



GREAT LAKES  
**GLLC**  
ST. LAWRENCE  
LEGISLATIVE CAUCUS



# GLLC Web Meeting

State and Provincial Efforts to Reduce Nutrient Inflow to the  
Great Lakes



MIDWEST

## Agenda

### **Welcome and Introductions**

Wisconsin Senator Andre Jacque, Chair, Task Force on Nutrient Management

### **H2Ohio**

***Speaker – Dr. Scudder Mackey, Ohio Office of Coastal Management***

Moderator – Ohio Senator Theresa Gavarone

### **New York Comprehensive Nutrient Management Plans**

***Speaker – Chastity Jock- Miller, Franklin County Soil & Water Conservation District***

Moderator – Wisconsin Senator Andre Jacque, Chair Task Force on Nutrient Management

### **Ontario's Lake Erie Agriculture Demonstrating Sustainability**

***Speaker- MPP Toby Barrett***

***Speaker – MPP John Vanthof***

Moderator – Wisconsin Senator Andre Jacque, Chair Task Force on Nutrient Management

## Virtual Meetings 101

- This event is being recorded.
- The recording will be available later today at [www.greatlakeslegislators.org](http://www.greatlakeslegislators.org)
- All lines will be muted while our speaker is talking
- To ask a question:
  - ✓ Under “participants,” click “raise hand”
  - ✓ Type into the “chat” pane
  - ✓ Or just unmute yourself and ask a question

## Featured Speaker



### **Scudder Mackey, Ph.D.**

- Chief, Office of Coastal Management, Ohio Department of Natural Resources
- Adjunct and Associate Professor, University of Windsor, Canada -Departments of Biological Sciences and Earth Sciences
- Ph.D. in Sedimentology from State University of New York

# Today's Menu... Nutrient Management in Ohio

- What are the issues?
  - Nutrient Reduction and Harmful Algal Blooms (HABs)
- Ohio's Commitment to Water Quality
  - Governor DeWine's H2Ohio Program and Domestic Action Plan
- H2Ohio Program Funding and Framework
  - ODNR – Investments in Natural Infrastructure (wetlands)
  - ODA – Investments in sustainable AG BMPs
  - OEPA – HSTS and 9-Element Plans
  - Long-term Monitoring (Old Woman Creek NERR and LEARN)
- Partnerships and innovative thinking are critical to success


# What are the Issues?


- Reduce/Eliminate Harmful Algal Blooms in the Western Basin and Tributaries of Lake Erie
- Public Health and Safety (drinking water, recreational activities)
- Support the North Coast Economy – tourism, fishing, birdwatching
- Reduce/Eliminate Central Basin Hypoxia in Lake Erie
- State of Ohio is committed to:
  - 40% Reduction in Phosphorus Loads by 2025
  - 25% Reduction in Sediment Loads by 2025
- Governor DeWine proposed, and with the support of the Ohio Legislature, implemented the H2Ohio Program

# Ohio Department of Natural Resources

## H2Ohio BY THE NUMBERS

**57**   
wetland projects

**\$64.5 MILLION**   
to support wetland project implementation.

**\$4.3 Million**   
allocated to establish independent project monitoring program.

**25**   
nonprofit conservation partners engaged.

**100,000**   
acres of watershed filtered by wetland projects.

**7,000**   
wetland acres to be created, restored or enhanced.

**\$5 Million**   
allocated to incentivize landowners to establish wetlands and wooded riparian buffers through Lake Erie CREP enrollment.

