H2Ohio

H2Ohio Accomplishments for Fiscal Year 2023

h2.ohio.gov

"Ohio is truly the heart of it all, and we must continue to protect our most valuable resource, our water, so that we can continue to thrive for generations to come. H2Ohio continues to use the best science and data available to inform our water quality decisions."

– Mike DeWine, Governor

MIKE DEWINE
GOVERNOR OF OHIO

Ohio

Department of Agriculture | Department of Natural Resources | Environmental Protection Agency | Lake Erie Commission

H2Ohio Accomplishments
for Fiscal Year 2023

Contents

Letter from the Governor

▲ *ABOVE: Governor Mike DeWine participates in 2023 Fish Ohio Day on Lake Erie. H2Ohio is making great strides in protecting our waters and improving the health of Lake Erie.*

Dear Fellow Ohioans,

This year, Ohio reintroduced the "Ohio, the Heart of it All" tagline, which previously served as Ohio's state slogan for nearly two decades. Ohio is the heart of opportunity, adventure, technology, prosperity, and more – and water plays a critical role in Ohio's success. From the adventures that await on our lakes and rivers to the new economic development opportunities coming to Ohio thanks to our abundance of water, Ohio's heart is beating strong thanks to this valuable natural resource. Protecting Ohio's water sources remains one of my biggest priorities. This fourth annual report details H2Ohio's progress and continued commitment to keeping Ohio's waterways clean and safe.

I want to thank the Ohio General Assembly for their dedication to H2Ohio. The continued support from the Legislature is making clean and safe water accessible to more Ohioans. It is also through our strong partnerships with the agricultural and environmental communities that H2Ohio has seen great success. For that, I thank all our partners.

H2Ohio is the vehicle to clean, safe water in Ohio. In collaboration with the Ohio Department of Agriculture (ODA), the Ohio Department of Natural Resources (ODNR), the Ohio Environmental Protection Agency (Ohio EPA), and the Ohio Lake Erie Commission (OLEC), Ohio continues to move in the right direction to reduce nutrient runoff, combat harmful algal blooms on Lake Erie, and make key investments in infrastructure. H2Ohio continues to use the best science and data available to inform our water quality decisions, and we are learning from experts how to adapt and enhance our approach to improve Ohio's waterways over the long term.

I am pleased that ODA and ODNR continue to work together to address the agricultural nutrient runoff that contributes to algal blooms on Lake Erie and other waters. We know farmers want to be part of the solution. To date, more than 2,400 farmers have enrolled 1.4 million acres of farmland into voluntary conservation practices that are proven to reduce phosphorus runoff. Additionally, H2Ohio has constructed and enhanced 141 wetland projects complete or in progress across the state that filter nutrients out of the water. These natural improvements also provide wildlife habitat and recreational opportunities for families to explore Ohio and learn about our great state's precious resources.

Making Ohio the best place for families to live and grow is so important. Thanks to the work being done through Ohio EPA, Ohioans are gaining access to clean and safe water through needed water infrastructure improvements that would not be possible without the support of H2Ohio. More than 59,000 Ohioans will be served by one of H2Ohio's 65 water infrastructure projects, and we know there are more communities in need that we can reach with the help of H2Ohio.

Ohio is truly the Heart of it All, and we must continue to protect our most valuable resource, our water, so that we can continue to thrive for generations to come.

Very respectfully yours,

Mike DeWine
Governor of Ohio

Executive Summary

▲ *ABOVE: Governor DeWine looks at a water experiment at a press conference in Marietta, Ohio, to announce the H2Ohio Rivers Initiative, which will preserve and improve Ohio's rivers which provide critical wildlife habitat, drinking water, and recreation space.*

H2Ohio continues to see tremendous support from Ohio farmers. The Ohio Department of Agriculture (ODA), with the help of local Soil and Water Conservation Districts (SWCD), enrolled 1.4 million acres into Voluntary Nutrient Management Plans (VNMP) across northwest Ohio.

VNMPs are essential to all other conservation practices and are required for each farmer enrolled in H2Ohio. Farmers use a VNMP to determine the exact amount of nutrients needed on their fields, and in some cases, none is needed. H2Ohio focuses heavily on nutrient management on every farm because nutrient runoff is a leading cause of harmful algal blooms in waterways such as Lake Erie. Thanks to H2Ohio, one in every three fields in northwest Ohio is now following a VNMP, ensuring only the right amount of nutrients are being applied. ODA also incentivizes other best management practices (BMPs) that focus on water management, like two-stage ditches, and land management, like cover crops.

The Ohio Department of Natural Resources (ODNR) continues to improve Ohio's landscape by restoring and improving wetlands. In all, 141 wetland projects have been completed or are in the process to be completed through ODNR's H2Ohio efforts.

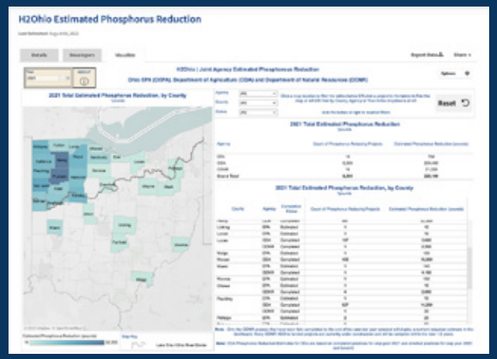
This amounts to more than 110,000 acres of Ohio's watershed being filtered and cleaned through natural processes. These wetlands provide essential habitat for Ohio's native species and help prevent floods. Wetlands also create recreational opportunities for families and learning opportunities for schools and communities. Through ODNR's Students Take Action program, more than 2,000 high school and middle school students have learned about Ohio's wetlands through hands-on activities, wetland site visits, and kayak adventures. With each new wetland, the next generation of scientists and engineers are learning the importance of keeping Ohio's waterways clean and safe.

Ohioans are benefiting from H2Ohio's funding for critical water and sewer infrastructure projects led by Ohio EPA. More than 59,000 Ohioans will be served by one of the 65 H2Ohio projects for critical water and sewer infrastructure.

This includes much-needed waterline extensions and new sanitary sewer lines, lead service line replacements at child-care facilities and within communities, and household sewage treatment system repairs and replacements. Ohio EPA's H2Ohio funding addresses critical water and wastewater infrastructure needs in communities throughout Ohio, particularly in economically disadvantaged communities that need projects that are not possible without additional financial support.

The Ohio Lake Erie Commission (OLEC) leads the collaboration and coordination among Ohio's state agencies and stakeholders.

H2Ohio continues to be a transparent initiative, keeping stakeholders and Ohioans updated on its progress. In the last year, 10 new, interactive dashboards were created to inform Ohioans on H2Ohio's progress in overall water quality improvement. OLEC also regularly engages the scientific community as a check and balance on H2Ohio's effectiveness and goals. Another way OLEC is achieving this is through the development of an H2Ohio watershed model with The Ohio State University. This model will provide insight into conservation effectiveness and how long it will take to achieve nutrient reduction goals for Lake Erie.



▲ *ABOVE: Screen capture of the H2Ohio Phosphorus Reduction Dashboard showing total estimated phosphorus reduction in pounds by county. Projects implemented by ODA, ODNR, and Ohio EPA are represented.*

The following pages provide a detailed description of H2Ohio's progress and success.

Ohio Department of NATURAL RESOURCES

Overview

The ODNR team, which includes staff from a variety of divisions with different expertise, work collectively to identify high-impact wetland creation, restoration, and enhancement project opportunities.The projects are primarily focused on waterways that have experienced increased frequency and intensity of harmful algal blooms (HABs) in recent years.

The highest priority H2Ohio wetland projects are :

1. located in watersheds that contribute high levels of nutrient runoff,
2. situated to filter the drainage from a large area of high nutrient landscape,
3. sized to have a wetland area that is efficient, relative to the contributing watershed, and
4. able to offer intangible benefits, such as ease of design-build execution or the assurance of long-term support from project partners.

ODNR By the Numbers – FY23

41 **new** wetland projects

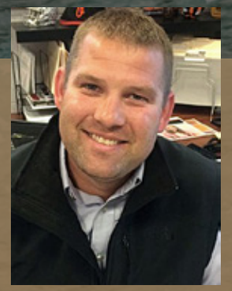
$25M to support wetland project implementation

20 **new** nonprofit conservation partners engaged

2,866 **new** acres of wetland and ecosystem restoration

90 threatened or endangered species dependant on wetlands

13,000+ **new** acres of watershed filtered by wetland projects



"Beyond the classroom, this project will also extend its positive influence to the wider community. It will serve as a valuable resource for local environmental organizations, enabling collaboration and fostering a sense of civic responsibility among our students. We envision partnerships with researchers, conservationists, and community leaders, leading to inspiring projects and initiatives that benefit both the wetland and the broader ecosystem."

Kevin O'Shea, Otsego High School Principal on the Otsego Schools Wetland Restoration Project

Program Successes

ODNR has developed a strategic approach focused on investing in natural infrastructure to provide nutrient reduction and water quality benefits to Ohio's waters. These projects are implemented using sound science, landscape conservation design principles, and robust monitoring to measure progress.

Last year, ODNR celebrated a milestone, surpassing 100 H2Ohio wetland projects that are either underway or complete. As of July 2023, more than 40 wetlands have been completed through the H2Ohio program.

ODNR By the Numbers – Overall

141 wetland projects

153 landowners incentivized to establish wetlands and wooded riparian buffers

65 nonprofit conservation partners engaged

90 endangered species benefiting from wetlands

$4.3M allocated to establish independent project monitoring program

$116M to support wetland project implementation

14,866 acres of wetland and ecosystem restoration

113,000+ acres of watershed filtered by wetland projects

80,000+ trees have been planted in wetland buffers

ODNR has partnered with many conservation groups and non-profits but has also seen great success by combining resources and efforts with park districts. ODNR partnered with the Hancock County Parks District to complete the Oakwoods Nature Preserve Wetland Restoration Project East and Oakwoods Nature Preserve Wetland Restoration Project West. Combined, the projects cover 142 acres and include 43 individual wetlands. The eastern site transformed 65 acres of farmland into wetlands and pollinator habitat, and the western site created and restored wetlands, woodland, and prairies. When water flow is high, the project will allow Aurand Run to flow into the restored wetlands, which will absorb and filter nutrients and sediment before reaching the Blanchard River and Lake Erie.

That site, and many others, also offers a recreational perk of three miles of walking trails.

"Since 2009, the Hancock Park District envisioned the transition of farmland to a natural area. Thanks to the wetland restoration funding through H2Ohio, we were able to bring that idea to life and give the community a place to come and enjoy nature. The project led to a thoughtful expansion of Oakwoods Nature Preserve."

Gary Pruitt, Hancock Parks District Executive Director

Ribbon Cutting at Litchfield Wetland Restoration Project – Medina County

Ribbon Cutting Participants at Litchfield Wetland Restoration Project

The Litchfield Wetland Restoration Project transformed formerly farmed land into 80 acres of wetland. The property also features an ADA-accessible trail that runs 1.7 miles as well as a 200-foot-long boardwalk.

During Construction

Ending Construction

"I could go on and on about how great the H2Ohio program is, from the straight-forward application to the quick turnaround for reimbursements. The folks in Columbus have been supportive and true champions of our projects. H2Ohio should be a model for other state grant programs. It's getting great results without being burdensome to the project managers."

– Nathan Eppink, Medina County Park District Director

H2Ohio Statewide Wetland Projects (Status)

