

# Ohio's Nonpoint Source Program and Watershed-based Implementation Strategies

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Ohio EPA, Division of Surface Water  
Nonpoint Source Program



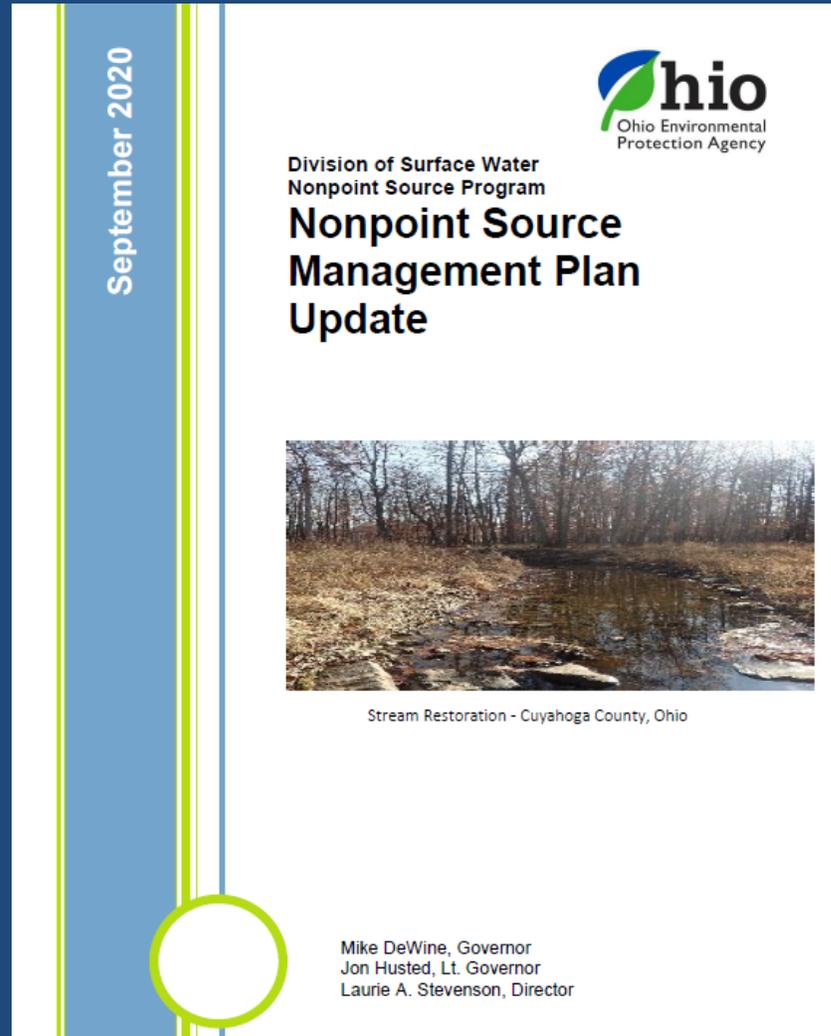
# Presentation Overview

- Overview of Ohio's Nonpoint Source program
- What are Nonpoint Source Implementation Strategies (NPS-IS) and why do they matter
- Current status of NPS-IS development and updates
- Importance of updating NPS-IS
- Tools and Resources on Ohio NPS website

# Nonpoint Versus Point Sources



# Ohio's NPS Program/Ohio NPS Management Plan



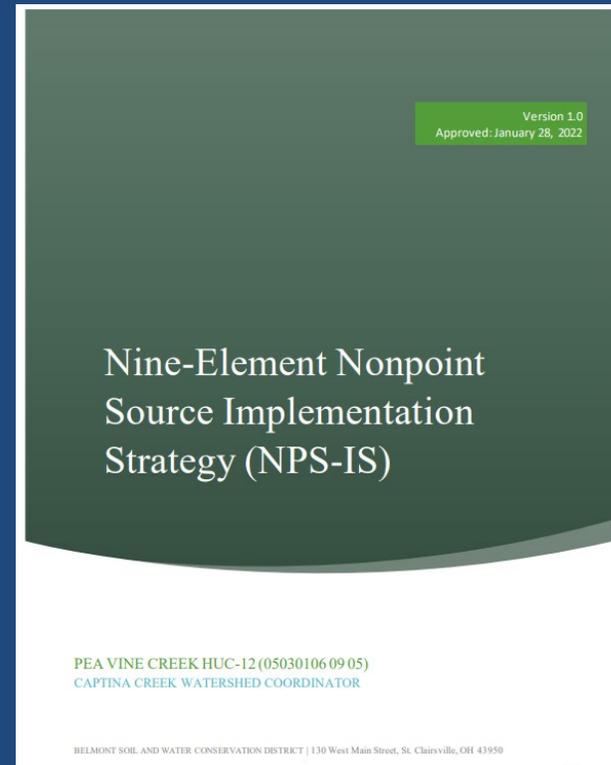
Identifies major NPS problems and reduction strategies for Ohio

U.S. EPA funding (Section 319) supports

- NPS related monitoring, modeling and TMDL development
- \$2.6 Million in implementation practices
  - Typically, 10-15 projects annually that
    - Reduce impairment
    - Protect high quality resources

# USEPA Funding Requires Watershed-based Planning

- In Ohio, these are Nonpoint Source Implementation Strategies, (NPS-IS) that are completed on HUC12 sized watersheds.
- Also known as 9-Element Plans



# Ohio's Watershed-based Plans

- Nearly 175 Nonpoint Source Implementation Strategies, (NPS-IS) have been completed on HUC12 sized watersheds



# What are NPS-IS (9-Element Plans)?

Strategic planning documents that:

- Characterizes the watershed
  - Summarize causes and sources of impairment;
- Establishes critical areas relevant to documented water quality problems or threats to attainment;
- Develops quantifiable objectives that address impairment;
- Describes projects designed to meet those objectives to make measurable progress toward water quality goals.