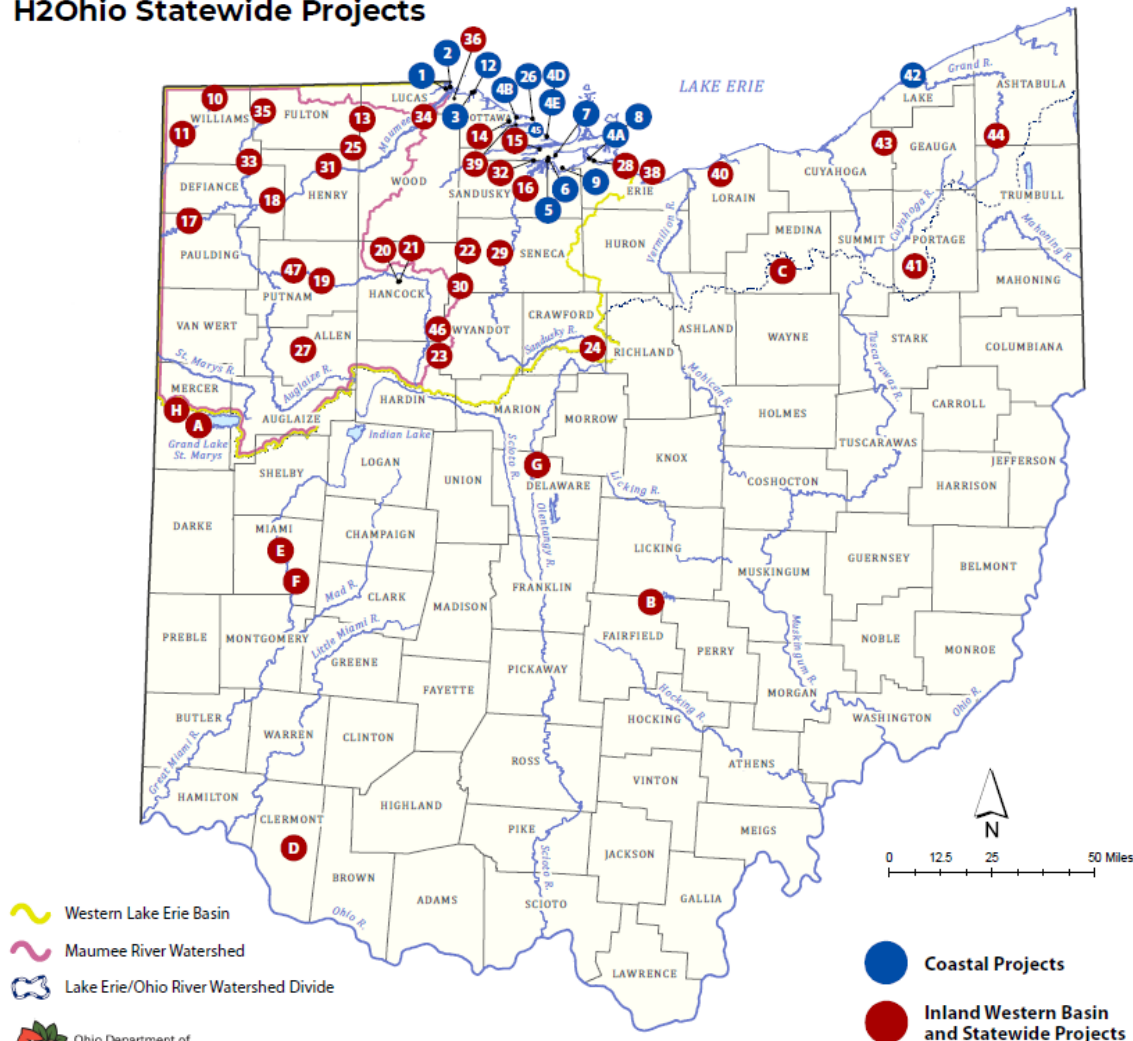
**90**   
threatened or endangered species dependent on wetlands; many will benefit from this additional habitat.