and Water Quality Incentive Program Projects

Project Key

1 Bright Conservation Area Wetland Restoration Initiative
2 Old Station Road
3 Maumee Bay State Park Wetland Reconnection
4 Ottawa National Wildlife Refuge Wetland Reconnection Projects
5 Magee Marsh Turtle Creek Bay Wetland Reconnection
6 Montpelier Wetland Restoration
7 Raccoon Creek Nature-Based Barrier Wetland
8 Moxley Wildlife Area Wetland Reconnection Project
9 Pickerel Creek Floodplain Restoration
10 St. Joseph Confluence Wetland Reconnection
11 St. Joseph River Restoration Project
12 Mallard Club Nutrient Reduction and Orchid Restoration
13 Oak Openings Preserve Wetland Restoration
14 North Ridge Hunt Club Wetland Restoration
15 Little Portage Nutrient Reduction & Coastal Wetland
16 Redhorse Bend Preserve Wetland Restoration
17 Forder Bridge Floodplain Reconnection
18 Independence Dam Canal Reconnection & Wetland Creation
19 Blanchard River Floodplain Restoration
20 Oakwoods Nature Preserve Wetland Restoration
21 Oakwoods Nature Preserve Wetland Restoration
22 Fruth Outdoor Center Wetland Restoration
23 Andreoff Wetland Restoration
24 Sandusky River Headwaters Preserve Wetland & Habitat Restoration
25 Van Order Wetland & Forest Restoration
26 Navarre Marsh Wetland Restoration & Reconnection
27 Baughman Petition Ditch
28 Sanford Agricultural Drainage Treatment Train Project
29 Defiance East River
30 Springville Marsh Wetland Extension
31 Maumee River Floodplain
32 Buehler Farms Treatment Wetland
33 The Weisgerber-Pohlman Nature Preserve
34 Clark Island Restoration, Design Phase
35 Goll Woods Wetland Extension
36 Duck and Otter Creek Wetland and Stream Restoration
37 Clary-Boulee-McDonald Nature Preserve
38 Bluebell Preserve Restoration Project
39 Rust Tract Wetland Restoration
40 Martin's Run Wetland and Stream Restoration Project
41 The Bird Family Bog Rehabilitation Project
42 Headlands Dunes Coastal Wetland Restoration Project
43 Fosters Run Restoration
44 Ashcroft Woods Scali Preserve
45 Chagrin River & East Branch Corridor Restoration & Protection Project
46 Upper Blanchard River Watershed Project
47 Sugarcamp 7 Blanchard Habitat Project
48 Litchfield Wetland Restoration
49 Trumbull Creek H2Ohio
50 Otsego Schools, Wood County
51 Madison Village Park Wetlands
52 City of St. Marys Treatment Train
53 Targeted Phosphorous Load Reduction in WLEB
54 Pilot Watershed Regional Conservation Partnership Program Support'
55 Lucas County, Ford Two Stage Ditch
56 CHEERS Project: floating wetlands
57 Toussaint Shooting Club Reconnections: Bob's Bay & Main Marsh
58 Bohling Marsh Wetland Reconnection
59 Darby Refuge Wetland Reconnection
60 Burntwood-Langenkamp Wetland Conservation Area
61 Buckeye Lake – Brooks Park Wetland Creation & Water Quality Initiative
62 Chippewa Lake Wetland Restoration
63 Harsha Lake – Williamsburg Wetland Treatment System
64 Springcreek Confluence Off-Channel Wetlands
65 Tipp City Off-Channel Wetland
66 O'Donnell Wetland Restoration and Treatment Train
67 Mercer Wetland Complex Restoration
68 Black Fork Forest Preserve Wetland Restoration Project
69 Funk Bottoms Wetland Restoration
70 Westchester Wetland Restoration
71 Walnut Creek Treatment Wetland Restoration
72 Forest Lawn Stormwater Park
73 Reconnecting to Killbuck Creek
74 Hellbranch Meadows West Wetland Restoration Project
75 East Funk Bottoms
76 Spring Run Conservation Area Wetland Restoration Project
77 Chippewa Creek Floodplain and Wetland Restoration Project
78 Indian Creek- Hoffmann Wetland and Stream Restoration
79 Gorman Heritage Farm Treatment Wetland System
80 'Taggarts Wetland Enhancement & Acid Mine Drainage Abatement
81 Lake Harsha: Wetland Treatment Train Feasibility Study
82 East Fork Riparian Reserve Wetland Treatment System
83 East Fork LMR Wetland Treatment Train
84 Woodpecker Ditch- Babcock Wetland Restoration
85 Fleming Bend Protection and Restoration
86 UT CADE Wetland and Stream Restoration
87 Cuyahoga River Riparian Forest and Wetland Restoration
88 Cedar Point National Wildlife Refuge Pool 2 Coastal Reconnection
89 Winous Point Conservancy "North Marsh" / "Metzger Marsh"
90 Killdeer Reservoir Wetland Project
91 Crane Creek Wetland Restoration
92 Mary Jane Thurston Wetlands
93 Juhasz Wetland Restoration
94 Putnam Oxbow Restoration
95 Elizabeth Street Stormwater Control
96 Perfect Creek Treatment Wetlands
97 Genevieve Jones Preserve Floodplain and Wetland Restoration
98 Big Darby Creek Treatment Wetland
99 Hocking River Riparian Restoration
100 Stream, Floodplain and Wetland Restoration at Mill Creek Golf Course
101 Holes Creek Restoration and Habitat Enhancement
102 Killbuck Creek Headwaters Preservation & Restoration
103 Dry Fork Streambank Stabilization at Governor Bebb Metropark
104 Rainbow Run Wetlands
105 Coldwater Wetlands Park
106 Tech Deployment: Algae Harvester
107 Clear Fork Preserve
108 Merriman Floodplain Restoration
109 Riverwood Restoration Project
110 Sagamore Hills Headwater Stream and Wetland Restoration Project
111 Chagrin River Headwaters Restoration
112 Twinsburg Heights Preserve
113 Little Killbuck Watershed Divide
114 Abraham Forest Riparian Restoration
115 Howard Island Preservation and Restoration
116 Miami & Erie Canal Towpath Wetlands
117 City of Fostoria, Mosier Floodplain Restoration
118 Maumee Floodplain Restoration
119 Wiregrass Restoration
120 Snow Fork, Acid Mine Drainage Abatement
121 Lakefront Reservation Green Infrastructure
122 Dillon Reservoir Wetland Treatment Train
123 Carbondale AMD Doser O&M
124 Thomas Fork AMD Doser O&M
125 Casto AMD Doser O&M
126 Monkey Hollow AMD Doser O&M
127 Jobs AMD Doser O&M
128 Pine Run AMD Doser O&M
129 Dobbelaire Wetland Diversion
130 Gonya Farms Ag Drainage Treatment
131 Kontz Wetland Enhancement
132 Marinewood Treatment Wetland
133 West Lake Shooting Club Wetland Enhancement
134 Nemecek Wetland Diversion
135 Aldrich Pond Wetland Enhancement
136 Village of Harrod Wetland Restoration
137 Little Auglaize Wildlife Reserve Project
138 Maumee Towpath Restoration Projects
139 Killbuck Reconnection Project
140 Village of Ottawa Hills Project
141 Wolf Creek Floodplain Wetland Restoration

H2Ohio Statewide Project Descriptions

1. Bright Conservation Area Wetland Restoration Initiative
Hancock County | Maumee River Watershed | Inland WLEB
Project size: 11 Acres
Partner: Hancock Parks

2. Old Station Road
Cuyahoga County | Cuyahoga Watershed | Inland CLEB
Project size: 18 Acres
Partner: Cleveland Metroparks

3. Maumee Bay State Park Wetland Reconnection
Lucas County | Lake Erie Watershed | Coastal
Project size: 137 Acres
Partner: The Nature Conservancy

4. Ottawa National Wildlife Refuge Wetland Reconnection Projects
Lucas County | Cedar-Portage Watershed | Coastal
Project size: 578 Acres
Partner: Ottawa Soil & Water Conservation District

5. Magee Marsh Turtle Creek Bay Wetland Reconnection
Ottawa County | Little Miami Watershed | Coastal
Project size: 173 Acres
Partner: Erie Soil & Water Conservation District


Magee Marsh Turtle Creek Bay Wetland Reconnection

6. Montpelier Wetland Restoration
Williams County | Maumee River Watershed | Inland
Project size: 98 Acres
Partner: The Ohio State University

7. Raccoon Creek Nature-Based Barrier Wetland
Sandusky County | Sandusky Bay Watershed | Coastal
Project size: 7 Acres
Partner: The Nature Conservancy

8. Moxley Wildlife Area Wetland Reconnection Project
Erie County | Sandusky Bay Watershed | Coastal
Project size: 52 Acres
Partner: Erie Soil and Water Conservation District

9. Pickerel Creek Floodplain Restoration
Sandusky County | Sandusky Bay Watershed | Coastal
Project size: 15 Acres
Partner: The Nature Conservancy

10. St. Joseph Confluence Wetland Reconnection
Williams County | Maumee River Watershed | Inland WLEB
Project size: 140 Acres
Partner: Black Swamp Conservancy

11. St. Joseph River Restoration Project
Williams County | Maumee River Watershed | Inland WLEB
Project size: 133 Acres
Partner: Black Swamp Conservancy

12. Mallard Club Nutrient Reduction and Orchid Restoration
Lucas County | Maumee River Watershed | Inland
Project size: 80 Acres
Partner: Ducks Unlimited

13. Oak Openings Preserve Wetland Restoration
Lucas County | Maumee River Watershed | Inland WLEB
Project size: 48 Acres
Partner: Metroparks Toledo

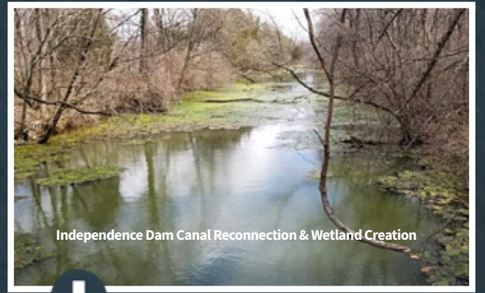
14. North Ridge Hunt Club Wetland Restoration
Ottawa County | Western Lake Erie Basin | Coastal
Project size: 30 Acres
Partner: Ducks Unlimited

15. Little Portage Nutrient Reduction & Coastal Wetland Restoration
Ottawa County | Portage River Watershed | Inland WLEB
Project size: 98 Acres
Partner: : Ducks Unlimited

16. Redhorse Bend Preserve Wetland Restoration
Sandusky County | Sandusky River Watershed | Inland WLEB
Project size: 55 Acres
Partner: Black Swamp Conservancy

17. Forder Bridge Floodplain Reconnection
Paulding County | Maumee River Watershed | Inland WLEB
Project size: 54 Acres
Partner: Black Swamp Conservancy


Forder Bridge Floodplain Reconnection


Independence Dam Canal Reconnection & Wetland Creation

18. Independence Dam Canal Reconnection & Wetland Creation
Defiance County | Maumee River Watershed | Inland
Project size: 29 Acres
Partner: Ohio Department of Natural Resources, Division of Parks and Watercraft

19. Blanchard River Floodplain Restoration
Putnam County | Maumee River Watershed | Inland
Project size: 50 Acres
Partner: Maumee Watershed Conservancy District

20. Oakwoods Nature Preserve Wetland Restoration
Hancock County | Blanchard River Watershed | Inland WLEB
Project size: 77 Acres
Partner: Hancock Park District

21. Oakwoods Nature Preserve Wetland Restoration Hancock County | Blanchard River Watershed | Inland WLEB
Project size: 65 Acres
Partner: Hancock Park District

22. Fruth Outdoor Center Wetland Restoration
Seneca County | Sandusky River Watershed | Inland WLEB
Project size: 18 Acres
Partner: Black Swamp Conservancy

23. Andreoff Wetland Restoration
Wyandot County | Outlet of the Blanchard River Watershed | Inland WLEB
Project size: 278 Acres
Partners: Ducks Unlimited

24. Sandusky River Headwaters Preserve Wetland & Habitat Restoration
Crawford County | Sandusky River Watershed | Inland WLEB
Project size: 38 Acres
Partner: Crawford Park District

25. Van Order Wetland & Forest Restoration
Henry County | Maumee River Watershed | Inland WLEB
Project size: 31 Acres
Partner: ODNR Division of Forestry

26. Navarre Marsh Wetland Restoration & Reconnection
Ottawa County | Toussaint River Watershed | Coastal
Project size: 628 Acres (of total 779-acre project)
Partner: Ducks Unlimited, U.S. Fish & Wildlife Service

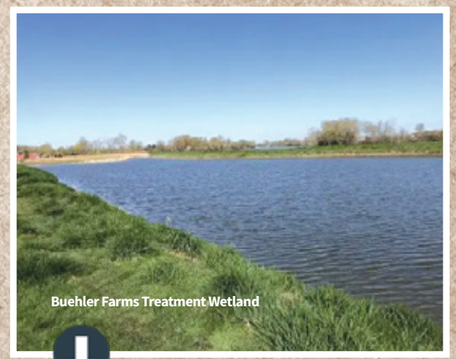
27. Baughman Petition Ditch
Allen County | Maumee River Watershed | Inland
Project size: 20 Acres
Partners: Allen County Engineer

28. Sanford Agricultural Drainage Treatment Train Project
Erie County | Sandusky Bay Watershed | Coastal
Project size: 3 Acres
Partner: Erie Soil and Water Conservation District

29. Defiance East River
Defiance County | Maumee River Watershed | Inland
Project size: 44 Acres
Partner: City of Defiance

30. Springville Marsh Wetland Extension
Defiance County | Maumee River Watershed | Inland
Project size: 65 Acres
Partner: Ohio Department of Natural Resources, Division of Natural Areas and Preserves

31. Maumee River Floodplain
Defiance County | Maumee River Watershed | Inland
Project size: 57 Acres
Partner: Black Swamp Conservancy


Buehler Farms Treatment Wetland

32. Buehler Farms Treatment Wetland
Ottawa County | Sandusky Bay Watershed | Coastal
Project size: 45 Acres
Partner: Ottawa Soil and Water Conservation District

33. The Weisgerber-Pohlman Nature Preserve
Defiance & Williams Counties | Maumee River Watershed | Inland
Project size: 75 Acres
Partner: Black Swamp Conservancy

34 Clark Island Restoration, Design Phase
Lucas County | Maumee River Watershed | Inland
Project size: 40 Acres
Partner: Toledo - Lucas County Port Authority

35 Goll Woods Wetland Extension
Fulton County | Maumee River Watershed | Inland
Project size: 15 Acres
Partner: Ohio Department of Natural Resources, Division of Natural Areas and Preserves

36 Duck and Otter Creek Wetland and Stream Restoration
Lucas County | Western Lake Erie Basin | Inland
Project size: 69 Acres
Partner: Toledo - Lucas County Port Authority

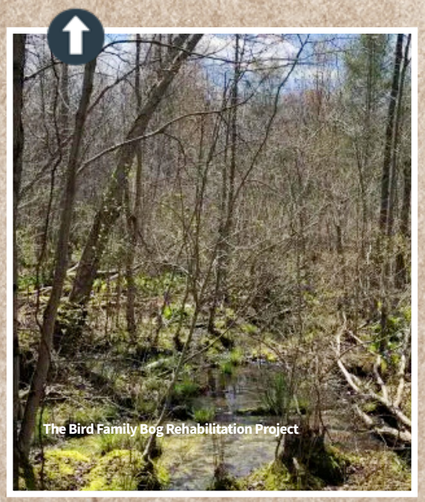
37 Clary-Boulee-McDonald Nature Preserve
Seneca County | Sandusky River Watershed| Inland
Project size: 162 Acres
Partner: Black Swamp Conservancy