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# What are the 9-Element in a NPS-IS?

1. Sources & Causes of Impairment
2. Change needed (load to be reduced, QHEI score change...)
3. Critical areas and measures that can achieve needed change
4. Identifies technical/financial assistance needed
5. Information/Education needed
6. Implementation Schedule
7. Measurable milestones
8. Indicators of progress
9. Monitoring component

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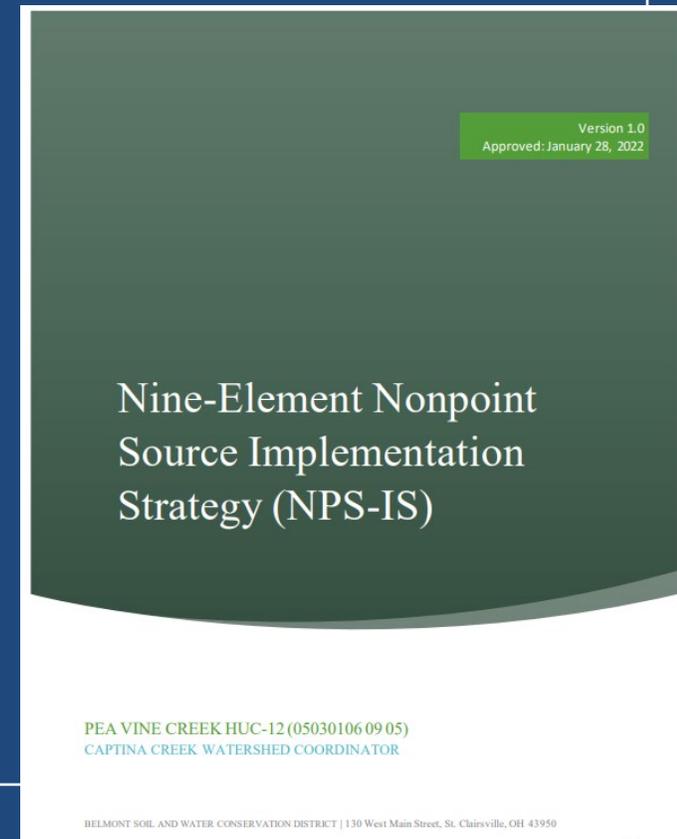
**Think SMARTPLAN**

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# Nonpoint Source Implementation Strategies

- Each is unique to their HUC-12 watershed
- They should be updated as projects come and go;
- Every update (with new projects, data, or changes to critical areas, goals, & objectives) is reviewed and approved by the state of Ohio.



# Do These Matter? YES!

## Most NPS-IS Projects Are Eligible for Funding

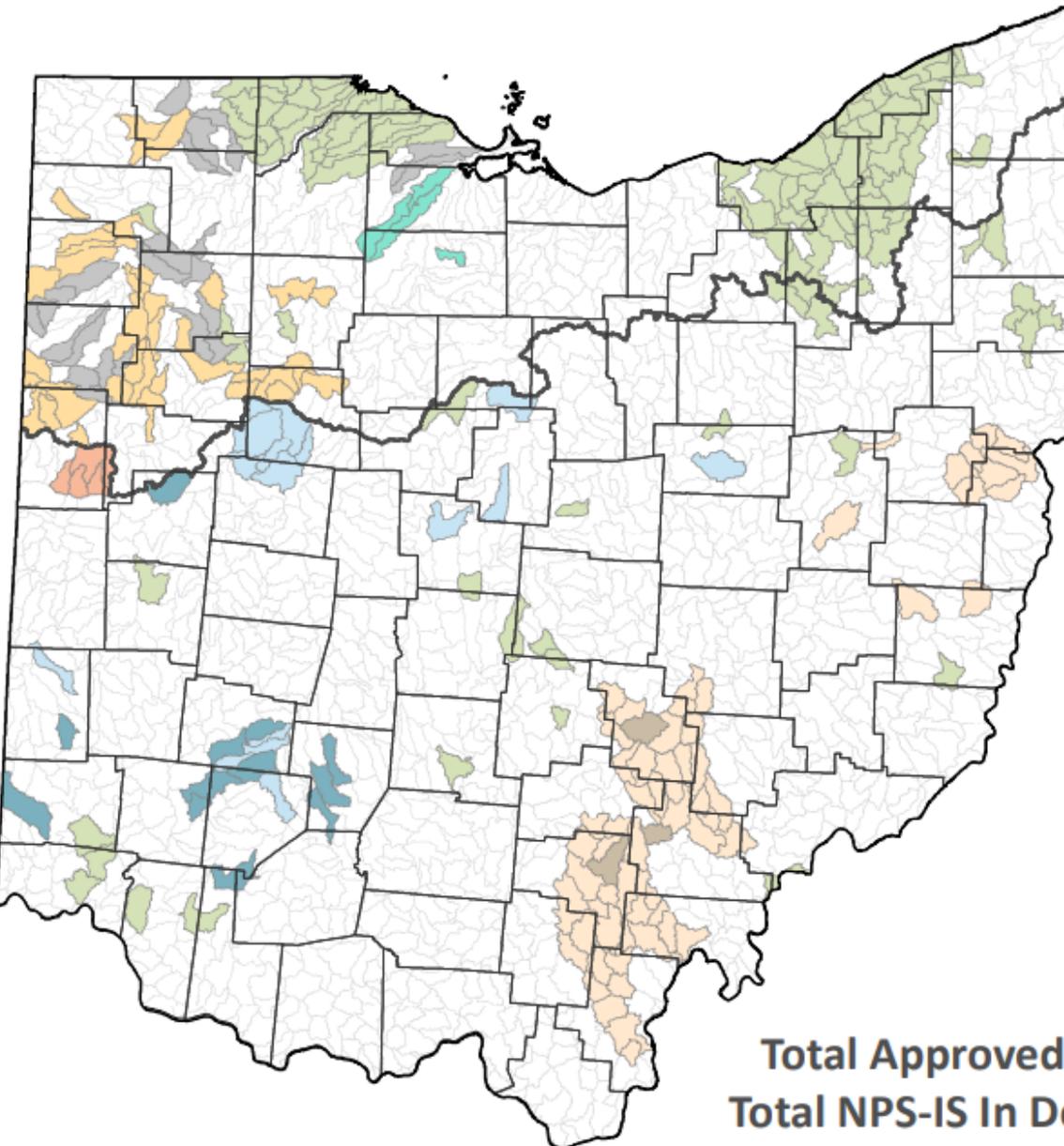
- Projects proposed for §319 funding must be described in an approved NPS-IS.
- For other funding, NPS-IS guide implementation, and provide strategic prioritization with watershed partners.
- Serves as the “at the ready” project bookshelf.
- A NPS-IS ensures that projects:
  - are rooted in the best science available;
  - are located where it will address the worst problems; and
  - have administrative, evaluation, and educational components needed for water resources to gain long term benefits.