# ODNR H2Ohio Investments in Natural Infrastructure

## Bohling Marsh Reconnection



## H2Ohio Statewide Projects



## Lake Erie Basin Projects

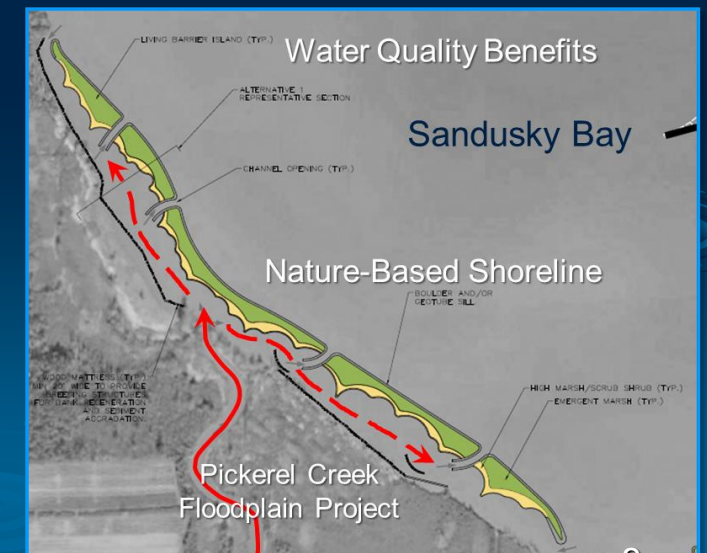
April 12, 2021

- 1 Cullen Park Wetland Restoration
- 2 Grassy Island Wetland Restoration, Design Phase
- 3 Maumee Bay State Park Wetland Reconnection
- 4A Ottawa National Wildlife Refuge Wetland Reconnection Projects
- 4B Maqee Marsh Turtle Creek Bay Wetland Reconnection
- 4D Bohling Marsh Wetland Reconnection
- 4E Darby Refuge Wetland Reconnection
- 5 Muddy Creek Bay Wetland Restoration
- 6 Winous Point - North Marsh Reconnection
- 7 Inner Bay Shoals & Islands Restoration, Design Phase
- 8 Moxley Wetland Reconnection
- 9 Inner Bay Coastal Wetlands Restoration, Design Phase
- 10 St. Joseph Confluence Wetland Reconnection
- 11 St. Joseph's River Restoration Project
- 12 Mallard Club Wildlife Area Reconnection
- 13 Oak Openings Preserve Wetland Restoration
- 14 Gatorland Wetland Restoration
- 15 Little Portage Nutrient Reduction & Coastal Wetland Restoration
- 16 Redhorse Bend Preserve Wetland Restoration
- 17 Forder Bridge Floodplain Reconnection
- 18 Independence Dam Canal Reconnection & Wetland Creation
- 19 Blanchard River Oxbow Restoration
- 20 Oakwoods Nature Preserve Wetland Restoration Project
- 21 Oakwoods Nature Preserve Wetland Restoration Project
- 22 Fruth Wetland Nature Preserve
- 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 Ditch Wetland Restoration
- 28 Sanford Agricultural Drainage Treatment Train
- 29 Wolf Creek Floodplain Restoration
- 30 Springville Marsh Wetland Restoration
- 31 Huddle Maumee Floodplain Restoration
- 32 Muddy Creek Wetland Enhancement and Reconnection
- 33 Tiffin River Pohlmann Floodplain Restoration
- 34 Clark Island Restoration, Design Phase
- 35 Goll Woods State Nature Preserve Extension
- 36 Duck and Otter Creek Wetland and Stream Restoration
- 38 Huron River Nutrient Reduction and Marsh Restoration
- 39 Rust Tract Wetland Restoration
- 40 Martin's Run Wetland and Stream Restoration Project
- 41 Bird Bog Restoration Project
- 42 Headlands Dunes Coastal Wetland Restoration Project
- 43 Fosters Run Restoration
- 44 Grand River Wet Meadow Restoration Initiative
- 45 Toussaint Coastal Wetland Reconnections
- 46 Upper Blanchard Watershed Wetland Restoration
- 47 Blanchard Floodplain Wetland Restoration

## Ohio River Basin Projects

- A Burntwood-Langenkamp Wetland Conservation Area
- B Brooks Park Wetland Creation & Water Quality Initiative
- C Chippewa Lake Wetland Restoration
- D East Fork Lake Nutrient Reduction & Wetland Initiative
- E Great Miami Off-Channel Wetland Project - Duke Phase
- F Great Miami Off-Channel Wetland Project - Tipp City Phase
- G Delaware Wildlife Area O'Donnell Treatment Train
- H Mercer Wildlife Area Wetland Restoration Projects

## South Shore Sandusky Bay





# Ohio Department of Agriculture

## Implementation

- VNMP's are being submitted and reviewed currently
- Year 1 practices began this past fall and will continue through late summer 2021
- Year 2 Funding has been approved by the Controlling Board
  - Agreement Extensions for 2<sup>nd</sup> year practices will be offered to all participants, likely in July of this year