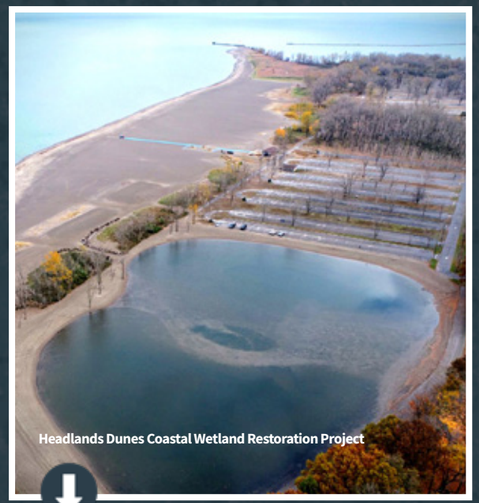
38 Bluebell Preserve Restoration Project
Medina County | Central Lake Erie Basin | Inland
Project size: 21 Acres
Partner: West Creek Conservancy

39 Rust Tract Wetland Restoration
Ottawa County | Sandusky Bay Watershed | Coastal
Project size: 216 Acres
Partner: Ducks Unlimited

40 Martin's Run Wetland and Stream Restoration Project
Lorain County | Central Lake Erie Basin | Inland
Project size: 19 Acres
Partner: City of Lorain

41 The Bird Family Bog Rehabilitation Project
Portage County | Cuyahoga River Basin | Inland
Project size: 170 Acres
Partner: West Creek Conservancy


The Bird Family Bog Rehabilitation Project


Headlands Dunes Coastal Wetland Restoration Project

42. Headlands Dunes Coastal Wetland Restoration Project
Lake County | Central Lake Erie Basin | Coastal
Project size: 16 Acres
Partner: : Ohio Division of Natural Resources, Division of Parks and Watercraft

43. Fosters Run Restoration
Cuyahoga County | Central Lake Erie Basin | Inland
Project size: 37 Acres
Partner: Cleveland Metroparks

44. Ashcroft Woods Scali Preserve
Ashtabula County | Grand River Watershed | Inland
Project size: 50 Acres
Partner: Western Reserve Land Conservancy

45. Chagrin River & East Branch Corridor Restoration & Protection Project
Lake County | Ashtabula-Chagrin Watershed | Inland
Project size: 78 Acres
Partner: Chagrin River Watershed Partners

46. Upper Blanchard River Watershed Project
Wyandot County | Maumee River Watershed | Inland
Project size: 30 Acres
Partner: Wyandot Soil and Water Conservation District

47. Sugarcamp 7 Blanchard Habitat Project
Putnam County | Maumee River Watershed | Inland
Project size: 20 Acres
Partner: Private Land Owner

48. Litchfield Wetland Restoration
Medina County | Black- Rocky Watershed | Inland
Project size: 145 Acres
Partner: Medina County Park District

49. Trumbull Creek H2Ohio
Ashtabula County | Cuyahoga Watershed | Inland
Project size: 30 Acres
Partner: Stream + Wetlands Foundation

50 Otsego Schools, Wood County
Wood County | Lower Maumee Watershed | Inland
Project size: 16 Acres
Partner: Black Swamp Conservancy

51 Madison Village Park Wetlands
Lake County | Ashtabula-Chagrin Watershed | Inland
Project size: 19 Acres
Partner: Village of Madison

52 City of St. Marys Treatment Train
Auglaize County | St. Marys Watershed | Inland
Project size: 63 Acres
Partner: City of St Marys

53 Targeted Phosporous Load Reduction in WLEB
Multiple Counties | Inland
Project size: TBD
Partner: Rural Action

54 Pilot Watershed Regional Conservation Partnership Program Support
Hardin County | Blanchard Watershed | Inland
Project size: TBD
Partner: OSU

55 Lucas County, Ford Two Stage Ditch
Lucas County | Ottawa-Stony Watershed | Inland
Project size: 3 Acres
Partners: Lucas County Engineers

56 CHEERS Project: floating wetlands
Cuyahoga County | Ashtabula-Chagrin Watershed | Inland
Project size: 0.5 Acres
Partner: Cleveland Metroparks

57 Toussaint Shooting Club Reconnections: Bob's Bay & Main Marsh
Ottawa County |Western Lake Erie Basin | Coastal
Project size: 995 Acres
Partner: Ottawa Soil and Water Conservation District


Bohling Marsh Wetland Reconnection

58 Bohling Marsh Wetland Reconnection
Ottawa County | Cedar- Portage Watershed | Coastal
Project size: 55 Acres
Partner: Ottawa Soil & Water Conservation District

59 Darby Refuge Wetland Reconnection
Ottawa County | Cedar- Portage Watershed | Coastal
Project size: 352 Acres
Partner: Ottawa Soil & Water Conservation District

60 Burntwood-Langenkamp Wetland Conservation Area
Mercer County | Upper Wabash Watershed | Inland
Western Ohio
Project size: 90 Acres
Partner: Lake Facilities Authority

61 Buckeye Lake – Brooks Park Wetland Creation & Water Quality Initiative
Fairfield County | Licking River Watershed | Inland
Eastern Ohio
Project size: 5 Acres
Partners: ODNR Division of Parks & Watercraft

62 Chippewa Lake Wetland Restoration
Medina County | Muskingum River Watershed | Inland
Project size: 50 Acres
Partner: Medina County Parks

63 Harsha Lake – Williamsburg Wetland Treatment System
Clermont County | Little Miami River Watershed | Inland
Southwestern Ohio
Project size: 3 Acres
Partner: Clermont Soil & Water Conservation District, Village of Williamsburg

64 Springcreek Confluence Off-Channel Wetlands
Miami County | Great Miami River Watershed | Inland
Project size: 55 Acres
Partner: Miami County Parks

65 Tipp City Off-Channel Wetland
Miami County | Great Miami River Watershed | Inland
Project size: 20 Acres
Partner: Miami County Parks

66 O'Donnell Wetland Restoration and Treatment Train
Delaware County | Upper Scioto Watershed | Inland
Project size: 210 Acres
Partner: Ducks Unlimited

67 Mercer Wetland Complex Restoration
Mercer County | Upper Wabash Watershed | Inland
Project size: 60 Acres
Partner: Ohio Department of Natural Resources, Division of Wildlife

68 Black Fork Forest Preserve Wetland Restoration Project
Richland County | Mohican River Watershed | Inland
Project size: 60 Acres
Partner: Western Reserve Land Conservancy

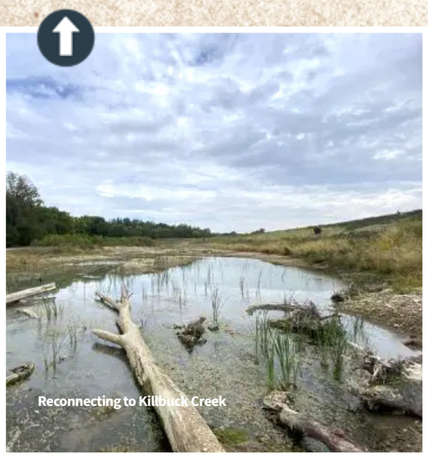
69 Funk Bottoms Wetland Restoration
Wayne County | Mohican Watershed | Inland
Project size: 135 Acres
Partner: DOW

70 Westchester Wetland Restoration
Butler County | Middle Ohio-Laughery Watershed | Inland
Project size: 16 Acres
Partner: Mill Creek Alliance

71 Walnut Creek Treatment Wetland Restoration
Franklin County | Upper Scioto Watershed | Inland
Project size: 18 Acres
Partner: Columbus and Franklin County Metro Parks

72 Forest Lawn Stormwater Park
Mahoning County | Mahoning Watershed | Inland
Project size: 15 Acres
Partner: ABC District

73 Reconnecting to Killbuck Creek
Holmes County | Walhonding Watershed | Inland
Project size: 33 Acres
Partner: Homes County Park District


Reconnecting to Killbuck Creek

74 Hellbranch Meadows West Wetland Restoration Project
Franklin County | Upper Scioto Watershed | Inland
Project size: 29 Acres
Partner: Franklin County SWCD

75 East Funk Bottoms
Wayne County | Mohican Watershed | Inland
Project size: 27 Acres
Partner: The Wilderness Center

76 Spring Run Conservation Area Wetland Restoration Project
Montgomery County | Lower Great Miami Watershed | Inland
Project size: 57 Acres
Partners: Five Rivers MetroParks

77 Chippewa Creek Floodplain and Wetland Restoration Project
Tuscarawas County | Lower Great Miami Watershed | Inland
Project size: 49 Acres
Partner: West Creek Conservancy

78 Indian Creek- Hoffmann Wetland and Stream Restoration
Butler County | Lower Great Miami Watershed | Inland
Project size: 22 Acres
Partner: Three Valley Conservation Trust

79 Gorman Heritage Farm Treatment Wetland System
Hamilton County | Middle Ohio-Laughery Watershed | Inland
Project size: 23 Acres
Partner: Gorman Heritage Farm

80 Taggarts Wetland Enhancement & Acid Mine Drainage Abatement
Tuscarawas County | Tuscarawas Watershed | Inland
Project size: 5 Acres
Partner: Internal: DMRM

81 Lake Harsha: Wetland Treatment Train Feasibility Study
Clermont County | Little Miami Watershed | Inland
Project size: N/A
Partner: Ohio Department of Natural Resources, Parks and Watercraft

82 Dry Creek Wetland
Henry County | Lower Maumee Watershed | Inland
Project size: 86 Acres
Partner: Ohio Department of Transportation

83 East Fork Riparian Reserve Wetland Treatment System
Brown County | Little Miami Watershed | Inland
Project size: 2 Acres
Partner: Clermont, Clinton and Highland Soil and Water Conservation Districts

84 Woodpecker Ditch- Babcock Wetland Restoration
Lorain County | Black-Rocky Watershed | Inland
Project size: 21 Acres
Partners: Lorain SWCD

85 Fleming Bend Protection and Restoration
Pickaway County | Lower Scioto Watershed | Inland
Project size: 315 Acres
Partner: Appalachia Ohio Alliance

86 UT CADE Wetland and Stream Restoration
Lucas County | Ottawa-Stony Watershed | Inland
Project size: 49 Acres
Partner: University of Toledo Foundation

87 Cuyahoga River Riparian Forest and Wetland Restoration
Summit County | Cuyahoga Watershed | Inland
Project size: 32 Acres
Partner: TNC

88 Cedar Point National Wildlife Refuge Pool 2 Coastal Reconnection
Lucas County | Cedar- Portage Watershed | Coastal
Project size: 155 Acres
Partner: Friends of Ottawa National Wildlife Refuge

89 Winous Point Conservancy "North Marsh" / "Metzger Marsh"
Sandusky County | Sandusky Bay Watershed
Project size: 1000 Acres
Partner: Winous Point Conservancy

90 Killdeer Reservoir Wetland Project
Wyandot County | Sandusky River Watershed
Project size: 80 Acres
Partner: Stream + Wetlands Foundation

91 Crane Creek Wetland Restoration
Ottawa County | Crane Creek Watershed
Project size: 119 Acres
Partner: The Nature Conservancy

92 Mary Jane Thurston Wetlands
Henry County | Maumee River Watershed
Project size: 4 Acres
Partner: Henry Soil and Water Conservation District

93 Juhasz Wetland Restoration
Henry County | Maumee River Watershed
Project Size: 6 Acres
Partner: Private Landowner

94 Putnam Oxbow Restoration
Putnam County | Blanchard Watershed
Project size: 36 Acres
Partner: The Nature Conservancy

95 Elizabeth Street Stormwater Control
Allen County | Auglaize Watershed
Project size: 7 Acres
Partner: Village of Spencerville

96 Perfect Creek Treatment Wetlands
Delaware County | Big Walnut Creek Watershed
Project Size: 8 Acres
Partner: Preservation Parks of Delaware County

97 Genevieve Jones Preserve Floodplain and Wetland Restoration
Pickaway County | Scioto River Watershed
Project size: 20 Acres
Partner: Appalachia Ohio Alliance


Big Darby Creek Treatment Wetland

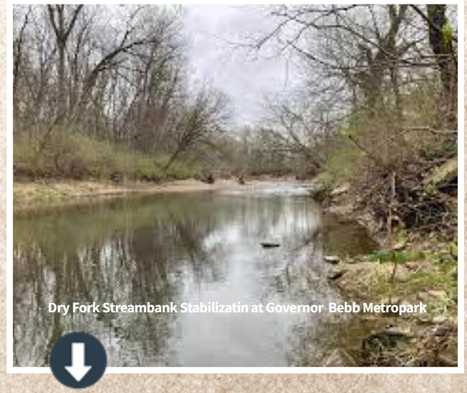
98 Big Darby Creek Treatment Wetland
Franklin County | Big Darby Creek Watershed
Project size: 220 Acres
Partner: Columbus and Franklin County Metro Parks

99 Hocking River Riparian Restoration
Athens County | Hocking River Watershed
Project size: 54 Acres
Partner: Hocking River Commission

100 Stream, Floodplain, and Wetland Restoration at Mill Creek Golf Course
Mahoning County | Mahoning Watershed
Project size: 5 Acres
Partner: Mill Creek Metro Park District

101 Holes Creek Restoration and Habitat Enhancement
Montgomery County | Holes Creek Watershed
Project size: 189 Acres
Partner: Centerville-Washington Park District

102 Killbuck Creek Headwaters Preservation & Restoration
Wayne County | Killbuck Creek Watershed
Project size: 43 Acres
Partner: Western Reserve Land Conservancy


Dry Fork Streambank Stabilizatin at Governor Bebb Metropark

103 Dry Fork Streambank Stabilization at Governor Bebb Metropark
Butler County | Little Miami Watershed
Project Size: 68 Acres
Partner: Metro Parks of Butler County

