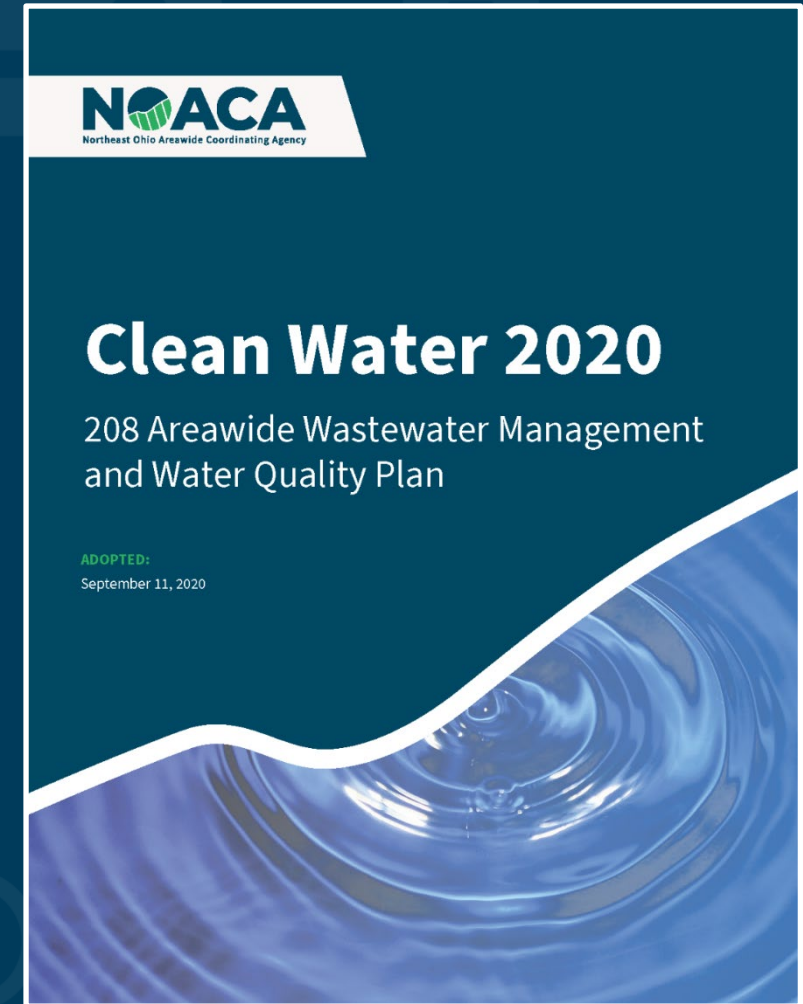
To learn more about how people are working to restore the Cuyahoga River, visit <http://www.cuyahogaoc.org>.

The bottom half of the screenshot shows a GIS map of the Cuyahoga River watershed. The map is titled "Management Action Projects (MAPs)" and includes a legend with four categories: Complete (green circle), Construction (orange circle), Design (blue circle), and Feasibility (pink circle). The map also shows "NHD Cuyahoga River FlowLine 2022", "AOC Subwatersheds", and "AOC Boundaries". To the right of the map, there are three thumbnail images with "More Info" buttons: "Cascade Metro Park - Valley View Area", "East of Boston Mills Ski Area", and "Little Cuyahoga River Fish Barrier Removals".

# CLEAN WATER 2020 WORK

## *Clean Water 2020* reformatting

- Staff reformatted the plan and appendices from landscape to portrait (NOACA's new report format)
- Staff updated the 208 Areawide Water Quality Management Plan webpage to summarize the reformatting work



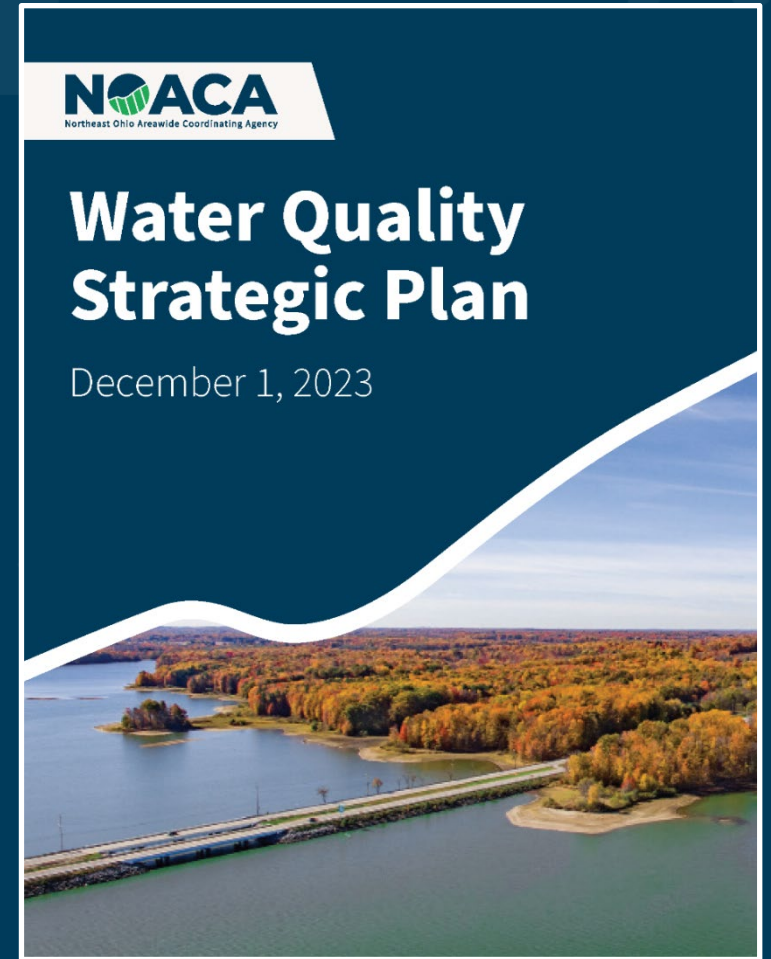
# CLEAN WATER 2020 WORK

## FPA Consistency Reviews & Maps to date (FY)

- Ensured projects are consistent with FPA maps
- Prepared 13 consistency review maps
- Reviewed 60 permits-to-install (PTIs)