Nearly 1.1 million acres in VNMP's

500,000+ acres in VRT

300,000+ acres in placement

Nearly 170,000 acres in manure incorporation

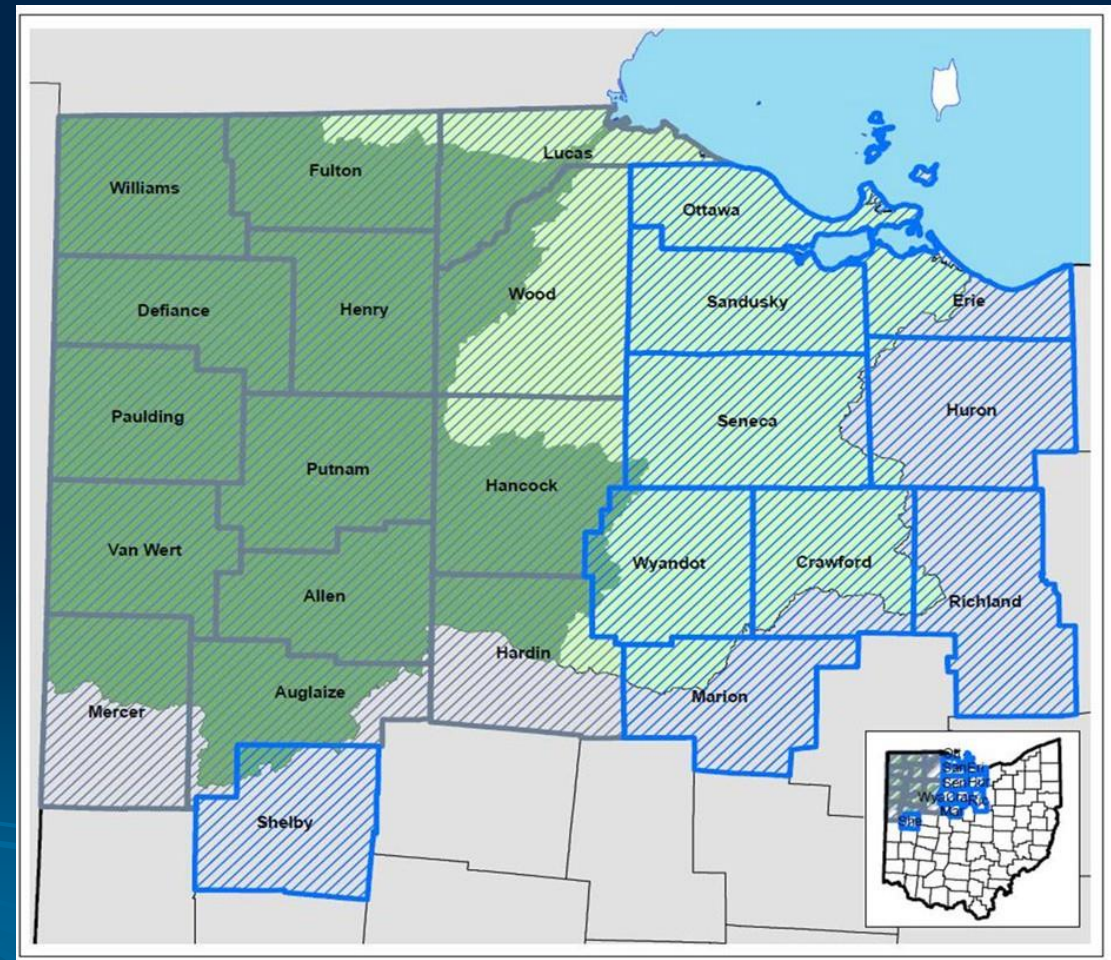
Nearly 155,000 acres in conservation crop rotation

Over 450,000 acres in over-wintering cover crops

# Ohio Department of Agriculture

## Looking Ahead

- ODA is working to expand H2Ohio programming to the entire Western Lake Erie Basin in FY 2022
- Evaluating program structure to reduce workload to deliver program to producers
- Clarify program requirements for participants
- ODA is working with the DeWine administration to secure funding for 2023 practices across the Maumee River Watershed