104 Rainbow Run Wetlands
Clark County | Upper Great Miami Watershed
Project size: 9 Acres
Partner: Tecumseh Land Trust

105 Coldwater Wetlands Park
Mercer County | Beaver Creek, Grand Lake St. Marys Watershed
Project size: 7 Acres
Partner: Village of Coldwater

106 Tech Deployment: Algae Harvester
Clermont County | Little Mami Watershed
Partner: AECOM

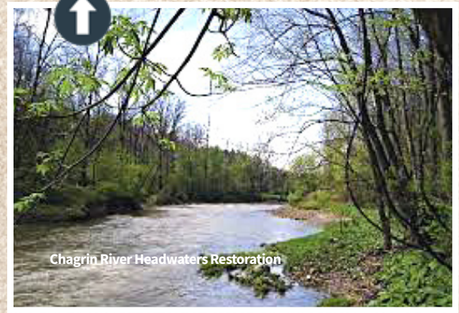
107 Clear Fork Preserve
Richland County | Mohican River Watershed
Project size: 213 Acres
Partner: West Creek Conservancy

108 Merriman Floodplain Restoration
Madison County | Little Darby Creek Watershed
Project size: 8 Acres
Partner: ODNR, Division of Natural Areas and Preserves

109 **Riverwood Restoration Project**
Summit County | Cuyahoga Watershed
Project Size: 50 Acres
Partner: West Creek Conservancy

110 **Sagamore Hills Headwater Stream and Wetland Restoration Project**
Summit County | Cuyahoga Watershed
Project size: 103 Acres
Partner: The Nature Conservancy

111 **Chagrin River Headwaters Restoration**
Cuyahoga County | Chagrin River Watershed
Project size: 90 Acres
Partner: Western Reserve Land Conservancy


Chagrin River Headwaters Restoration

112 **Twinsburg Heights Preserve**
Summit County | Cuyahoga Watershed
Project Size: 76 Acres
Partner: West Creek Conservancy

113 **Little Killbuck Watershed Divide**
Medina County | Killbuck Creek Watershed
Project size: 173 Acres
Partner: Medina County Parks

114 **Abraham Forest Riparian Restoration**
Sandusky County | Green Creek Watershed
Project size: 2 Acres
Partner: ODNR, Division of Forestry and Sandusky Soil and Water Conservation District

115 **Howard Island Preservation and Restoration**
Wood County | Maumee River Watershed
Project size: 9 Acres
Partner: Black Swamp Conservancy

116 **Miami & Erie Canal Towpath Wetlands**
Henry County | Maumee River Watershed
Project size: 50 Acres
Partner: Henry-Wood Sportsmans Alliance

117 **City of Fostoria, Mosier Floodplain Restoration**
Hancock County | East Branch Portage River Watershed
Project size: 159 Acres
Partner: City of Fostoria

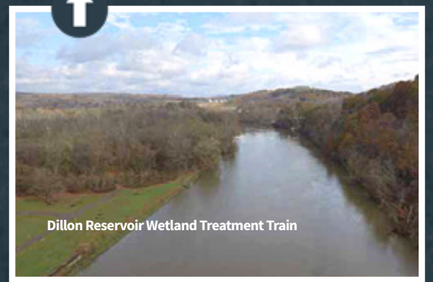
118 **Maumee Floodplain Restoration**
Wood County | Lower Maumee Watershed
Project size: 38 Acres
Partner: Black Swamp Conservancy

119 **Wiregrass Restoration**
Lucas County | Lower Maumee Watershed
Project Size: 14 Acres
Partner: The Nature Conservancy

120 **Snow Fork, Acid Mine Drainage Abatement**
Athens County | Hocking River Watershed
Project size: 1 Acre
Partner: ODNR, Division of Mineral Resources Management

121 **Lakefront Reservation Green Infrastructure**
Cuyahoga County | Central Lake Erie Basin Watershed
Project size: 7 Acres
Partner: Cleveland Metroparks

122 **Dillon Reservoir Wetland Treatment Train**
Muskingum County | Muskingum Watershed
Project Size: 100 Acres
Partner: Rural Action


Dillon Reservoir Wetland Treatment Train

123 **Carbondale AMD Doser O&M**
Athens County | Racoon Creek Watershed
Project Size: 1 Acre
Partner: ODNR Division of Mineral Resources Management

124 **Thomas Fork AMD Doser O&M**
Meigs County | Thomas Fork Watershed
Project Size: 1 Acre
Partner: ODNR Division of Mineral Resources Management

125 **Casto AMD Doser O&M**
Meigs County | Thomas Fork Watershed
Project Size: 1 Acre
Partner: ODNR Division of Mineral Resources Management

126 **Monkey Hollow AMD Doser O&M**
Hocking County | Hocking Watershed
Project Size: 1 Acre
Partner: ODNR Division of Mineral Resources Management

127 **Jobs AMD Doser O&M**
Perry County | Hocking Watershed
Project Size: 1 Acre
Partner: ODNR Division of Mineral Resources Management

128 **Pine Run AMD Doser O&M**
Perry County | Hocking Watershed
Project Size: 1 Acres
Partner: ODNR Division of Mineral Resources Management

129 **Dobbelaire Wetland Diversion**
Ottawa County | Toussaint Watershed
Project Size: 3 Acres
Partner: Ottawa Soil and Water Conservation District

130 **Gonya Farms Ag Drainage Treatment**
Sandusky County | Sandusky Bay Watershed
Project Size: 9 Acres
Partner: Ottawa Soil and Water Conservation District

131 **Kontz Wetland Enhancement**
Ottawa County | Western Lake Erie Basin Watershed
Project Size: 37 Acres
Partner: Ottawa Soil and Water Conservation District

132 **Marinewood Treatment Wetland**
Ottawa County | Portage River Watershed
Project Size: 7 Acres
Partner: Ottawa Soil and Water Conservation District

133 **West Lake Shooting Club Wetland Enhancement**
Ottawa County | Portage River Watershed
Project Size: 35 Acres
Partner: Ottawa Soil and Water Conservation District

134 **Nemecek Wetland Diversion**
Ottawa County | Portage River Watershed
Project Size: 18 Acres
Partner: Ottawa Soil and Water Conservation District


Aldrich Pond Wetland Enhancement

135 **Aldrich Pond Wetland Enhancement**
Sandusky County | Portage River Watershed
Project Size: 35 Acres
Partner: Ottawa Soil and Water Conservation District

136 **Village of Harrod Wetland Restoration**
Allen County | Auglaize Watershed
Project Size: 28 Acres
Partner: The Nature Conservancy

137 **Little Auglaize Wildlife Reserve Project**
Paulding County | Auglaize Watershed
Project Size: 130 Acres
Partner: Black Swamp Conservancy

138 **Maumee Towpath Restoration Projects**
Lucas County | Maumee River Watershed
Project Size: 8 Acres
Partner: Lucas County Engineers

139 **Killbuck Reconnection Project**
Wayne County | Killbuck Creek Watershed
Project Size: 1,500 Acres
Partner: Wayne Soil and Water Conservation District

140 **Village of Ottawa Hills Project**
Lucas County | Ottawa River Watershed
Project Size: 23 Acres
Partner: The Nature Conservancy

141 **Wolf Creek Floodplain Wetland Restoration**
Lucas County | Western Lake Erie Basin Watershed
Project Size: 3 Acres
Partner: City of Oregon


Wold Creek Floodplain Wetland Restoration

The H2Ohio wetlands already funded are projected to reduce phosphorous loading in Ohio waterways by over 100,000 pounds per year. These wetlands will also reduce nitrogen by 185 thousand pounds per year, and sequester an estimated 5.3 million pounds of carbon per year.

Budget

ODNR has allocated a total of **$117,443,000** into natural infrastructure projects through funding from H2Ohio, the Ohio Water Development Authority and private industry. ODNR received $25 million for FY-23 for H2Ohio through House Bill 110.

In addition to a generous state budget, H2Ohio is constantly looking for new ways to fund science-based solutions to Ohio's water quality issues. ODNR is currently using federal dollars from the U.S. Fish and Wildlife Service, the National Fish and Wildlife Foundation, and the Great Lakes Commission; and the agency is also taking advantage of private funding. In addition, ODNR used $6.8 million in partnership support from the Ohio Water Development Authority, which is funding projects and supporting the H2Ohio wetland monitoring program.

Because of the fast pace in which H2Ohio tackles water quality challenges across the state, further monetary backing is needed to keep pace with Ohio's needs. High goals have been set for the program, with efforts not only focused on the Maumee River and Western Lake Erie Basin Watershed, but statewide. ODNR aspires to secure funding to address water quality issues in inland lakes, the Central Lake Erie Basin, and waterways throughout all of Ohio.

Partnerships

ODNR works closely with conservation organizations, park districts, high schools, colleges, and nonprofit partners. Current H2Ohio projects rely on 65 nonprofit conservation partners. Working side by side with H2Ohio program staff, these partners are developing a customized scope of work and timeline as well as managing environmental permitting and contracting.

LEARN
LAKE ERIE & AQUATIC RESEARCH NETWORK

ODNR enlisted the Lake Erie and Aquatic Research Network (LEARN) to help monitor and record the impact wetlands have on water quality at field stations and scientific laboratories. Researchers help ODNR measure the success of wetlands and educate young scientists on the importance of this approach. ODNR will use the data collected to better understand how future wetlands should be built and managed in order to improve water quality and habitat.

"The nutrient functions of wetlands are often challenging to understand and quantify. This program is truly something special. In a short time, we have invested in people, data management, and partnerships with end users, all of which set us up for long-term success. Most notable to me is the direct exchange of information among researchers, ODNR staff, and conservation partners. We are restoring these ecosystems in human-altered landscapes. Integrating design attributes, management decisions, and modern climate variables into our monitoring will make this data useable and actionable."

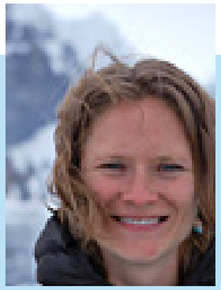
– **Olivia Johnson,** H2Ohio Wetland Monitoring Program, Program Research Coordinator, Kent State University

This partnership with LEARN is a win-win relationship for H2Ohio and the students involved. The monitoring program provided training and workforce development to 9 full-time employees and more than 40 student researchers in 2022.

"The coolest thing I have seen so far is people coming together to plant 4,000 wetland plants at Burntwood-Langenkamp in one day! It's amazing how much people care and want to help make an impact in some way."

– **Morgan Jutte,** H2Ohio Wetland Monitoring Program, Southwest and Central Base Crew Technician, Wright State University

The H2Ohio Students Take Action program connects teachers and students with real-world learning opportunities, access to wetland sites, and a chance to explore careers in conservation. The initial goals for the program were to reach 10 schools and 500 students. To date, Students Take Action has been involved with 41 schools and more than 2,000 students, exceeding the program's initial goal by 400%.



"Our students are the next generation of caretakers for our Great Lakes. H2Ohio gives students the background information on local environmental concerns and then gives them the chance to take action. When they have the opportunity to get involved and make a difference, they care more to stay connected to making positive choices for our local waterways."

– **Laura Kubiak,** Aerospace and Natural Science Academy of Toledo

ODNR has secured a second naturalist, who is now bringing wetland lessons into classrooms in northwest and northeast Ohio. The educational effort is one welcomed by communities in areas that see water quality issues firsthand.

ODNR has also connected teachers to H2Ohio resources online, allowing them to download lesson plans, reach out to naturalists, and provide literature to help students better understand the science of how wetlands work.

H2Ohio has also begun taking the lessons on water quality to an even younger group. To celebrate Earth Day this year, ODNR, the Ohio Department of Agriculture , Ohio Environmental Protection Agency, and Ohio Lake Erie Commission presented the initiative to COSI, offering hands-on experiences for children in attendance. The event was informative and fun, and it introduced a new audience to the importance of H2Ohio and its mission.

Children get an up-close look at some of Ohio's wetland creatures.

ODNR, ODA, and Ohio EPA celebrated Earth Day with future conservationists at COSI.

"It was an amazing opportunity to partner with ODNR, ODA, and Ohio EPA to celebrate Earth Day and inspire the next generation around H2Ohio. Together, we delivered fun, hands-on experiences to engage kids around water and nature. We are thankful for the leadership of the state to showcase how science can be fun, but also how families and youth can learn and contribute to the world around them."

– Stephen White, Esq. Chief Strategy Officer, COSI

Director Mertz demonstrates that science can be fun to parents and children during the joint Earth Day celebration.

Pickerel Creek Wildlife Area in Northern Ohio bordering Sandusky Bay

Vision for the Future

Every person, family, and community in Ohio should have safe, clean water. ODNR is using monitoring and science-based solutions to achieve that through the H2Ohio initiative. Through natural infrastructure, like the restoration and creation of wetlands, ODNR is contributing to the fight against harmful algal blooms that threaten Ohio's water supply.

There is more to solving water quality issues, however than just putting boots on the ground and building wetlands. ODNR is focused on a wide scope of work, which includes informing the next generation about the importance of wetlands. By spreading awareness about the science behind H2Ohio, ODNR is teaching young people how taking care of Ohio's waterways ensures a brighter future for everyone.

Conclusion

ODNR has taken the H2Ohio initiative from concept to construction, and, most recently, to the completion of wetlands that filter pollutants from Ohio waterways. Thanks to support from Governor DeWine and the Ohio General Assembly, ODNR has been able to build a strong program that will benefit Ohioans across the state.

Utilizing strong partnerships, scientific expertise, and a monitoring system that encourages education, ODNR has worked on more than 140 projects. Those collaborations have given the agency the chance to implement science-based solutions that not only clean waterways but also provide wildlife habitat and offer recreational opportunities.

There is still work to do, but the actions taken since H2Ohio's implementation in 2019 have put Ohio on a path of success. The goal of clean water for all of Ohio will be a continuing theme for each agency involved.