# Why are the 9-Elements Required for EPA funding?

- In 2013, U.S. EPA issued NPS Guidance requiring that 319-funded restoration and protection projects be guided by well-developed WBPs.
- Based on this, Ohio developed guidance called *Ohio's 9-Element Nonpoint Source Implementation Strategic (NPS-IS) Planning Process*.

# Ohio NPS-IS Plans

Date: 10/26/2021



- Approved NPS-IS w/far field targets (GLSM)
- Approved NPS-IS w/far field targets (GULF)
- In Development NPS-IS w/far field targets (GULF)
- Approved NPS-IS w/far field targets (LE)
- In Development NPS-IS w/far field targets (LE)
- Approved NPS-IS w/far field targets (Sandusky Bay)
- Approved NPS-IS w/near field targets
- Approved NPS-IS/AMDAT
- AMDAT
- Lake Erie - Ohio River Basins
- County Boundaries

**Total Approved NPS-IS: 156 HUC-12 watersheds**  
**Total NPS-IS In Development: 37 HUC-12 watersheds**

\*Total Approved AMDAT only: 60 HUC-12 watersheds

9-Element  
Nonpoint  
Source  
Implementation  
Strategies  
Development  
in Ohio  
(2017-2022)



# 9-Element NPS-IS Examples



## Nonpoint Source Implementation Strategies

Hamley Run – Hocking River  
HUC 12 # 05030204 08 01

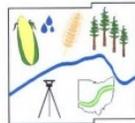


Version 1.0  
28 December 2017  
Approved: 6, February 2018

## Nine-Element Nonpoint Source Implementation Strategic Plan (NPS-IS plan) Olentangy Watershed Headwaters Olentangy River HUC-12 [05060001 08 01]

Version 1.0 June, 2021)

Approved June 30, 2021



Created by:  
**Crawford Soil & Water  
Conservation District**  
3111 State Route 98  
Bucyrus, OH 44820



Community of Mechanicsville-Grand River  
HUC-12: 041100040603  
Nine-Element  
Nonpoint Source Implementation Strategy  
(NPS-IS)



Version 1.0 Draft  
December 10, 2019  
Approved: December 17, 2019

# NPS-IS Development (through the 9 Elements)

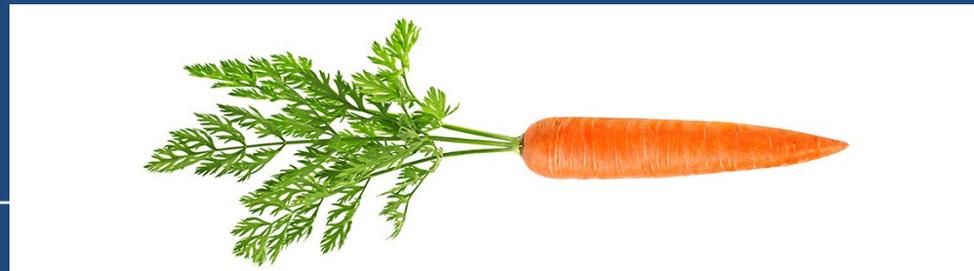
NPS-IS <u>Outline</u> Order	NPS-IS <u>Development</u> Order			
Watershed profile	<p data-bbox="800 288 1467 654"><b>Public participation</b> (iterative consultation with stakeholders at each stage of NPS-IS development to ensure buy-in and willingness to implement)</p> <div data-bbox="937 659 1607 1025" style="text-align: center;"> <p data-bbox="1026 691 1518 1003"><b>Iterative Consultation Approach</b></p> </div>	<p data-bbox="1472 288 1722 525"><b>Projects</b> (Identify and detail projects)</p>	<p data-bbox="1727 288 2390 488"><b>Water quality characterization</b> (Identify land use related water quality issues)</p>	
Public participation			<p data-bbox="1727 494 2390 682"><b>Goals</b> (Identify and quantify WQ problems and reduction targets)</p>	
Water quality characterization "nonpoint sources"			<p data-bbox="1727 688 2390 931"><b>Objectives</b> (Identify and quantify conservation activities and practices)</p>	
Critical areas		<p data-bbox="1727 936 2390 1173"><b>Critical areas</b> (Delineate specific geographic target areas for sets of closely related objectives)</p>		
Goals		<p data-bbox="1727 1179 2390 1416"><b>Watershed profile</b> (Overview of locality in general, important stakeholders, areas, etc.)</p>		
Objectives				
Projects				

# Who Helps To Develop NPS-ISs?

- Local entities and partnerships (funded outside of State and Federal sources)
- State funded Watershed Coordinators – NPS-IS development task item (2019-present)
- Great Lakes Restoration Initiative (2017-2022)
- U.S. EPA - Office of Water (Gulf Hypoxia) (2019-2022)
- Lake Erie Commission - New and Updates (2019-2021)
- State of Ohio - Surface Water Improvement Fund (2017)

Currently, investment per HUC12 watershed NPS-IS ranges between \$4,000 and \$10,000 for a NPS-IS.