# Ohio EPA HSTS Funding in Western Basin

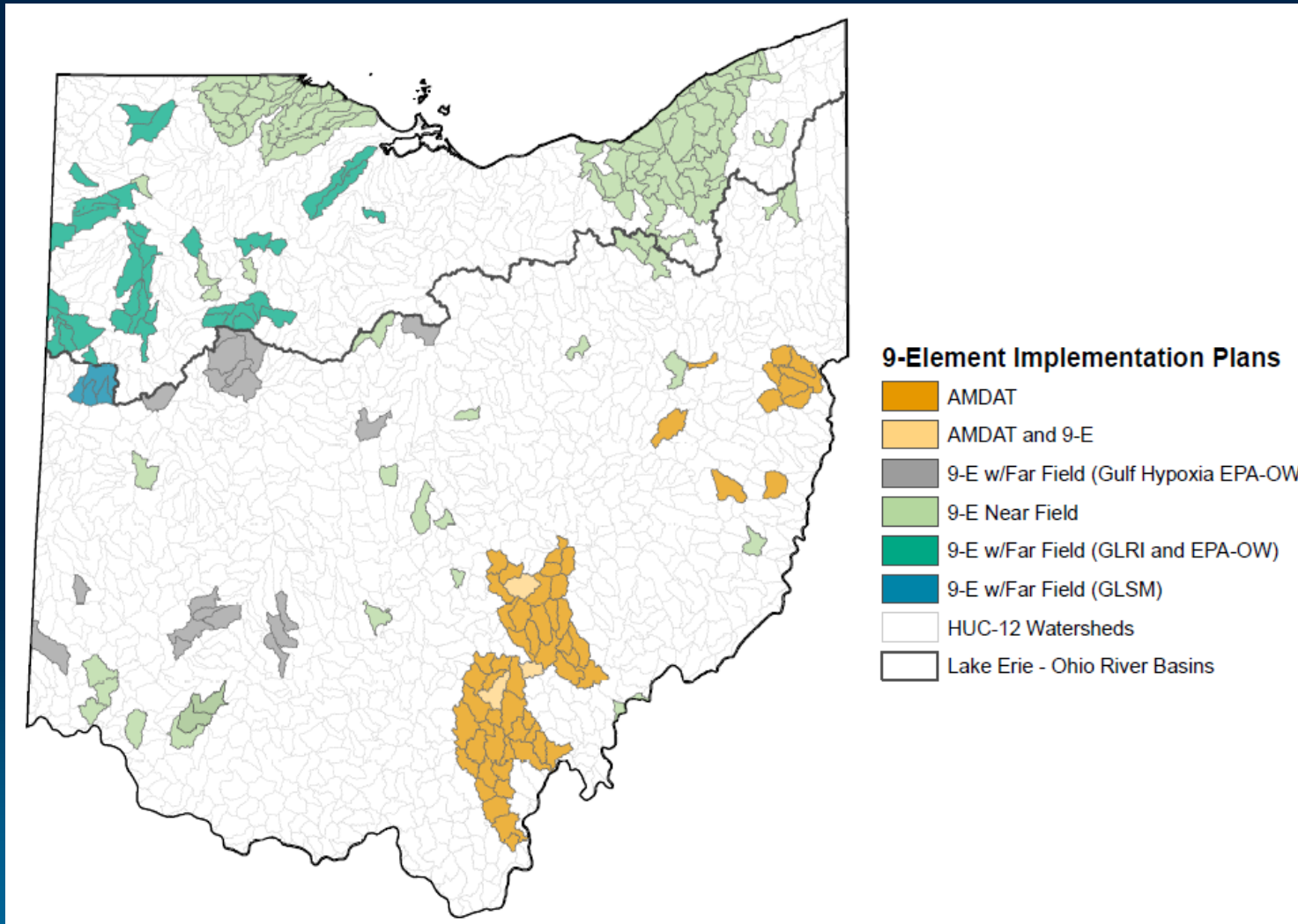
HSTS – Home Septic Treatment Systems



**\$1.75 M Administered by Ohio EPA Division of Environmental Financial Assistance**

- 7 Local Health Departments (LHD) participating in the WLEB.
- \$250,000 is available from H2Ohio for each participating LHD to provide financial assistance for failing HSTS replacements and repairs.
- \$10 million available each year to all LHDs statewide from state revolving fund for HSTS repair/replacement.
- Continued focus for H2Ohio in coming years.

