# EPA UPDATES: NONPOINT SOURCE PROGRAM, AGRICULTURE, AND WATER QUALITY PARTNERSHIPS

Presentation by U.S. EPA, Nonpoint Source Management Branch
North American (ICCA) Board Meeting
September 14, 2022

United States Environmental Protection Agency

# Presentation Outline

- Nonpoint Source Pollution Program Overview
- EPA and Office of Water Priorities
- Gulf of Mexico Hypoxia Task Force
- Natural Hazard Mitigation
- National Water Quality Initiative
- EPA Next-Gen Fertilizer Challenges
- Engagement Opportunities

# Clean Water Act (CWA) §319 Grant Program

- Established in 1987 CWA amendments
  - 319(b) - State Management Programs
  - 319(h) - Grant Program
- States, territories, and tribes receive grant money that supports technical & financial assistance, education, training, technology transfer, demonstration projects, and monitoring
- The §319 grant program continues to be EPA's 1st line of defense against nonpoint source (NPS) pollution
  - ≈70% of 319 projects address nutrient parameters
  - ≈10% address sediments or pathogens

# §319 Program Influences State Programs and Powers Local Watershed Projects

**Funds are distributed to states annually**

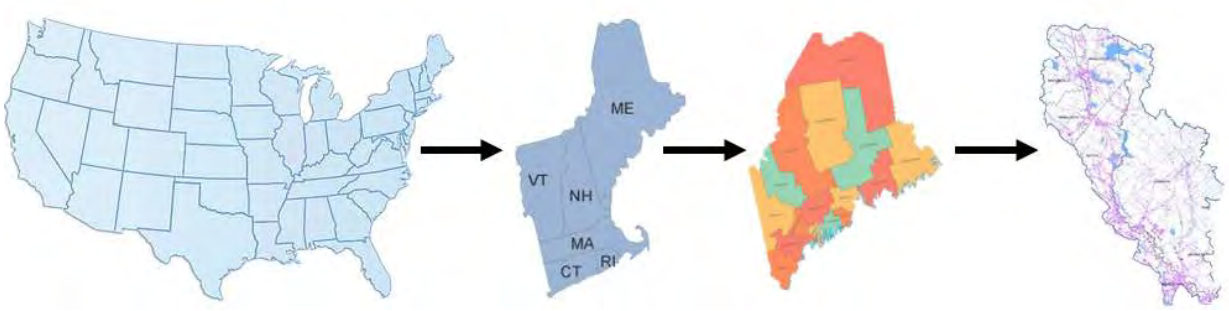
- FY22: $178 M distributed to states/$9.852M to tribes
- 40% non-federal match required

**319 Funds are a catalyst**

- Provides initial funding that can be leveraged to secure additional partner funding
  - E.g., Inflation Reduction Act provides ≈$20B in conservation funding through FY26

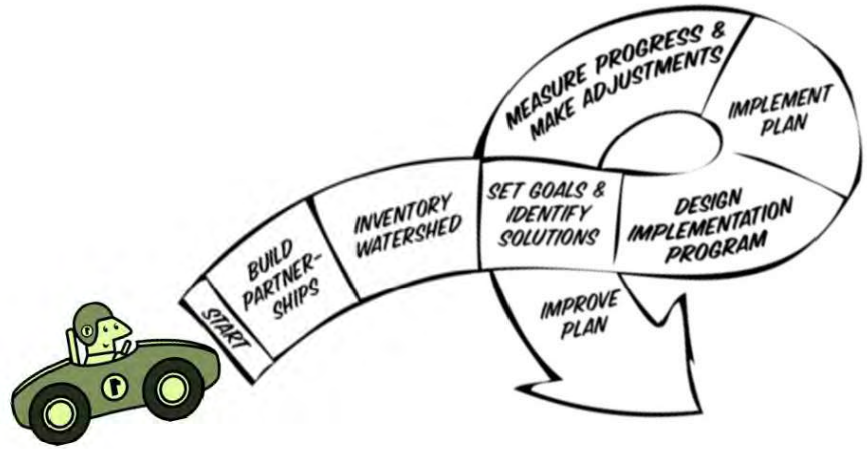
**Guidelines -** Use of funds requires:

- **Watershed projects:** ≥50% of funds allocated must support on-the-ground projects
- **NPS program work:** staffing, administrative



# The Importance of Watershed Planning

- §319 watershed projects must be guided by watershed-based plans
- Plans provide the technical basis for on-the-ground projects with consideration of:
  - Relative contributions of pollutants from various sources
  - Critical source areas where intervention can result in proportionately greater improvements
  - Available/appropriate best management practices (BMPs)
- Plans provide a roadmap for engagement with landowners/stakeholders needed for project success



# EPA & Office of Water Priorities

- Implementing the Infrastructure Investment and Jobs Act (IIJA)
- Advancing Administration Climate and Equity/Environmental Justice (EJ) Priorities
- Tackling Nutrient Pollution and Advancing Agricultural Partnerships