\*\*\*Nonpoint Source funding eligibility for water quality project(s) in the NPS-IS\*\*\*



# NPS Implementation Strategies: Developing and Keeping them Current Brings Funding Opportunities



This project in Coventry Township near Akron, Ohio daylighted 1,117 feet of culverted streams, leaving natural stream with habitat structure and significant riparian areas planted with native grasses, trees and shrubs.

# Example: FY 2020 §319 Program Award to Holmes County

## Nine-Element Nonpoint Source Implementation Strategy (NPS-IS) for Tea Run-Killbuck Creek HUC-12 (05040003 06 07)



Prepared for:

Holmes Soil and Water Conservation District

Prepared by:

Civil & Environmental Consultants, Inc.  
Toledo, Ohio

Version 1.0: April 29, 2020

Approved: May 1, 2020

In 2020, Holmes SWCD applied for a Section 319 NPS Grant and was selected for a \$289,830 award

Rush Run Stream Restoration  
Pre-project walk-through  
NPS-IS approved May 1, 2020



Restore Streambank by Re-contouring or Regrading	1,378	Linear Feet
Plant Native Grasses in Riparian Areas	2.5	Acres
Plant Trees Shrubs and/or Live Stakes in Riparian Areas	2.5	Acres

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# Beechers Brook Award to Cleveland Metroparks



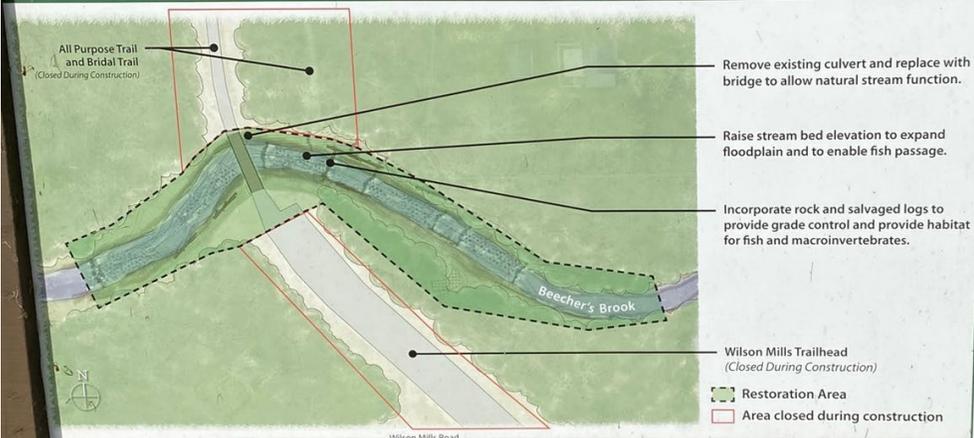
# Beechers Brook Award to Cleveland Metroparks



## Capital Improvement

Coming in 2021

### Beecher's Brook Restoration Project



Remove existing culvert and replace with bridge to allow natural stream function.

Raise stream bed elevation to expand floodplain and to enable fish passage.

Incorporate rock and salvaged logs to provide grade control and provide habitat for fish and macroinvertebrates.

Wilson Mills Trailhead  
(Closed During Construction)