# 9 - Element NPS-IS Plans in Ohio



- Domestic Action Plan
- Locally Developed Action Plans to Address Water Quality
- OEPA HUC-12 Watershed Monitoring to set targets
- Distributed Load Model to Integrate Loads Across the Basin.
- U.S. EPA/GLNPO Funding
- Southern Ohio focus on N Reduction (Gulf Hypoxia)

# GLRI Award: DAP 2.0 Implementation Project

## Project Types

|  |
|--|
| Two-Stage Ditch Restoration (Blierdofer HUC-12)  |
| Grassed Waterways (Blierdofer HUC-12)  |
| Agricultural -Runoff and Drainage Water BMPs – (Brush Creek & Flat Run)  |
| Cropland to Wetland Conversion (Flat Run)  |
| Cropland to Wetland Conversion (Lapp Ditch)  |
| 5 Grassed Waterways (2 Watersheds)   |
| Develop 12-14 Nine Element NPS-IS Plans with associated data analysis and stakeholder outreach (14 HUC-12s in Maumee River watershed). |

GLRI Award expected: ~\$774K (~85% Projects, 15% Strategic Planning

# ODNR Long-Term Monitoring

- ODNR has invested \$4.3M to develop and implement a 10-year comprehensive monitoring program to document success
- Lake Erie Area Research Network (LEARN) is a consortium of Universities led by OSU and the Old Woman Creek NERR
- LEARN to perform an independent third-party assessment of project performance
- Testing low-cost innovative smart sensor technologies at the Old Woman Creek NERR to evaluate suitability for H2Ohio natural infrastructure projects



LoRaWAN Gateway



Weather



Water Quality



Water Quality



Water Level

# Ohio Summary

- Implementing a Vision to improve water quality and public health and safety across the State of Ohio
- Legislative support for significant long-term funding to implement that Vision
- Making investments in Natural Infrastructure, Sustainable Agriculture, and Local Communities
- Strong interagency partnerships between Federal, State, Local governments, NGO's, and Academia – Leveraging of Funds and Expertise... to achieve success!

# Nutrient Management in Ohio H2Ohio Program and Domestic Action Plan

## Questions?

Scudder D. Mackey, Ph.D.  
Chief, Office of Coastal Management  
Ohio Department of Natural Resources  
[Scudder.Mackey@dnr.ohio.gov](mailto:Scudder.Mackey@dnr.ohio.gov)



## Featured Speaker



- Chastity Jock-Miller  
District manager, Franklin County Soil & Water  
Conservation District
- M.S. Environmental Science, University of  
New Haven

# NEW YORK



Nutrient Reduction Programs

Chastity Miller

District Manager Franklin County Soil and Water Conservation District

Past President and Current Treasurer New York State Conservation  
District Employee's Association

# Best Management Practices (BMPs)

- Best Management Practice (BMP) is a term used to describe pollution control systems that treat, slow, divert, or capture nonpoint source pollutants.
- BMPs are the actions on the ground that help to improve and restore water quality.
- Identifying the appropriate BMPs is critical to a successful watershed plan or implementation plan.
- The BMPs that are selected depends on the type of nonpoint source pollution of concern, the land use and the management goal (for example, meeting a reduction goal).

# NYS Guidance for BMPs

- Construction Management
- Agriculture
- Beach Restoration
- Local Roads/Rural Roads
- Forestry
- Streambanks, flooding and hydrologic practices
- Spills, leaks and accidents
- Erosion and sediment control
- Onsite waste water treatment
- Stormwater



# Non-Agricultural Non-point Source Planning Grant (NPG)

NPG is a competitive, reimbursement grant program that funds planning reports for nonpoint source water quality improvement projects.

- The goal of the program is to get projects ready for construction and future implementation funding through the Water Quality Improvement Project grant program or other funding opportunities.
- Decentralized Wastewater Treatment Facilities for Failing On-Site Treatment Systems or Long Island On-Site Treatment Systems that Do Not Currently Abate Nitrogen
- Green Infrastructure Practice/Stormwater Retrofits
- Great Lakes Nature-Based Shoreline Projects
- Streambank Stabilization
- In-Waterbody Controls for Nutrients
- Beach Restoration
- Culvert Repair and Replacement



# Agricultural Non-point Source Abatement and Control Program (AG NPS)

- The Agricultural Non-point Source Abatement and Control Program is a cost-share grant program that provides funding to address and prevent potential water quality issues that stem from farming activities.
- Financial and technical assistance supports the planning and implementation of on-farm projects with the goal of improving water quality in New York's waterways.
- The program seeks to support New York's diverse agricultural businesses in their efforts to implement best management practice systems that improve water quality and environmental stewardship.
- State funds come from the New York State Environmental Protection Fund.
- Grants can cost-share up to 75% of project costs or more if farmers contribute in the following two areas:
  - Planning: funds awarded to conduct environmental planning
  - Implementation: funds awarded to construct or apply management practices