Ohio Department of AGRICULTURE

In its fourth year, the success of H2Ohio is evident by the continued, strong commitment from agricultural producers who work closely with the Ohio Department of Agriculture (ODA). Because of H2Ohio, more farmers are now implementing best management practices (BMPs) on their cropland to help prevent the over-application of nutrients and reduce nutrient runoff that contributes to harmful algal blooms (HABs) in Ohio's waterways.

Meet the New ODA Director Brian Baldridge

Brian Baldridge was appointed the 40th Director of ODA by Governor DeWine in February 2023. He most recently served two terms in the Ohio House of Representatives, where he represented House District 90. During his tenure, Director Baldridge served on the House Agriculture Committee and advocated for programs supporting the agricultural industry, including H2Ohio.

> *I had the unique opportunity to work on H2Ohio policy during my time in the legislature, and I am excited to continue working on the Governor's initiative in my role as Director of Agriculture.*

By the Numbers

2,400 Agreements
signed by producers to implement practices on the farm

More than 18,000
acres of watershed improved by two-stage ditch projects

1.4 Million Acres
enrolled in Voluntary Nutrient Management Plans

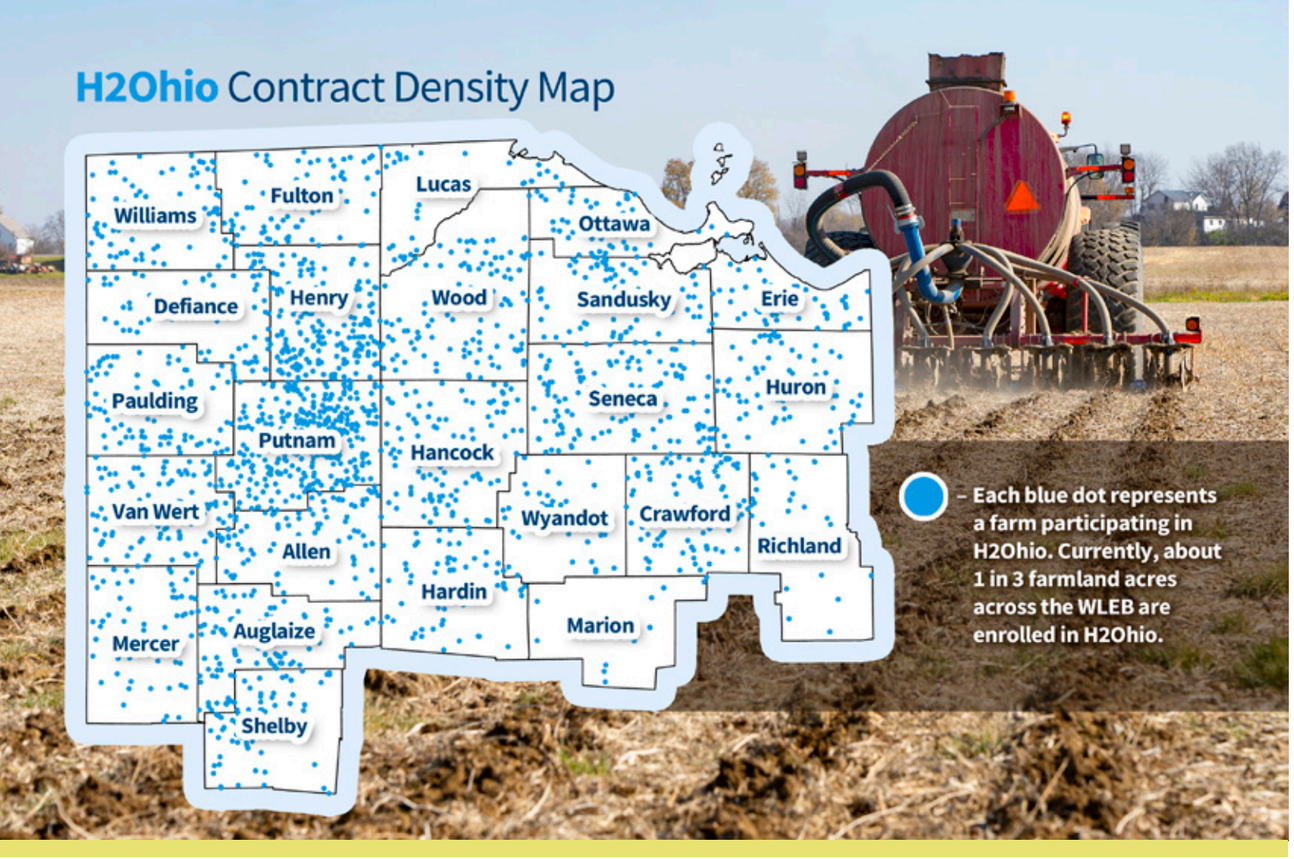
1.2 Million Acres
enrolled in other proven, cost-effective Best Management Practices

Director Baldridge visits Kellogg Farms, part of the Blanchard River Demonstration Farms Network, for a first-hand look at new technology that is helping farmers reduce fertilizer use.

H2Ohio has led to the development of Voluntary Nutrient Management Plans (VNMPs) that cover nearly 1.4 million acres in 24 counties across the Western Lake Erie Basin (WLEB). This represents nearly 35% of the total cropland in the H2Ohio project area.

ODA also incentivizes other BMPs that focus on water management practices that slow down the movement of water, like two-stage ditches and drainage water management structures, and land management practices that prevent erosion and nutrient loss, like cover crops and phosphorus placement.

To date, more than 1.2 million acres have been enrolled into these other practices.



Producers in the original 14-county area have completed BMPs for two growing seasons and are implementing BMPs this year, which is H2Ohio's third growing season. In 2021, the remaining 10 counties in the WLEB were eligible to enroll in H2Ohio practices. ODA, in partnership with local Soil and Water Conservation Districts (SWCDs), delivers H2Ohio to farmers to develop VNMPs, assist producers in practice implementation, track practice completion, and process payments for program participants.

To ensure that H2Ohio has the best data, ODA is also working with researchers from the U.S. Department of Agriculture's (USDA) Agricultural Research Service and The Ohio State University to better understand the agronomic and economic efficacy that H2Ohio practices will have over the long term. Based on experience and expertise from SWCDs, farmers, and research partners, ODA has made improvements to future program offerings including streamlined practice standards, improved incentive structure, and simplified enrollment processes that will improve farmers' ability to effectively implement BMPs.

"What continues to be impressive about H2Ohio is the willingness of stakeholders to come together to find success, not only in the program but also in the way we can support producers to manage their land more sustainably for the future. H2Ohio is giving all of us - the environmental groups, the agriculture groups, the decision makers and the landowners - the reason to try something new to make a lasting difference."

Jessica D'Ambrosio, The Nature Conservancy

Program Success

Cropland Management Efforts

Over the last year, producers enrolled in H2Ohio have developed or implemented nearly 1.4 million acres of VNMPs. In addition, producers have implemented over 640,000 acres of additional BMPs across those fields. These practices are proven to have a positive impact on water quality by reducing nutrient runoff, improving nutrient application methods, reducing erosion, and promoting soil health. Below is a summary of acres completed for each BMP across the 14-county Maumee River Watershed H2Ohio project area:

2022 - Maumee Project Area - Completed Acres

County SWCD	VNMP Implementation	VRT Phosphorus Application	Subsurface Phosphorus Placement	Manure Incorporation	Conservation Crop Rotation	Overwintering Cover Crop
Allen	25,600	10,500	3,900	300	1,400	2,700
Auglaize	37,400	7,600	4,000	1,500	2,400	4,700
Defiance	57,000	9,300	7,100	2,300	1,700	9,500
Fulton	37,200	8,600	3,300	2,000	2,100	6,900
Hancock	55,800	27,500	5,600	600	2,500	12,400
Hardin	49,100	12,900	6,500	1,800	2,200	16,600
Henry	128,200	19,500	19,600	3,100	5,500	14,900
Lucas	12,600	3,800	4,400	100	600	2,700
Mercer	43,400	7,800	2,200	5,000	3,500	16,300
Paulding	51,400	2,200	10,700	4,300	3,000	11,800
Putnam	122,400	20,000	10,700	8,600	7,700	30,000
Van Wert	80,500	9,600	21,800	6,800	2,800	18,500
Williams	49,300	2,300	10,600	3,400	2,000	13,500
Wood	66,000	16,100	5,900	1,800	2,600	13,700
TOTAL	**815,900**	**157,700**	**116,300**	**41,600**	**28,500**	**11,300**

2022 - Maumee Project Area - Incentive Dollars Provided to H2Ohio Producers

County SWCD	VNMP Implementation	VRT Phosphorus Application	Subsurface Phosphorus Placement	Manure Incorporation	Conservation Crop Rotation	Overwintering Cover Crop
Allen	$51,300	$84,200	$118,300	$17,500	$51,600	$66,700
Auglaize	$74,800	$61,200	$120,400	$82,600	$92,200	$117,600
Defiance	$113,900	$74,200	$212,600	$126,000	$86,600	$237,000
Fulton	$74,300	$68,500	$98,800	$121,400	$94,700	$163,500
Hancock	$111,500	$220,300	$166,600	$31,800	$92,000	$309,500
Hardin	$98,200	$102,800	$195,700	$96,100	$79,400	$413,900
Henry	$256,300	$155,600	$588,100	$149,800	$215,600	$373,600
Lucas	$25,100	$30,000	$132,100	$3,400	$38,100	$67,500
Mercer	$86,800	$62,300	$61,900	$255,100	$160,800	$409,000
Paulding	$102,800	$17,500	$321,500	$207,300	$109,200	$295,900
Putnam	$244,500	$160,100	$321,900	$441,500	$326,700	$748,900
Van Wert	$161,000	$76,600	$652,900	$362,200	$108,200	$462,600
Williams	$98,600	$18,000	$318,900	$193,300	$101,100	$338,200
Wood	$130,600	$126,100	$175,800	$108,000	$152,200	$340,200
TOTAL	**$1,630,000**	**$1,257,300**	**$3,485,800**	**$2,196,000**	**$1,708,400**	**$4,344,100**

Based on the 2022 completed BMP data, ODA estimates that agriculture producers have reduced overall phosphorus runoff by 232,000 pounds. Considering the BMPs currently enrolled for 2023, ODA estimates that this number could increase to over 315,000 pounds over the next year.

H2Ohio Phosphorus Load Reduction Estimates

Summary Across ODA Project Areas

	2021 Completed Practices (Lb reduced)	2022 Completed Practices (Lb reduced)	2023 Enrolled Practices (Lb reduced)
Maumee Watershed Project Area	204,300	207,900	216,300
WLEB Expansion Project Area	----------	24,100	100,800
TOTAL	204,300	232,000	317,100

Maumee River Watershed Project Area - County Estimates

County SWCD	2021 Completed Practices (Lb reduced)	2022 Completed Practices (Lb reduced)	2023 Enrolled Practice (Lb reduced)
Allen	9,000	6,800	13,500
Auglaize	10,100	9,000	10,600
Defiance	13,800	13,700	12,400
Fulton	5,600	9,300	11,100
Hancock	11,900	15,700	14,600
Hardin	15,200	13,400	12,800
Henry	32,300	30,100	27,100
Lucas	3,600	3,700	3,100
Mercer	10,000	11,900	10,300
Paulding	14,200	12,900	24,400
Putnam	32,100	30,900	28,700
Van Wert	19,500	21,300	19,800
Williams	11,700	12,600	12,900
Woods	15,300	16,600	15,000
TOTAL	204,300	207,900	216,300

WLEB Expansion Project Area - County Estimates

County SWCD	2021 Completed Practices (Lb reduced)	2022 Completed Practices (Lb reduced)	2023 Enrolled Practice (Lb reduced)
Crawford	----------	2800	17000
Erie	----------	3000	7500
Huron	----------	4000	14200
Marion	----------	500	9800
Ottawa	----------	2200	6200
Richland	----------	500	3800
Sandusky	----------	4200	15300
Seneca	----------	4400	12700
Shelby	----------	1600	4900
Wyandot	----------	900	9400
TOTAL	----------	24,100	100,800

▲ *ABOVE: Map of Ohio's Western Basin of Lake Erie assessment units and the Maumee River watershed*

Water Management Efforts

H2Ohio has provided incentives for Drainage Water Management (DWM) structures since the initial H2Ohio roll-out. These structures are located at the edge of farm fields to help control the amount and timing of water leaving the field through existing tile lines. Farmers can raise or lower the level of water held in the soil to a desired elevation depending on crop needs. DWM structures are best suited to flat land, which is common in northwest Ohio. With proper management, these structures decrease nutrient runoff, manage soil moisture, and increase crop yields. To date, 166 DWM structures have been installed in the WLEB through H2Ohio. In addition, over 1,000 DWM structures have been installed in the WLEB through the efforts of other state-led conservation programs since 2015 to control drainage for a total of more than 25,000 acres of cropland.

Another water management practice identified as a H2Ohio practice is the two-stage conservation ditch. A two-stage conservation ditch design modifies the shape of a drainage channel to create vegetated benches on each side of the channel to provide additional water storage. Two-stage conservation ditches slow water flow, reduce maintenance costs, and improve water quality.

In 2022, ODA made funds available across the 24-county project area for the design and construction of two-stage conservation ditches. In this new program, ODA offered funding to SWCDs and county engineers to improve existing channels or construct new two-stage conservation ditches in rural areas along farm fields.

These channels will provide better nutrient processing capacity and additional water storage within the drainage system. Interest from SWCDs and county engineers has been phenom-enal. ODA awarded $4.2 million in grants for 12 two-stage ditch projects. Mercer, Huron, Erie, and Putnam SWCDs, and Defiance, Allen, and Lucas County engineers will each receive funding for these projects once completed.