Restoration Area

Area closed during construction

#### Funding Provided By



Ohio Environmental Protection Agency, Section 319 (h) grant



Cleveland Museum of Natural History Trout Club

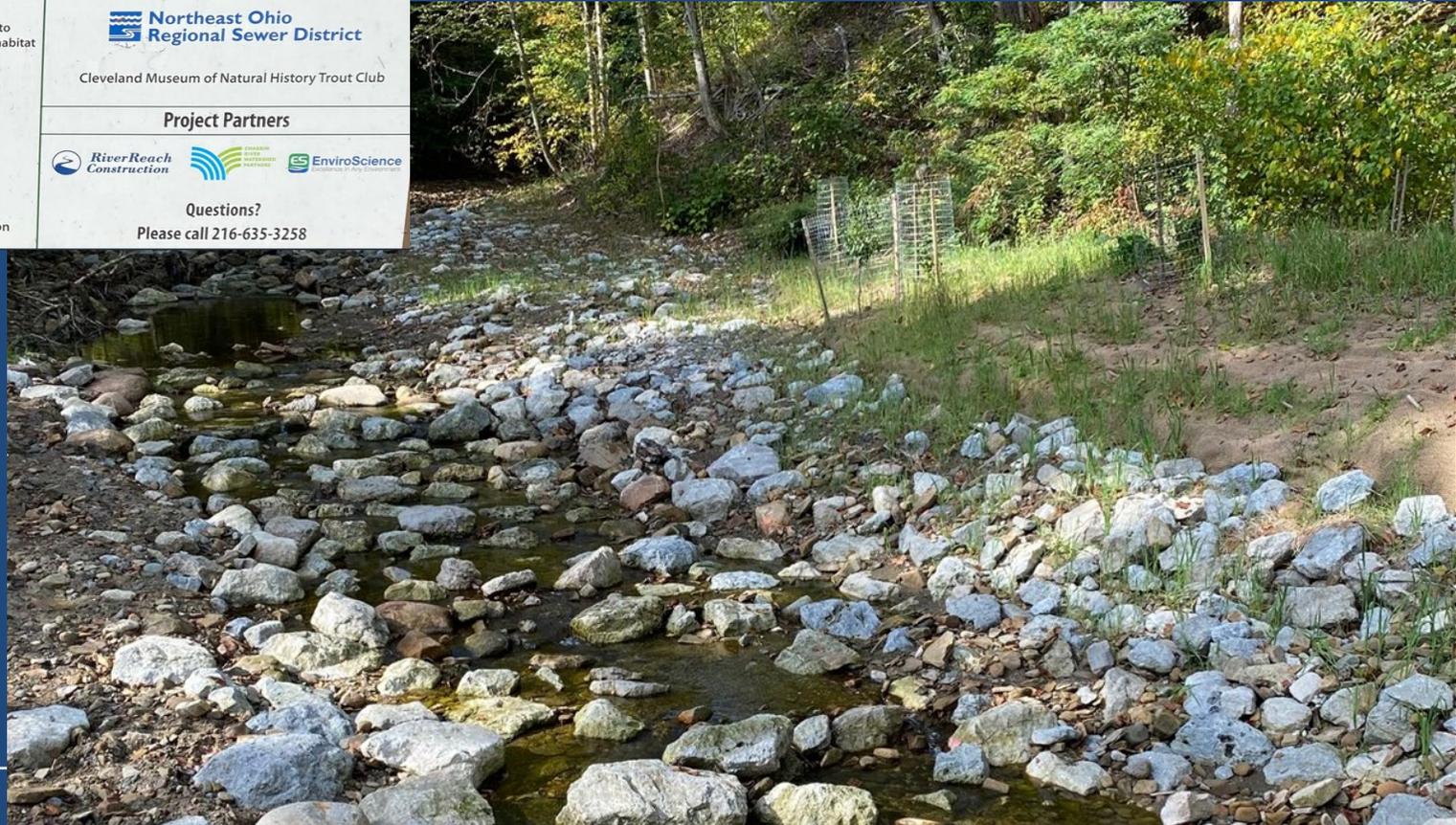
#### Project Partners



Questions?

Please call 216-635-3258

\$182,000 Federal §319  
\$120,000 Local Match



# More NPS-IS Derived Project Examples



Waterways reduce nutrient loss and erosion

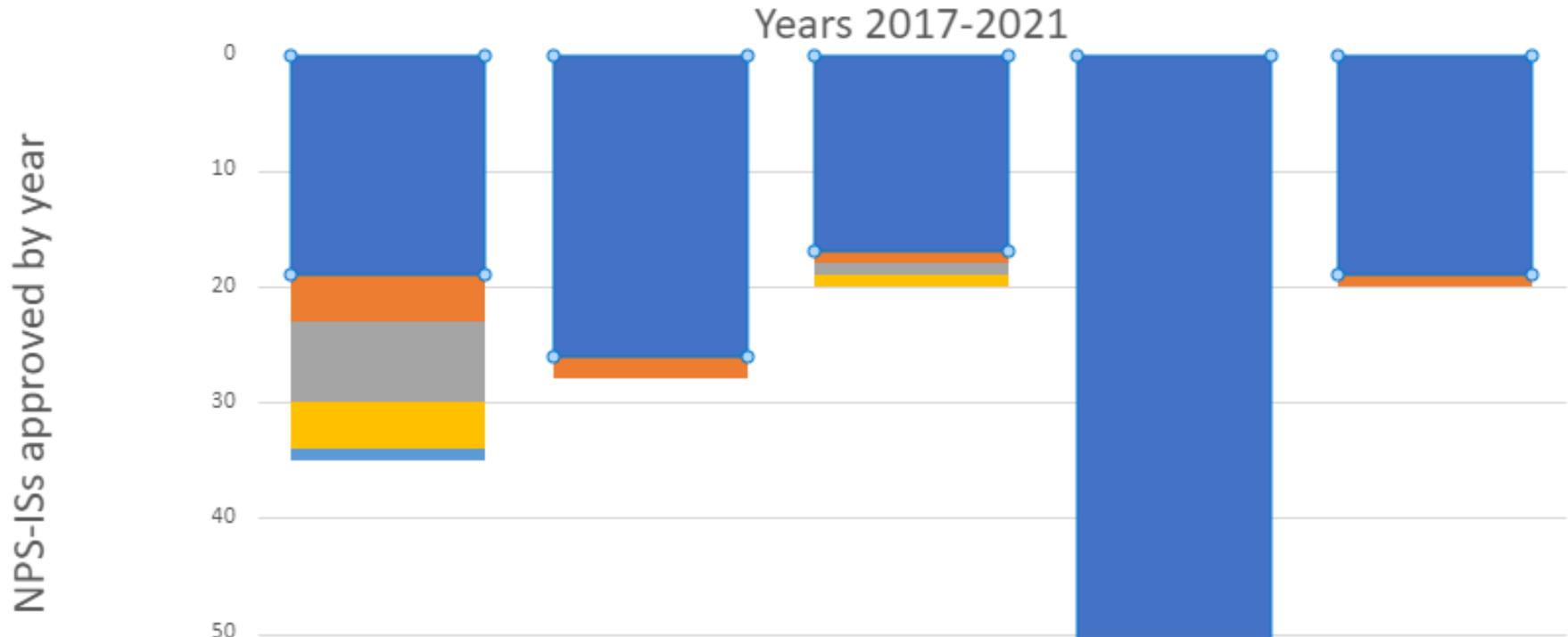


# You Have an Approved NPS-IS...

## Now Keep It Healthy – Update Regularly

- How many have been approved over the years and where?
- How many NPS-ISs have been updated so far...5 years in?
- Is the core NPS-IS development team still together?
  - Regular review and maintenance of NPS-ISs is always recommended. Revisit and revise NPS-ISs according to new project, stakeholder, and funding opportunities; and new data, new watershed reports.
  - Review and itemize NPS efforts that have been implemented. These all go toward the incremental progress toward accomplishing measurable goals and objectives.