# Agricultural Environmental Management (AEM)

- Agricultural Environmental Management, or AEM, is a cooperative interagency program that provides one-on-one help to farmers to identify environmental risks on their farms. Once these risks are identified, farmers receive help with solution planning and design and with obtaining financial assistance to address existing problems and prevent future ones.
- The SWCC develops policy for the statewide AEM program and administers programs through staff and various groups associated with the interagency AEM Steering Committee.
- AEM is a voluntary, incentive-based program that helps farmers make common-sense, cost-effective, and science-based decisions to meet business objectives while protecting and conserving New York State's natural resources. By participating in AEM, farmers can document their environmental stewardship and further advance their positive contributions to their communities, our food systems, the economy, and the environment.
- Farmers work with local AEM resource professionals to develop comprehensive farm plans using a tiered process:
  - Tier 1 – Inventory current activities, future plans, and potential environmental concerns.
  - Tier 2 – Document current land stewardship; assess and prioritize areas of concern.
  - Tier 3 – Develop conservation plans addressing concerns and opportunities tailored to farm goals.
  - Tier 4 – Implement plans utilizing available financial, educational, and technical assistance.
  - Tier 5 – Evaluate to ensure the protection of the environment and farm viability.

# State Aid for Districts

- State Aid to Districts provides consistent funding through the NYS Environmental Protection Fund (EPF) and serves as a program that reimburses Conservation Districts for locally provided technical assistance (Part A), provides Conservation Project Financial Assistance (Part B), and incentivizes strong performance and operations through funding of Performance Measures (Part C).





# Implementation of Agricultural Environmental Management Plans on New York State Grown & Certified Farms

- The Department and the New York State Soil and Water Conservation Committee are pleased to announce the availability of funds to support implementation of Agricultural Environmental Management (AEM) Plans on [New York State Grown and Certified](#)<sup>®</sup> (NYS G&C) farms.
- The goal of the implementation of AEM Plans on NYS G&C farms is to assist growers in producing products using the highest environmental standards in order to protect and improve New York's natural resources, including the water quality of its ocean and Great Lakes.
- Funding provided under this RFP comes from the Environmental Protection Fund, and will support environmental stewardship by providing financial assistance to implement Conservation Practice Systems on NYS G&C farms.

# Climate Resilient Farming (CRF)

- Led by the New York State Soil and Water Conservation Committee, in coordination with the Department, the goal of the Climate Resilient Farming Program is to reduce the impact of agriculture on climate change (mitigation) and to increase the resiliency of New York State farms in the face of a changing climate (adaptation).
- Launched in 2015, \$8 million has been awarded for 121 farms to implement best management practice systems that reduce potent greenhouse gas emissions, increase carbon storage in soils, and improve the health and resiliency of our farms, ecosystems, and communities.
- Funds are eligible for (track 1) manure storage cover and flare systems, (track 2) water management projects, and (track 3) Healthy Soils NY to improve soil health management practice systems.

# Implementation of High-efficiency Agricultural Irrigation Water Management Systems

- The Department and the New York State Soil and Water Conservation Committee
- Recently announced the availability of funds to support the implementation of high-efficiency agricultural irrigation water management systems.
- Providing financial assistance to implement improvements to existing agricultural irrigation systems that result in the conservation of water resources, improvements to nutrient management strategies and crop production yields, while safeguarding natural resources.

# Source Water Buffer Program

- The [Source Water Buffer Program](#) is administered by the [New York State Soil and Water Conservation Committee](#), in coordination with the Department. The goal of the program is to protect public drinking water and to enhance water quality protection. The Source Water Buffer Program funds the purchase of conservation easements and projects that establish riparian buffers on farmland that borders critical water sources.
- Funding for the program is provided through the Clean Water Infrastructure Act of 2017. Approximately \$5 million is available to support the purchase of conservation easements and the implementation of buffer systems, which filter surface runoff or shallow groundwater to protect the water quality of New York State's aquifers, watersheds, reservoirs, lakes, rivers, and streams.

## Benefits

- Vegetated or forested buffers are extremely effective practices to improve and protect water quality and mitigate nutrient pollution. The Source Water Buffer Program provides long-term protection of these areas to positively impact water quality for future generations.
- The program will cost share up to 75%, the purchase of perpetual conservation easements or 50-year term conservation easements.
- Funds may also be used to install or enhance vegetated or forested buffers within the easement area.