# 2023 WATER QUALITY STRATEGIC PLAN (WQSP) MISSION STATEMENT

“As a designated areawide planning agency and a metropolitan planning organization, NOACA will maintain and update the region’s Water Quality Management (208) Plan. NOACA will support the restoration, protection, and sustainable use of water. NOACA will provide leadership, planning and technical assistance to advance Northeast Ohio’s quality of life through the management of water as a valuable resource.”



# 2023 WQSP GOALS

**Goal 1: Provide planning and technical support to protect and restore Lake Erie and the region's valuable water resources**

**Goal 2: Protect the region's water quality/quantity to support regional economic competitiveness**

**Goal 3: Identify and inform communities & organizations about the impacts of local decisions on valuable regional water resources and infrastructure**

**Goal 4: Advance the philosophy of "One Water" through NOACA's water planning work**

**Goal 5: Within NOACA's internal structure, address potential water quality & quantity impacts related to climate change on the region's transportation and water infrastructure**

# GOAL 1: ...PROTECT AND RESTORE LAKE ERIE...

**Objective:** To collaborate with key stakeholders to implement initiatives that promote sustainable water use and enhance quality of life.

**Strategy:** Continue to support the Cleveland Water Alliance (CWA) and the Lake Erie Volunteer Science Network (LEVSN)

# GOAL 1: ...PROTECT AND RESTORE LAKE ERIE...

## Opportunities for Engagement Offered by CWA:

- NOACA WQP staff rejoin LEVSN standards working group monthly meetings
  - Assist in the developments of volunteer sampling standards and coordinate annual data analysis and reporting
- CWA presentation to NOACA DMAs at a Roundtable meeting
  - Potential topics: Volunteer Stream Monitoring & Smart Lake Erie Watershed and Data Services
- NOACA engage LEVSN participants in a **One Water** outreach campaign
- CWA is considering efforts to leverage **One Water** campaign to establish more sustainable funding for LEVSN participants
- CWA identifies/presents technology innovations of interest to NOACA stakeholders



# GOAL 4: “ONE WATER” PHILOSOPHY OVERVIEW

**One Water** is rooted in the concept of Integrated Water Resource Management (IWRM)

“a process which promotes the coordinated development and management of water, land, and related water resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.”

United State Water Alliance (USWA) is one of the leaders in the **One Water** movement

- Created the [One Water for America Policy Framework](#)

# “ONE WATER” PHILOSOPHY

## Advancing the One Water Philosophy

- NEO’s water quality depends on actions of individuals
- **One Water** aims to raise awareness of the interconnectedness of water challenges and promote actions individuals can take to protect water resources

## Options being considered:

- Watershed Champions Story Map
- MS4 Phase II Public Educational and Outreach Messaging



# “ONE WATER” PHILOSOPHY

## Watershed Champions Story Map

- Northeast Ohio is home to dedicated leaders working to protect and sustain water resources for future generations.
- WQP staff are exploring the development of a story map that illustrates how individuals across the region interact with each “drop” of the **One Water** cycle throughout an average day.
- WQP staff would like to partner with regional organizations
  - NEORSD, NEOPIPE, Soil & Water Conservation Districts, Water Departments, Cleveland Water Alliance, etc.



# MS4 PHASE II PUBLIC EDUCATION & OUTREACH SUPPORT

- Promote the integration of **One Water** principles in stormwater management
- Stormwater contains pollutants in quantities that can adversely affect water quality - leading to higher costs to treat drinking water
- USEPA Stormwater Phase II Final Rule – requires “Urban Area” communities to obtain a Small Municipal Separate Storm Sewer Systems (MS4s) - General NPDES Permit
  - Permit requires each MS4 to develop/update and implement a Storm Water Management Program (SWMP)
  - Incorporate **One Water** Philosophy in Minimum Control Measure (MCMs)

# MS4 PHASE II PUBLIC EDUCATION & OUTREACH



- **MS4 General NPDES Permits** require development and implementation of a Storm Water Management Program (SWMP)
- The SWMP defines BMPs addressing the permit's six minimum control measures (MCM)
- WQP staff is exploring integration of the **One Water** approach into MCM 1 (Education and Outreach) and MCM 2 (Public Participation)
- Efforts are informed by coordination with NEO Pipe and *Lake Erie Starts Here*.

# FINANCIAL IMPACTS

Ohio EPA contracts and NOACA's local water quality dues fund this work.

# NEXT STEPS

**NOACA staff will provide quarterly updates on the Water Quality Planning Program to the Water Quality Subcommittee.**



# NOACA

Northeast Ohio Areawide Coordinating Agency

NOACA will **strengthen** regional cohesion, **preserve** existing infrastructure, and **build** a sustainable multimodal transportation system to **support** economic development and **enhance** quality of life in Northeast Ohio.