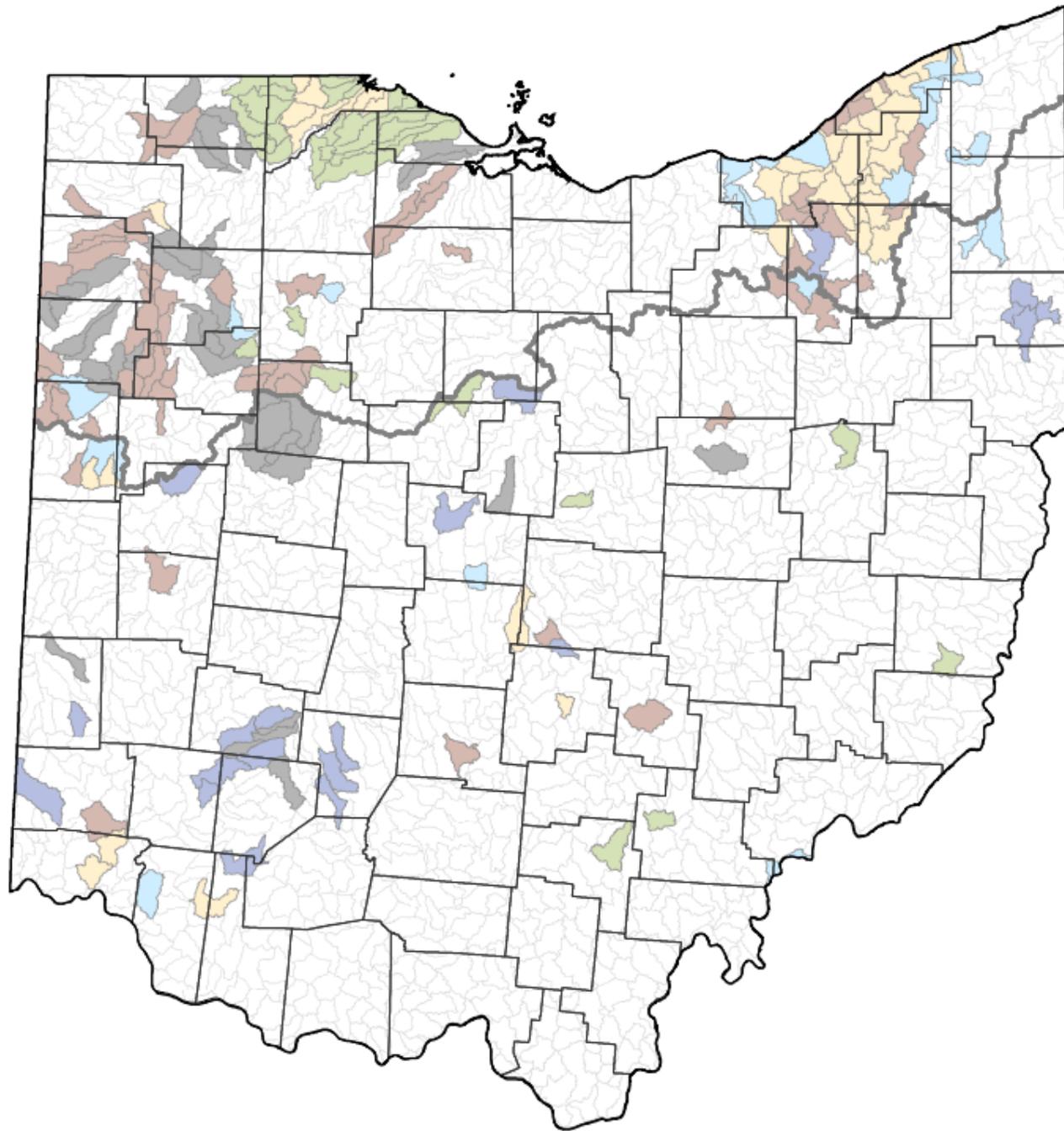
# 9-Element NPS-IS update comparison by Approval Year



	2017 (35 total)	2018 (28 total)	2019 (20 total)	2020 (53 total)	2021 (20 total)
1	2	3	4	5	5
Updated to 1.4	1	0	0	0	0
Updated to 1.3	4	0	1	0	0
Updated to 1.2	7	0	1	0	0
Updated to 1.1	4	2	1	2	1
Version 1.0 only	19	26	17	51	19

At time of this evaluation, 156 Nine-Element NPS-ISs were approved. Of those, only 24 have been updated to Version 1.1 or beyond.