More than 18,000 acres of watershed will benefit from the 8.4 miles of two-stage ditch projects. Construction of these projects will begin in the summer of 2023, and all projects must be completed by the fall of 2024.

Because of the interest from local partners and the water quality benefits two-stage ditches provide, ODA plans to announce a second round of funding for two-stage ditch projects in FY 2024 and 2025.

"H2Ohio provided the necessary funding for Lucas County to implement two-stage channels, which significantly improve drainage, reduce flood risk, and enhance water quality. H2Ohio funds provided the additional funding necessary to deliver critical storm-water infrastructure improvements that will benefit our citizens for generations to come. H2Ohio accelerated the delivery of priority projects and made them a reality for our community."

Mike Pniewski, Lucas County Engineer

Budget

ODA is appreciative of the continued funding support from the Ohio General Assembly. In the FY22-23 biennium budget, over **$104 million** was allocated for ODA's H2Ohio initiatives, with approximately 97% of these funds committed to farmers for completed BMPs. Over 50% of the funds in the WLEB were directed to VNMPs and cover crops. ODA continues to seek partnerships with federal agencies, such as USDA's Natural Resources Conservation Service, to capitalize on potential funding opportunities for nutrient reduction and water quality initiatives.

Partnerships

Since the inception of H2Ohio, SWCDs have been at the heart of delivering ODA's program directly to farmers. SWCDs play an integral part in each of Ohio's 88 counties to provide technical, financial, and educational resources to farmers and landowners for conservation.

Every SWCD in the current H2Ohio project area has one or more technicians dedicated to the delivery of the H2Ohio programs at the county level. This includes managing H2Ohio contracts, verifying completed BMPs on enrolled acres, and processing payments directly to farmers.

SWCD personnel also perform field checks and review practice documentation to ensure practices are implemented according to the requirements defined for each BMP. Once practices are verified by SWCD staff, incentive payments are processed and delivered to program participants.

Currently, SWCDs are managing more than 2,400 contracts that encompass nearly 1.4 million cropland acres and have paid over $42 million in incentive payments for completed practices to farmers in the 24-county project area. Moreover, enrollment for future H2Ohio practices in 2023 and beyond total more than $100 million in incentive payments for practice implementation through 2026.

In addition to administrative management, SWCDs provide robust and inclusive education to farmers who are enrolled in or interested in enrolling in H2Ohio. ODA works closely with SWCDs to develop informational outreach materials for farmers, promote H2Ohio through advertising, and offer educational opportunities in the community. SWCDs regularly engage with their local communities with in-person field days, workshops, volunteering, and are involved in their county fairs.

H2Ohio would not be a success without local connection to farmers. SWCDs are the local, trusted connection to communities, and as H2Ohio grows and evolves, SWCDs will continue to be the backbone of ODA's program. With goals of expansion in the future, SWCDs will be paramount in delivering the program to new farmers beyond the WLEB.

"H2Ohio has had a huge impact on nutrient management education and has helped build a relationship between farmers, local fertilizer dealers, and Soil and Water Conservation Districts. By communicating and working with each other on VNMPs, farmers are becoming aware of the water quality improvements and the economic impacts these plans provide through the 4Rs: right amount, right time, right place, and right source."

Bob George, Henry SWCD

OACI
Ohio Agriculture Conservation Initiative

ODA has partnered with the Ohio Agriculture Conservation Initiative (OACI) to promote H2Ohio since the first program signup in early 2020. OACI is made up of several agricultural commodity groups, environmental organizations, and researchers and has developed a certification program as well as watershed assessment surveys across Ohio.

ODA will continue to work with OACI to develop and adapt the OACI certification program to meet the needs of H2Ohio program delivery. Currently, the certification program is tailored to row crop agricultural production typical in northwest Ohio. ODA staff and OACI representatives are discussing options for certification requirements on other land uses such as pasture and grazing for future H2Ohio programming.

OACI is also conducting watershed assessment surveys across Ohio. The assessment of the Lower Maumee Watershed was released in spring of 2022, which quantified farmers' nutrient management practices and conservation efforts in the region. The watershed assessments allow ODA to track progress over time by establishing a baseline of current practices across a watershed. This baseline allows ODA to assess H2Ohio's impact and progress over the long term. OACI is currently completing two additional watershed assessments with plans for additional assessments moving forward.

ODA recognizes the importance of assessing the impact of the H2Ohio program on water quality and nutrient load reductions. To better quantify the impact of the H2Ohio program efforts, ODA is working with researchers at the USDA's Agricultural Research Service (ARS) and The Ohio State University to develop additional data and a better understanding of the impact of conservation practices at the edge of field and on a watershed scale.

USDA Agricultural Research Service

The Ohio State University
College of Food, Agricultural, and Environmental Sciences

Dr. Kevin King

ODA has partnered with Dr. Kevin King with ARS to assess nutrient load reductions on surface and subsurface runoff at the edge-of-field scale. This three-year effort will add to the existing data on practice impact and better inform conservation practice implementation moving forward. The development of nutrient load reduction models is also part of this research effort. Modeling will allow ODA to better understand practice performance across a wide range of soil types and runoff conditions. ODA and ARS will continue to discuss research needs to better understand practice impact at the edge-of-field scale across a variety of soil types and climatic conditions. This information is needed to better tailor conservation practices to specific site conditions and management considerations.

ODA, along with the Natural Resources Conservation Service (NRCS), has also funded a pilot watershed research project led by Dr. Jay Martin, the Ohio State University. The pilot project will focus on nutrient placement incentives across the Shallow Run Watershed (Hardin County) and will implement a phosphorus placement BMP on 70% of the cropland acres with the watershed annually for five years. Researchers will monitor the results of this pilot. Existing water quality monitoring stations in the watershed have been in place for several years and have established a historic baseline for nutrient loading and water quality.

ODA has committed $4 million from the FY 22-23 budget to support this project, while NRCS has committed over $6 million in federal funds. Additional partners such as the Ohio Department of Natural Resources have also contributed funding toward this project. This partnership also includes a variety of academic institutions and a wide range of agricultural and environmental groups. Producer enrollment for the pilot watershed program is set to begin this fall for practice implementation in 2024.

Vision for Future

We cut fertilizer usage by one-third due to strip till and variable rate placement. H2Ohio is a perfect opportunity to have producers work with their SWCD."

Bill Kellogg, Hardin County Farmer, and Blanchard River Demonstration Farms Network

Farmers in the 14 counties in the Maumee Watershed project area were the first to enroll in H2Ohio. The original contracts with these participants will be completed in 2023. ODA plans to offer new contracts to existing participants and to new producers who have not yet enrolled.

To streamline the process of enrolling producers into H2Ohio for 2024 and beyond, ODA has contracted with MyFarms management software to custom-build a unique digital platform. This platform will help producers and their advisors with the creation of VNMPs and with H2Ohio's enrollment, certification, and verification processes.

With improvements to management software and streamlined BMP standards, ODA's goal is to grow the overall enrollment in the WLEB to 2 million acres by the end of FY25. To achieve this, ODA is working to increase enrollment in H2Ohio and other federally funded conservation programs across the original 14 counties in the Maumee Watershed to 1.3 million acres. Additionally, ODA anticipates offering new H2Ohio contracts to participants in the remaining 10 counties in the WLEB next year with a goal to increase state and federal enrollment in this project area to 750,000 acres through 2026.

ODA's H2Ohio work will continue to focus on water quality in Ohio's lakes, rivers, and streams. The future of H2Ohio will also focus on education and outreach to grow interest, enrollment, and continued support of the program. The program has been refined year after year since its inception and has developed into a streamlined process to be implemented across the state.

Additional H2Ohio funding will continue to support and refine these practices in the WLEB and to expand H2Ohio's footprint across the remainder of the state, targeting an additional 500,000 acres of farmland outside of the WLEB. SWCDs will continue to be crucial in providing the boots on the ground to implement H2Ohio programming. As the program continues its growth, dedicated H2Ohio staff will implement the expansion and ensure accountability as ODA tracks and monitors progress.

ODA recognizes more than just financial incentives are needed to change crop production and management practices for the long term. Outreach efforts and educational opportunities are needed to reinforce better nutrient management and conservation stewardship. To accomplish these goals, ODA is partnering with the Conservation Action Project (CAP) and the Ohio Farm Bureau Federation (OFBF) Blanchard River Watershed Demonstration Farms Network.

CAP is a grassroots conservation group located in northwest Ohio and will provide the coordination and development of several demonstration plots and field days over the next five years. This project will examine yield and economic impacts of reduced phosphorus applications over a range of soil test values. Cover crop establishment, management practices, and economics will also be demonstrated at the selected sites.

Each of the demonstration plots will also host an annual field day to share knowledge with farmers in the surrounding area. ODA hopes to demonstrate consistent yield and better economic return through reduced phosphorus application and adoption of cover crops.

ODA will also be working with the Blanchard River Demonstration Farms Network to provide educational opportunities for farmers and conservation groups. ODA and OFBF are developing the goals and deliverables for the project and will begin these efforts by the end of 2023.

Blanchard River DEMONSTRATION FARMS NETWORK

Conclusion

ODA remains fully committed to the success of H2Ohio. With more than one million acres enrolled in voluntary best management practices, it is clear farmers want to be part of the solution to improve water quality over the long term. Collaboration with SWCDs, OACI, and local agriculture retailers will be integral for H2Ohio's future. Though H2Ohio has immense enrollment to date, increased enrollment will be needed to reach Ohio's phosphorus reduction goals. With the implementation of the MyFarms custom software for streamlined program enrollment, payment, and verification, and with improvements to BMPs, ODA is confident enrollment in the WLEB will increase to continue making a long-term, positive effect on Ohio's water quality.

FY2023 Annual Report

ODA WATERSHED PROGRAM

Overview

The Ohio Department of Agriculture (ODA) Watershed Program is a statewide program for watershed planning and management, established by House Bill 7 in April 2021. Managed by the Division of Soil and Water Conservation, the program provides watershed planning for the entire state to enhance and protect Ohio's watersheds. Management is divided into seven regions, as specified in the legislation, with a watershed manager assigned to each region.

The program provides support for local watershed activities, regional-scale watershed planning, and lays the foundation for expansion of H2Ohio, as well as the development of new conservation initiatives. Each region's unique water quality issues are considered by the program, with nutrient loss from both agricultural and non-agricultural activities receiving special attention. This program provides long-term collaborative support to partners and focuses on water quality for the future.

Objectives

- Characterize regional water quality concerns (emphasis on agriculture)
- Provide guidance and support for H2Ohio and other conservation programs
- Support local watershed plan development and implementation
- Offers regional watershed networking to achieve common goals with partners

FY23 Achievements

7 watershed plans drafted

600+ pages of technical information compiled from dozens of sources

226 unique maps created

70 stakeholder meetings held for discussion and feedback (SWCD & Technical Teams)

88 SWCDs surveyed for an estimate of best management practice implementation

22 NPS-IS plans reviewed

10 Nutrient Management Plans for Muskingum Watershed Conservancy District reviewed

Program Development

The ODA Watershed Program has made significant progress over the past year. After onboarding seven watershed managers, the team began developing and utilizing stakeholder networks and drafting regional watershed plans. The planning effort has been the primary focus over the past 12 months, with watershed managers compiling data, characterizing the watersheds, and assessing best management practices that are applicable to the unique water quality needs of each region. The effectiveness and feasibility of the management practices were assessed to help craft new regional components of ODA's H2Ohio program and other programming. Throughout the development of the plans, watershed managers have shared information and received feedback from their region's Soil and Water Conservation Districts (SWCDs) and Technical Assistance Teams. With the planning process drawing to a close the completed watershed plans will be released in September 2023. Once released, the regional plans will be implemented, periodically reviewed and updated.

In addition to watershed planning, the team also supports development of Nonpoint Source Implementation Strategic (NPS-IS) plans, assists with H2Ohio, and supports collaborative efforts with SWCDs, agency partners, and other stakeholders.

H2Ohio Assistance

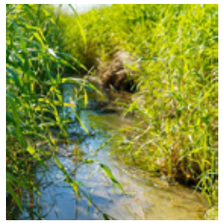
30 nutrient management plans reviewed

25 contracts verified for SWCD Board members

3 research grants supported (OSU, USDA-ARS, & OFB Demo Farms)

2 Nutrient management training sessions held for SWCDs

Vision for the Future



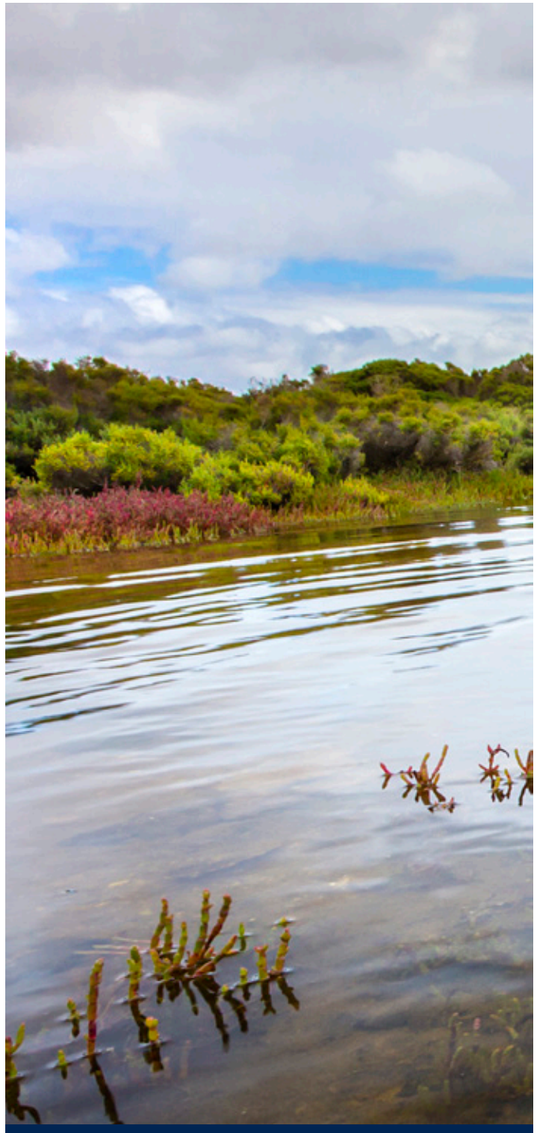
With planning concluded, the program is shifting from regional planning to implementation and training, supporting H2Ohio and its expansion, and continuing NPS-IS plan development and follow-up. Education and training on using regional watershed plans will be an important component to ensure effective application of the plans. Training with SWCDs and other stakeholders will begin in 2024 and will continue throughout the year.