# Additional Programs

- NYS Ag Districts
- Farmland Protection
- NYS DEC
- RRAMP- Local Roads
- Cornell Local Roads
- Watershed Associations
- Conservation Easements



# Recap

- Environmental Protection Fund
- Funding Support
- Legacy of Projects and Implementation
- Functional Partnerships
- Local Commitments
- Questions?



# For More Information-

- Brian Steinmuller- Assistant Director NYS Department of Agriculture and Markets, Division of Land and Water Resources, O: (518) 457-0562 | C: (518) 764-2615 [brian.steinmuller@agriculture.ny.gov](mailto:brian.steinmuller@agriculture.ny.gov)
- Greg Albrecht- Agricultural Environmental Management (AEM) Coordinator. Comprehensive Nutrient Management Planning (CNMP) Specialist- NYS Department of Agriculture and Markets, Division of Land and Water Resources NYS Soil and Water Conservation Committee, (607) 229-4654, [greg.albrecht@agriculture.ny.gov](mailto:greg.albrecht@agriculture.ny.gov)
- Dustin Lewis- President NYSCDEA and District Manager Saratoga County Soil and Water, (518) 885-6900, [dustinlewissaratogaswcd@gmail.com](mailto:dustinlewissaratogaswcd@gmail.com)
- Chastity Miller- Past President, Current Treasurer NYSCDEA District Manager- Franklin County Soil and Water, (518) 651-2097 [cmiller@fcswcd.org](mailto:cmiller@fcswcd.org)

## Featured Speakers



### **MPP Toby Barrett**

- ✓ **Parliamentary Assistant to the Minister of Agriculture.**
- ✓ **Has served in the Legislative Assembly since 1995.**
- ✓ **Master's Degree in Agriculture Science, and a degree in Economics.**
- ✓ **Former high school agriculture teacher.**
- ✓ **Partner in Farmleigh Farms.**



### **MPP John Vanthof**

- ✓ **Has served in the Legislative Assembly since 2011**
- ✓ **Commissioner Board of Internal economy**
- ✓ **Critic, Agriculture and Food, Rural Development**
- ✓ **Deputy Leader, Official Opposition**
- ✓ **Dairy Farmer**



## **LEADS - Lake Erie Agriculture Demonstrating Sustainability**

- Help farmers take action to improve soil health and water quality while improving farm productivity in the region
- A five year, \$15.6 million investment funded under the Canadian Agricultural Partnership
- Available until March 2023
- Since 2018 > 730 projects have been approved
- Delivered by the Ontario Soil and Crop Improvement Association
- Aligns with the Made in Ontario Environment Plan

## LEADS projects include:

- Establishing permanently vegetated buffer strips adjacent to streams, drains, rivers, ponds, wetlands and lakes to reduce nutrient loss and soil erosion
- Retiring environmentally fragile lands from agricultural production and planting permanent vegetative cover to reduce the loss of soil and nutrients from these lands
- Modifying equipment to improve management of agricultural nutrients, to support reduced tillage and to reduce soil compaction
- Installation of soil erosion control structures including grass waterways and water and sediment control basins to reduce soil erosion losses.

## Questions? Comments?

- Under participants click “raise hand” and unmute your line when we announce your name
- Type your question in the chat pane to be read by staff or have staff call on you.
- Just unmute yourself and ask a question

# Remember to Register

## Great Lakes Commission Blue Accounting

Friday May, 21, 10:00 CT | 11:00 ET

Featuring web testing of the new information service to track the region's progress toward shared goals for the Great Lakes.

Hundreds of different entities – across eight states and two provinces – currently invest billions of dollars in restoring and maintaining the Great Lakes, but until Blue Accounting, there hasn't been a way to measure the effectiveness of these efforts.

Thank you to our sponsors!

# The **Joyce** Foundation



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## About the GLLC

- The GLLC is a binational, nonpartisan group of state and provincial lawmakers from the Great Lakes region.
- Organized around the principle of assuring that the Great Lakes and St. Lawrence River continue to provide a plentiful source of clean, affordable water to the region's residents, businesses, and industries.
- Legislators may enroll at [bit.ly/GLLCmember](https://greatlakeslegislators.org) (case sensitive). This link is available on the GLLC website:  
<https://greatlakeslegislators.org>.



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