## NPS-IS Plan Approvals by Year

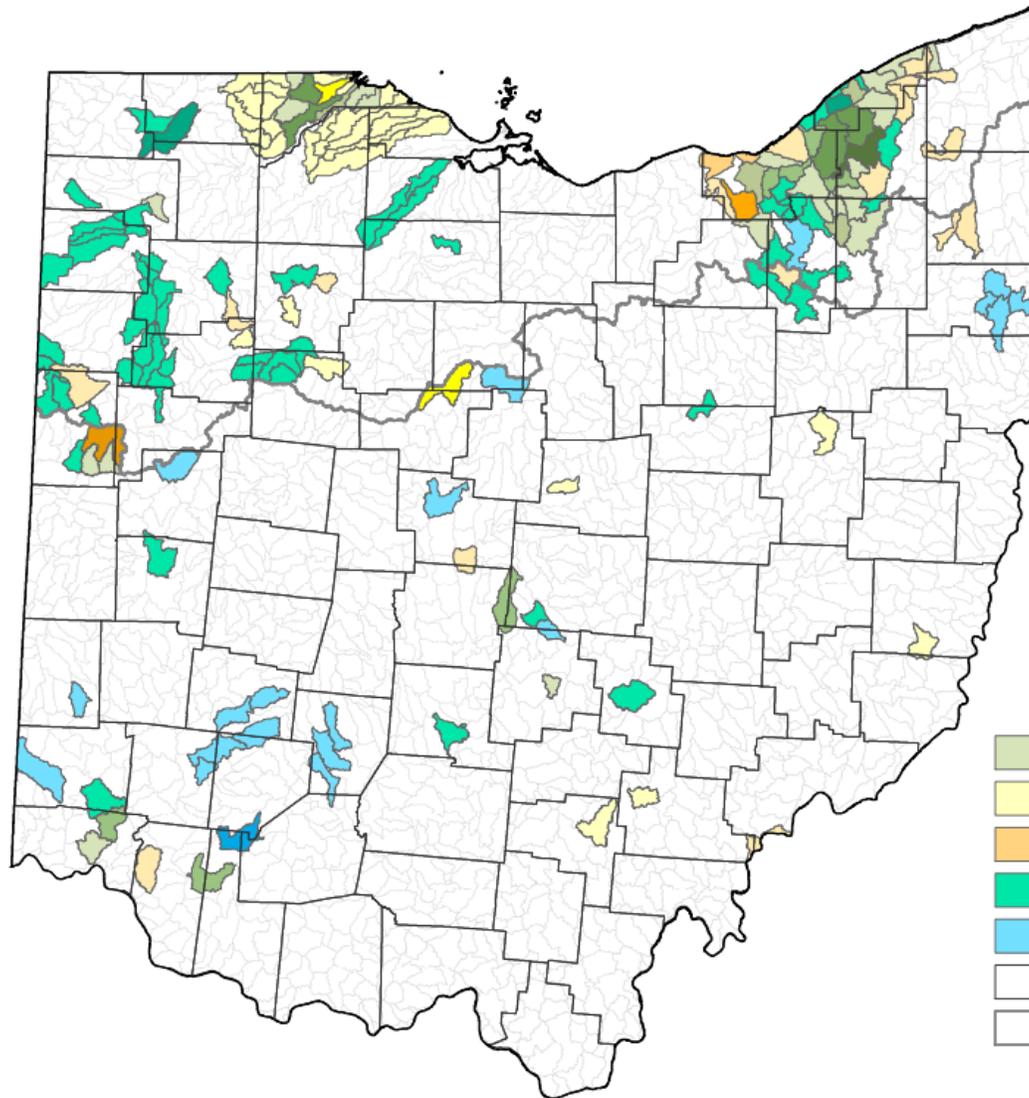
Date: 10/26/2021

- County Boundaries
- Lake Erie - Ohio River Basins
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022 (expected)