The information and analysis within the regional watershed plans will provide guidance as H2Ohio expands outside the Western Lake Erie Basin (WLEB). Watershed managers will utilize their technical expertise and stakeholder networks to support H2Ohio initiatives in their respective regions. Members of the watershed team are also involved in coordinating H2Ohio research grants, most of which will continue for the next several years.

The Watershed Program will also explore development and support of new regional-scale conservation measures across the state, continue to develop local NPS-IS plans, assist with grant writing and reviewing plans, and help the Ohio Environmental Protection Agency track and follow up with existing projects.

FY 24 Activities

- Education/training on use of watershed plans
- Support current H2Ohio efforts
- Assist in H2Ohio expansion
- Seek funding for development of new regional conservation measures
- Assist SWCDs and local partners in grant writing
- Develop/review NPS-IS plans
- Track and coordinate current NPS-IS plan projects (with Ohio EPA)
- Offer training on development of NPS-IS plans
- Continue meetings with regional stakeholders to share information and collaborate on projects



Conclusion

As ODA's Watershed Program continues to address statewide water quality concerns, the program will also increase support of H2Ohio's efforts. With ODA's H2Ohio expansion outside the WLEB, the Watershed Program will provide assistance with voluntary nutrient management planning and development, as well as with SWCD education and outreach.

Ohio Environmental PROTECTION AGENCY

In the 134th biennial budget passed by the General Assembly, the Ohio Environmental Protection Agency (EPA) received $10 million in H2Ohio spending authority for fiscal year 2023 through House Bill 110. This funding supports critical drinking water and sewer infrastructure projects throughout the state, bridging the "last mile" of funding for projects partially financed through other loans and grants. So far, the Ohio EPA has supported 69 H2Ohio projects serving more than 60,000 Ohioans, including waterline extensions, new sanitary sewer lines, lead service line replacement, and household sewage treatment system repair and replacement.

Meet New Ohio EPA Director Anne M. Vogel

Director Vogel was appointed to lead Ohio EPA by Governor DeWine in January 2023. She most recently served as the governor's policy director, driving the implementation of the governor's polices for Ohio, including the creation and launch of H2Ohio.

"I had the privilege of working on this initiative while in the Governor's Office and have seen the impact H2Ohio funding has had in communities of all sizes. As Ohio EPA's new director, I am excited to continue our work to improve water quality and the lives of Ohioans across the state."

By the Numbers

$4.86 M for nine critical water and sewer projects

$1.5 M for water quality projects (Gorge Dam and Mentor Marsh)

$2.36 M to lead service line mapping

$263,486 To replace failing household sewage treatment systems in five local health districts

$1 M in mini grants to replace drinking water systems

Program Successes

Drinking Water and Wastewater Infrastructure Projects

Village of Lowell (Washington County) $200,000

For years, the village of Lowell struggled with discolored drinking water caused by iron and manganese. H2Ohio funding enabled the village to purchase new water filters, providing a vital first step to improving water quality until construction of a new water treatment plant is completed. The water filters are already improving water quality, with many residents drinking the water again for the first time in years. The project will benefit approximately 300 homes.

"We haven't been able to drink our water since 2019. (We) purchased bottled water to start, and then when that was starting to become too cumbersome, my husband decided to put a central line filter on our house, we were replacing the filter every week, but we've noticed a significant change since the temporary system has been put in."

– Dayna Pitzer, Village of Lowell Resident

Village of Nevada (Wyandot County) $800,000

The village of Nevada will replace waterlines and construct a new water tower for Nevada's approximately 350 homes. The village water tower was constructed in 1935 and has issues that could cause a community health problem. In addition, many of Nevada's water distribution lines are between 60 and 80 years old and need replaced, being made of cast iron and asbestos cement.

City of Bucyrus (Crawford County) $800,000

The city of Bucyrus will extend a water line to the village of Nevada with a master meter, backflow, and flow control included in a control building to be constructed at the village's corporation limits. The village water treatment plant was constructed around 1937 and needed extensive updates and repairs. In 2021, Bucyrus and Nevada came to an agreement for the regionalization of the two public water systems. The water line installation will include approximately 30,000 feet of 6-inch water line and 1,100 feet of 8-inch water line.

Ohio & Lee Township Water and Sewer Authority (Monroe County) $425,000

Ohio & Lee Township Water and Sewer covers the unincorporated areas of Duffy, Hannibal, and Sardis. H2Ohio funds will help with construction of a wastewater collection and treatment system for Duffy, which will eliminate the discharge of sewage in stormwater systems and 82 failing household sewage treatment systems. Ohio EPA is continuing to partner with Ohio & Lee to find solutions to its wastewater needs in Hannibal and Sardis. These communities have historically struggled to find affordable solutions to address their wastewater needs.

Village of Magnetic Springs (Union County) $400,000

Magnetic Springs is an unsewered village in Union County. H2Ohio provided funding for the planning and engineering design for a wastewater collection system to serve the village. The collection system will convey sanitary sewage to the Village of Richwood's wastewater treatment plant. This will replace the current failing home sewage treatment systems in the area, which have been discharging inadequately treated wastewater into Bokes Creek for over a decade, leading to public health concerns for those that live nearby. Once the collection system is constructed and online, approximately 125 homes in the area will see a direct benefit.

City of Ravenna (Portage County) $488,230

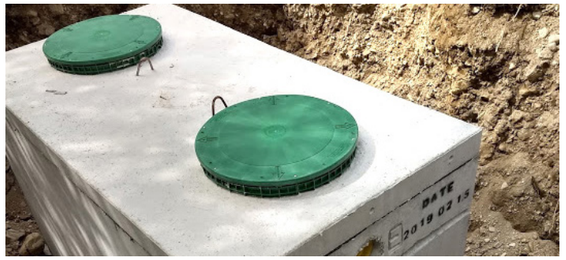
In 2021, concerns of sewage contamination from Foxwood Estates subdivision in Ravenna Township were brought to the attention of Ohio EPA and the Portage County Health Department. After determining the contamination was due to failing household treatment systems, Ohio EPA, Portage County and the city of Ravenna worked together to find a solution. H2Ohio funding supported the elimination of the failing sewage treatment systems and connected 10 homes in the subdivision to the city of Ravenna's sewer system.

Summit County $500,000

The village of Peninsula is a tourist destination within the Cuyahoga Valley National Park. Peninsula has 126 residential and 26 commercial sites, most with failing septic systems and no public drinking water. Due to small lot size and poor soil conditions, a central sewerage system is necessary to eliminate the discharge of raw sewage to the Cuyahoga River. H2Ohio funding will help with planning and engineering design costs for wastewater and drinking water improvements for the village. The project would serve an additional 180 homes. Restaurants that currently rely on hauled water, and an existing small public water system on its own well water, may also eventually be able to connect to the municipal drinking water supply as infrastructure is expanded.

Village of Donnelsville (Clark County) $750,000

Since contamination was first discovered in the ground water in Donnelsville, Ohio EPA has worked with local officials, U.S. EPA, and Beach Manufacturing to further investigate the extent of the contamination. Beach took responsibility to install in-home water treatment systems for residents using private wells for drinking water, but these in-home systems were not a long-term solution. The best permanent solution was for the village to connect residents to a public water system so Donnelsville no longer had to rely on possibly contaminated wells. H2Ohio funding will provide for the planning and engineering design for a drinking water distribution system for approximately 100 homes currently served by individual wells. Drinking water will now be provided to the village by a nearby public water system.



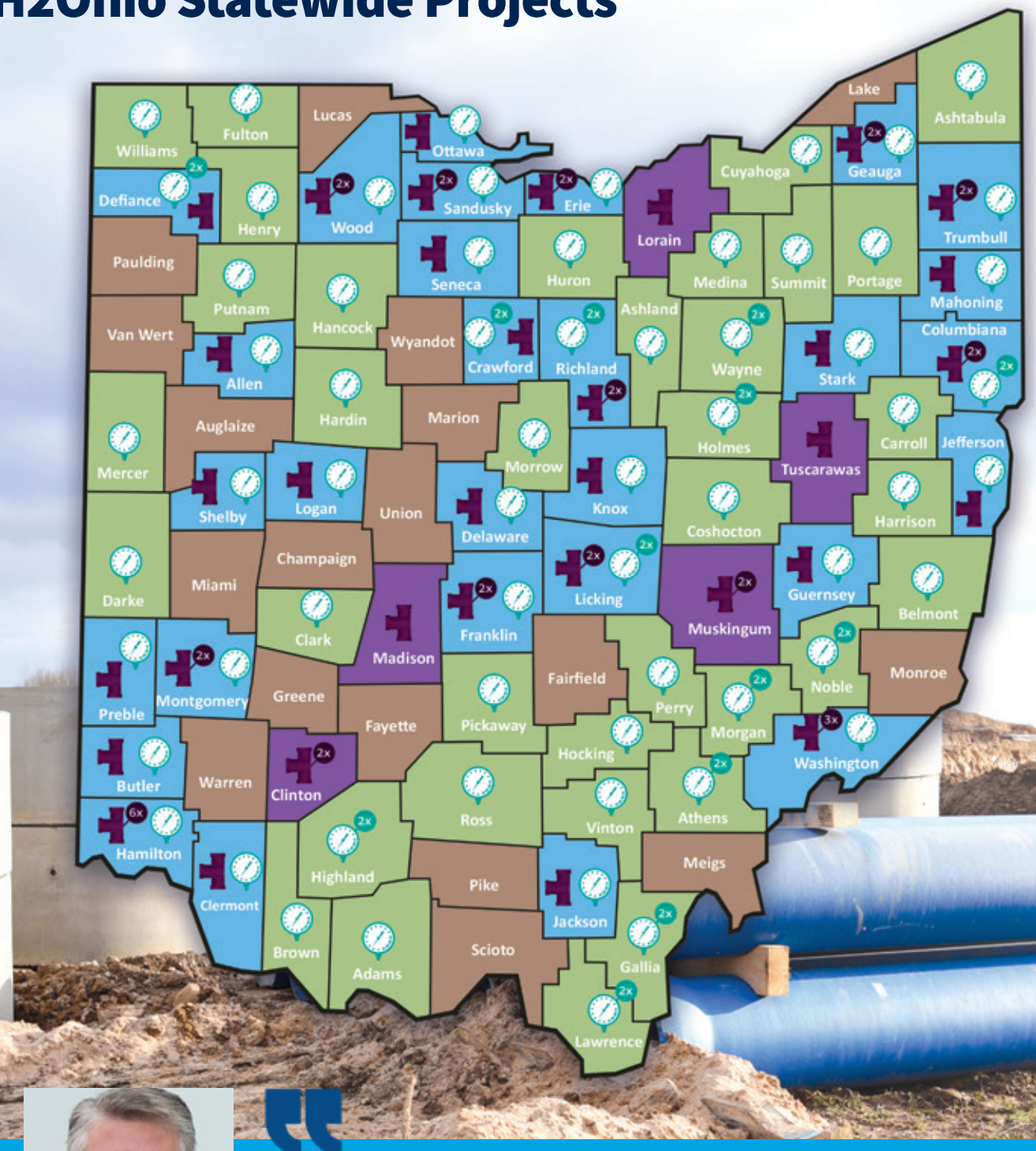
Home Sewage Treatment Systems

Ohio has nearly one million homes served by household sewage treatment systems (HSTS). When working properly, these can be a viable form of sewage treatment in rural areas that lack centralized sanitary sewers. However, when malfunctioning, HSTS can contribute to poor water quality and threaten public health.

Ohio EPA awarded more than $263,000 in H2Ohio funding to local health districts in Licking, Lorain, Portage, Stark and Wayne counties to go towards HSTS repair or replacement.

These counties were chosen because of their prevalence of HSTS and the local health districts' proven ability to work with homeowners to correct problems. Funds are directed to disadvantaged homeowners. Depending on the household income and the number of residents, homeowners may qualify for grants of 50% to 100% of the total costs for HSTS repair or replacement.

H2Ohio Statewide Projects



"When the H2Ohio funds were made available to us, we were able to use that to do the private side lead replacement for the homeowners at no cost of them, and we actually were able to replace every lead line we found on the street. It really makes a huge difference in our community."

Clint Zimmerman, Norwood's Superintendent of Public Works

Drinking Water Equipment Grants

More than 100 communities across the state have been awarded a total of $1 million in grants to help pay for equipment needed to maintian their public drinking water infrastructure. The grants cover distribution system equipment such as mobile leak detectors, line locators, valve exercisers, flow meters, hydrant condition assessors, pressure monitors, and training to use the equipment.

Project Count

Lead Service Mapping Grants

Ohio EPA announced approximately $2.4 million in H2Ohio grant assistance to help 53 public water systems take the first step toward removing and replacing lead water pipes.