# NPS-IS Map by Approval Date

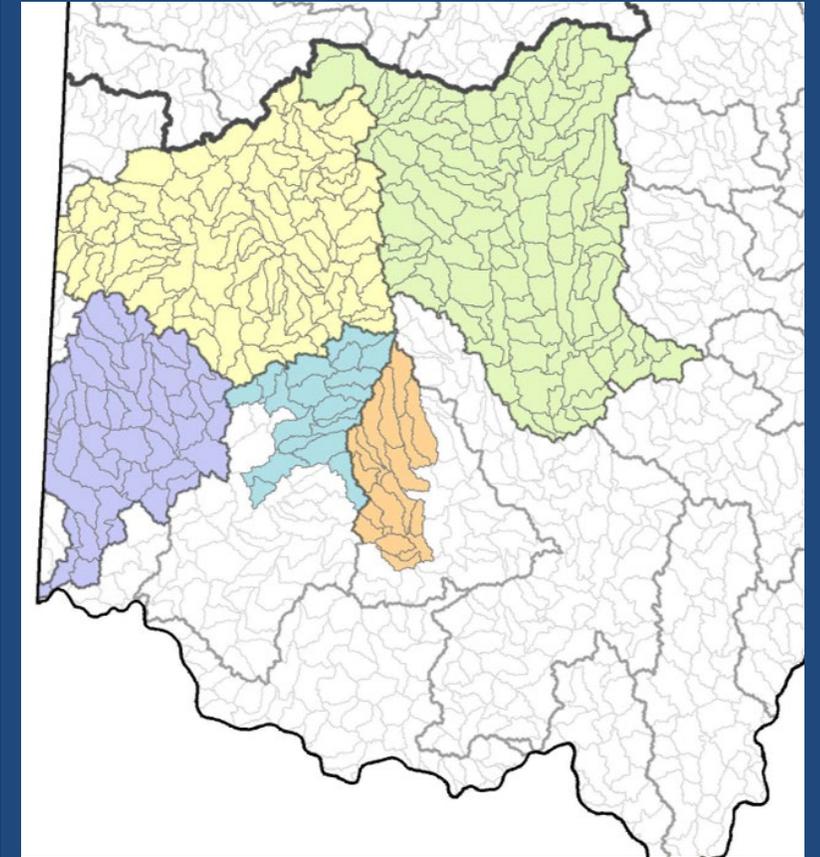
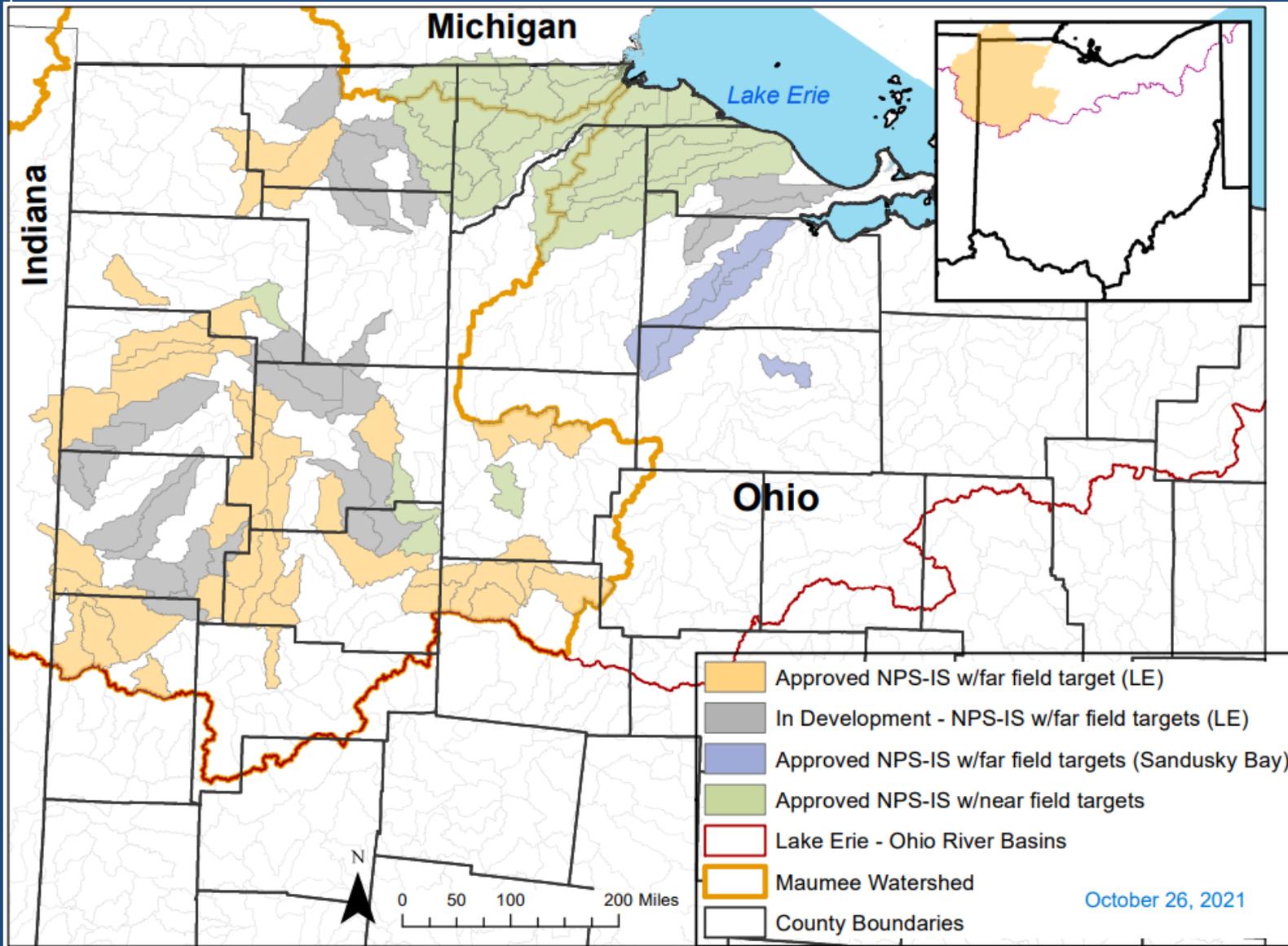
# 9-Element NPS-ISs and Updates (through Oct. 27, 2021)

NPS-IS Approvals  
and Updates by Year  
(2017-Present)



- 2017
- 2018
- 2019
- 2020
- 2021
- County Boundaries
- Lake Erie - Ohio River Basins

# Maumee Watershed, Western Lake Erie Basin, and Priority Ohio River Basin HUC-12 Watershed Planning



Gulf of Mexico Hypoxia NPS-IS  
Plan development effort 2020-  
2022

# Other Relevant NPS-IS Update Items to Consider

- Many updated NPS-ISs keep aligning critical areas with sources. Example critical areas include:
  - *Prioritized Row-Crop Land*
  - *Prioritized Developed Land*
  - *Riparian Corridor (along selected and/or prioritized waters)*
  - *Home Septic Treatment Systems Clusters (prioritized)*
- Future NPS-ISs and updates may include new water quality related goals such as bacteria and recreational use attainment(RU), public water supply(PWS) protection, nutrient load reduction (far-field ...Lake Erie, Gulf of Mexico, Ohio inland lakes).

# Most Important Element Is Stakeholder Involvement

**Identify or reconvene stakeholders:** (e.g., City, County, SWCD, Watershed Organizations, Parks, Farm Producers, Landowners, NRCS, ODA, Extension, Health Department).

- **Create a venue** (virtual or otherwise) to go over main components of NPS-IS with focus on:
  - impaired waters,
  - the types of practices that can address them, and
  - development of implementable projects amongst partners.
- **Assign** tasks, follow up with calls and meetings (virtual or in-person).
- Seek help with Ohio EPA and ODA (Rick Wilson and Greg Nageotte) with questions.

# Many Resources Are Available on Ohio EPA's NPS Page

<https://epa.ohio.gov/divisions-and-offices/surface-water/about/ohio-nonpoint-source-pollution-control-program>

Search for Ohio EPA NPS Program

Technical help: Rick Wilson, NPS Tech. Lead, [rick.wilson@epa.ohio.gov](mailto:rick.wilson@epa.ohio.gov) and  
Emma Comerford, [emma.Comerford@epa.ohio.gov](mailto:emma.Comerford@epa.ohio.gov)

Thank you, John Mathews, Ohio EPA DSW  
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