Project Count

Drinking Water Equipment and Lead Service Mapping Grants

Both Projects

Counties Not Requesting Grants at this Time

Drinking Water Equipment Grants

More than 100 communities across Ohio were awarded a total of $1 million in grants to help pay for equipment needed to maintain their public drinking water infrastructure. Public water systems were eligible to apply for up to $10,000 through H2Ohio. These grant opportunities aim to strengthen the ability of public water systems to reduce leaks, purchase critical equipment, evaluate rates, and successfully operate into the future. This is the first time these grants were awarded, and the Ohio map to the left features by-county details about these grants.

Lead Service Line Mapping Grants

As part of H2Ohio, Ohio EPA previously awarded $2.1 million to 48 communities for lead service line identification and mapping assistance. This year, Ohio EPA announced approximately $2.4 million in H2Ohio grant assistance to help 53 public water systems in 37 counties take the first step toward removing and replacing lead service lines by identifying and mapping these toxic pipes. The Ohio map to the left features by-county details about these grants.

"We didn't realize when we bought the house that it had lead lines, "I think a lot of people don't. I was just really thankful that the city and the state were able to work together and get it done - it was a great process."

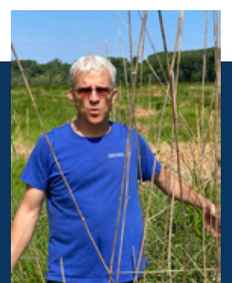
– Sandra Kelly, City of Norwood Homeowner

Water Quality Projects

Mentor Marsh

H2Ohio provided $500,000 to support the Cleveland Museum of Natural History's Mentor Marsh Coastal Restoration Project. The grant will be used to monitor and remove invasive species and grow native plants that will improve the overall health and quality of the wetland.

This grant builds on Governor DeWine's commitment to restoring the marsh, which was destroyed by salt pollution several decades ago. In 2013, while serving as Ohio's attorney general, Governor DeWine filed a lawsuit against the entity responsible for the damage. As a result, the 801-acre wetland has largely been remediated.



"It's this beautiful landscape of restored wetland, so it's a huge accomplishment and we really appreciate (Ohio) EPA's support of that. It really means a lot."

– Dr. David Kriska, Cleveland Museum of Natural History

Gorge Dam

H2Ohio is providing $1,000,000 to support the removal of the Gorge Dam on the Cuyahoga River. These funds will allow Ohio to meet the Non-Federal Cost Share requirement and leverage federal funding of $150,000,000.

The removal of the Gorge Dam will include dredge and disposal of 912,000 cubic yards of sediment containing PCBs, PAHs, heavy metals, and pesticides; reduce nutrients including phosphorus; and dramatically improve aquatic life within the Cuyahoga River.

▶ *RIGHT: The Gorge Dam was originally constructed in 1913 to provide hydroelectric power, but hydroelectric generation ended at the dam by 1958. In the spring of 2009, the power generating station on the dam was razed. The 58 ft. tall and 425 ft. wide dam, which has no necessary use today, prevents the river from flowing freely.*

Budget

In the last biennium budget, Ohio EPA received $10 million in H2Ohio spending authority for fiscal year 2023 through House Bill 110. Ohio EPA is appreciative of this support that allowed the agency to continue the important work of improving the lives of Ohioans through better water quality across the state.

"The conversations about taking this dam down have been around for nearly 30 years. Having the dam down will create paddling opportunities but also cleaner water. Once the dam is down and we reveal the white water that will be possible there, the kayakers will come from miles around."

– Lisa King, Executive Director, Summit Metro Parks

Partnerships

Since H2Ohio began, Ohio EPA has been fortunate to work with many different partners at the local, state, and federal level.

Ohio EPA was joined by several partners to complete more challenging and complex restoration and remediation projects like Gorge Dam and Mentor Marsh. Ohio EPA continues to partner with local health departments to disperse funding to lower-income homeowners for removal and replacement of home sewage treatment systems. Ohio EPA meets regularly with communities to identify infrastructure needs and provide vital gap funding for these projects.

Vision for the Future

Although each Ohio community is unique, all want to ensure their water and wastewater infrastructure are up-to-date, reliable, and sized to serve residents. Through H2Ohio, the Ohio EPA continues to meet these needs with projects ranging from construction of new wastewater collection systems to grants for drinking water system equipment.

Ohio EPA will maintain its efforts to help communities map and remove lead service lines, moving Ohio ever closer to its goal of lead-free drinking water for all communities.

H2Ohio's ongoing partnership with local health districts to remove and replace aging and failing home sewage treatment systems will reduce threats to Ohio's water quality.

Conclusion

Ohio EPA thanks the Ohio General Assembly for its continued support of H2Ohio, which has improved the lives of Ohioans across the state through better water quality.

Ohio EPA and its partners have made incredible progress as part of H2Ohio, but its work is not done. Ohio EPA will continue to focus on Ohio's water needs for the future.

Ohio Lake Erie COMMISSION

The Ohio Lake Erie Commission received H2Ohio funding in the current biennium to develop an H2Ohio-specific watershed model analysis of the western basin of Lake Erie. The Ohio State University, University of Toledo, and their academic partners are conducting this research. After consulting state agency staff, the researchers identified multiple scenarios to describe the expected effectiveness of the selected top agricultural best management practices used in H2Ohio and the overall spatial and temporal effectiveness of those practices. The model, which was developed using remote sensing, will allow the calculation of the range of possibilities for H2Ohio success at nutrient reduction in the western basin of Lake Erie.

About the Agency

The Ohio Lake Erie Commission's mission is to preserve Lake Erie's natural resources, protect the quality of its waters and ecosystem, and promote economic development of the region by ensuring the coordination of policies and programs of state government pertaining to water quality, toxic substances, and coastal resource management. Under this initiative, the Commission is primarily tasked with coordinating H2Ohio. The Commission convenes regular meetings of the agencies participating in H2Ohio as well as public meetings. The Commission supports communication between agencies and the academic community to understand the latest science and serves as a liaison with regional Great Lakes partners participating in forums through the Great Lakes Water Quality Agreement.

Budget

Through House Bill 110, the Commission received a total of $125,000, which is being used for the H2Ohio watershed model project. The Commission awarded the funds to The Ohio State University and University of Toledo to implement the model project. These dollars leveraged an additional $299,903 of funding for two years from the Ohio Department of Higher Education's HABRI and additional matching funds from the universities for that project totaling $304,319. The Commission appreciates the Ohio General Assembly's ongoing support for H2Ohio.

Partnerships

For the modeling project, the Commission is working with The Ohio State University and University of Toledo and their academic partners, as well as the Ohio Department of Higher Education on HABRI, which is supporting additional work on the watershed model being used for this project.

Program Successes

This biennium, the Commission worked to develop an H2Ohio watershed model analysis of the western basin of Lake Erie. This model will explore spatially specific issues such as the locations of pre-existing practices and when are they used. Questions being investigated include projections of conservation practice effectiveness across the Maumee River watershed and the length of time needed to achieve the Lake Erie western basin nutrient reductions.

Researchers at the University of Toledo have completed the mapping of existing conservation and management practices in the Maumee River watershed using high-resolution remote sensing data sources. In addition to mapping tile drainage networks, they have mapped buffer strips, crop rotation patterns, cover crops, and tillage practices. Each practice has been mapped in a way that will provide information about changes in these practices over the time span that is covered by the model.

Using supplemental funding through the Ohio Department of Higher Education's Harmful Algal Bloom Research Initiative (HABRI), researchers at The Ohio State University and their partners worked to improve the field-scale watershed model of the Maumee River Watershed with emerging data sources. The full team of researchers worked with state agency staff to identify various scenarios of implementing conservation practice that will be modeled to provide additional information about the expected effectiveness of the selected top H2Ohio agricultural best management practices. The various scenarios consider how many are acres of practices are needed, approximately how they should be distributed, and how long it might take H2Ohio to achieve the goals of the Ohio Domestic Action Plan and the Maumee River Nutrient Total Maximum Daily Load.

Vision for Future

Having a better understanding of the level of conservation practices needed will provide important information for future management decisions. The research teams are in the final stages of running the different scenarios in the model. For the next reporting period, this project will provide the Commission with information about the range of possibilities for H2Ohio success at nutrient reduction in the western basin of Lake Erie using this method. This information will supplement and enhance the existing methods being used to estimate the return on investment for site-specific practice installations.

With funding from the FY 24-25 budget, the Commission will continue efforts to build tools to collect better data for adaptive management and to provide better accountability for H2Ohio decisions. The Commission plans to work with agency partners to develop methodology to improve the effectiveness and performance measures for H2Ohio management practices with better benchmarking of traditional or pre-existing practices and placement.

"H2Ohio has given graduate students at the University of Toledo an opportunity to expand their remote sensing and GIS skills beyond the classroom and to work on a critical research project for Lake Erie."

– Dr. Kevin P. Czajkowski, College of Arts and Letters, University of Toledo

Conclusion

The H2Ohio program was designed around the principles of cost effectiveness and return on investment. The Commission's role in coordination and oversight of the program includes continued evaluation of cost effectiveness not just at the project and field scale but also overall. By leveraging existing research to address H2Ohio specific questions, the Commission will provide supporting information to the governor, the legislature, and all Ohioans on the continued cost effectiveness of the program.

H2Ohio

CONCLUSIONS

H2Ohio continues to track nutrient reduction progress with modeling, monitoring, and edge-of-field data. We have seen great success with H2Ohio through each agency's unique approach to improving water quality. Though H2Ohio is a statewide effort, one measurement of success is the phosphorus reduction in Lake Erie and beyond.

ODA continues to estimate phosphorus reductions through implemented Best Management Practices (BMP) on the field. Because the growing season in Ohio begins in spring and extends into the winter, ODA does not yet have complete and verified data for 2022, but based on the 2022 data that is available, ODA estimates that agricultural producers have reduced overall phosphorus runoff by 232,000 pounds, an increase from the 200,000 pounds in 2021. Considering the BMPs currently enrolled for 2023, ODA estimates that this number could increase to over 317,000 pounds over the next year.

Through ODNR's efforts, H2Ohio wetlands that are already built or in the construction process are projected to reduce phosphorus loading in Ohio waterways by over 132,000 pounds per year. These wetlands will also reduce nitrogen by 185,000 pounds per year and sequester an estimated 5.3 million pounds of carbon per year.

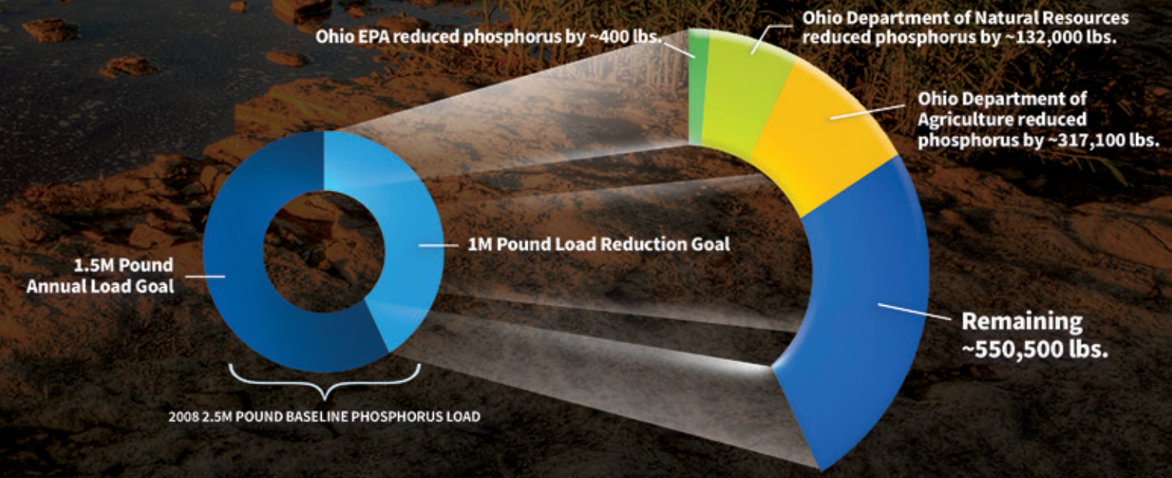
Ohio EPA invested their H2Ohio dollars as well as other funds for nutrient management in Lake Erie in wastewater infrastructure improvements. The benefits to improving large-scale wastewater facilities and home sewage treatment systems are largely human health related. Through Ohio EPA's projects, a total of 400 pounds of phosphorus runoff was prevented.

With continued effort and investment, the phosphorus entering Lake Erie is continuing to decrease year after year.

But Ohio has more work to do. Each agency remains focused and committed to ensuring water quality through advancements in technology and software, streamlined BMPs for producers, and expansion into Ohio's rivers and lakes. The calculated potential phosphorus load reduction for 2023, once projects and practices are constructed and completed, is 449,500 pounds of phosphorus, an increased reduction of 161,100 pounds. With continued effort and investment, the phosphorus entering Lake Erie is continuing to decrease, but because Ohio's water quality issues took several years to develop, H2Ohio recognizes that the initiative's impact will also take several years before it is fully realized. In the coming year, H2Ohio will remain focused on the long-term plan of improving water quality in Lake Erie and will also expand to put additional focus on the quality of Ohio's rivers. With support from the Ohio General Assembly in the FY 24-25 biennial budget, the new H2Ohio Rivers Initiative will follow a comprehensive approach to look beyond Lake Erie to address water quality concerns across the state.

Potential Load Reduction in the Western Lake Erie Basin (2023)

Based on planned projects and practices as well as completed work



H2Ohio

H2Ohio

H2Ohio Accomplishments for Fiscal Year

2023

Department of Agriculture

Department of Natural Resources

Environmental Protection Agency

Lake Erie Commission

MIKE DEWINE
GOVERNOR OF OHIO

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