# Implementing IIJA

- On November 15, 2021, President Biden signed the IIJA, also known as the Bipartisan Infrastructure Law (BIL, P.L. 117-58)
- The transformational investment in clean water includes ≈$50 billion to EPA, the single largest investment in clean water that the federal government has ever made

# Clean Water State Revolving Fund

- The Clean Water State Revolving Fund (CWSRF) program is a federal-state partnership that provides communities low-cost financing for a wide range of water quality infrastructure projects
- IIJA will infuse ≈$12.7B into states' CWSRF programs FY22-26
  - ≈$1B is to be focused on emerging contaminants
  - 49% of CWSRF General Supplemental Funding must be provided as grants and forgivable loans to certain assistance recipients or project types to ensure that disadvantaged communities benefit
- States are exploring the potential for CWSRF to support agricultural practices and/or watershed conservation projects
  - Kansas used CWSRF funding to purchase cover crop interseeders that are shared amongst agricultural service providers
- Program recently issued implementation guidelines for IIJA funding
- IIJA brings more opportunities for financing non-traditional water quality projects by increasing the funding pot and targeting disadvantaged communities

# Gulf Hypoxia Grant Program

- IIJA provides $60M between FY22-26 (~$1m/yr. to each of the 12 Hypoxia Task Force (HTF) states) to help states implement nutrient reduction strategies to improve water quality in the Mississippi River Basin and the Gulf of Mexico and reduce low oxygen (hypoxic) conditions, or "dead," zone in the northern Gulf
  - Modest support will also be provided to other entities (e.g., eligible tribes, sub-basin committees, and land grant university consortium)
- Funds will:
  - Support staff in accomplishing goals of grant program
  - Prioritize and target watersheds with the greatest opportunities
  - Support HTF partner collaboration
  - Support implementation of water quality programs that result in NPS pollution and nutrient reductions
- HTF states are working with EPA to finalize initial grant workplans; EPA will publish guidance for tribal grants later this year and for the Sub-Basin Committee and Land Grant Universities next year

More Information: https://www.epa.gov/ms-htf/gulf-hypoxia-program

# Water Quality Management Planning

- Under section 604(b) of the Clean Water Act, each year states reserve 1% of their CWSRF allotment to conduct water quality management planning
- IIJA will infuse approximately $127M into state programs FY22-26
- Funds may be used for a wide range of planning activities including: ambient monitoring; watershed-based plan development; Total Maximum Daily Load (TMDL) development; water quality standards development
- Recently-released implementation guidelines outline priorities around climate and equity/EJ

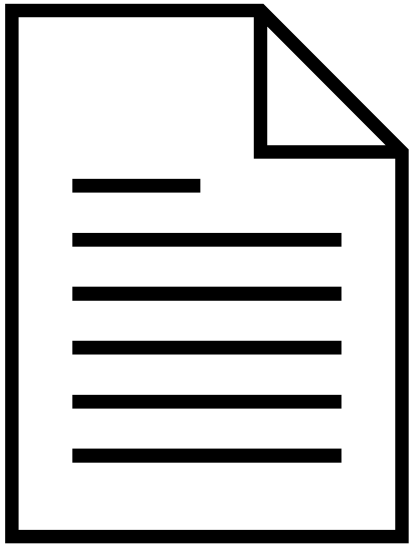
# Tackling Nutrient Pollution

# Tackling Nutrient Pollution

- Nutrient pollution remains one of the U.S.' most widespread, costly, and complex environmental problems
- EPA is committed to re-invigorating partnerships with agricultural stakeholders to address nutrient and other water quality issues
    - Collaboration with USDA and other key stakeholders is critical
    - CCAs are the doers, providing on-the-ground technical assistance
    - Advanced 4R nutrient management certification can help!
- Innovative financing/funding and market-based approaches can play a role
    - "Pay for performance" approaches can maximize delivery of water quality and other benefits vs. traditional cost-share programs

# Tackling Nutrient Pollution (cont.)

- EPA issued a Nutrient Reduction Memorandum (April 2022) to accelerate progress in controlling nutrient pollution
  - The memo affirms the foundational principles and approaches that are described in previous Office of Water nutrient policy memos
- Three primary strategies in the memo:
  - Deepen collaborative partnerships with agriculture sector and USDA
  - Redouble our efforts to support states, tribes, and territories to achieve nutrient pollution reductions from all sources
  - Utilize our authorities under the Clean Water Act to drive progress, innovation, and collaboration



# Hypoxia Task Force

Mississippi River Gulf of Mexico Watershed Nutrient Task Force

- HTF established 1997 to:
  - Understand the causes and effects of eutrophication in the Gulf of Mexico;
  - Coordinate activities to reduce the size, severity, and duration of the hypoxic zone
- Activities include:
  - Coordinating and supporting nutrient management activities from all sources;
  - Restoring habitats to trap and assimilate nutrients; and
  - Supporting other hypoxia related activities in the Mississippi River and Gulf of Mexico watersheds
- Goal: reduce the five-year running average areal extent of the Gulf of Mexico hypoxic zone to less than 5,000 square kilometers by the year 2035

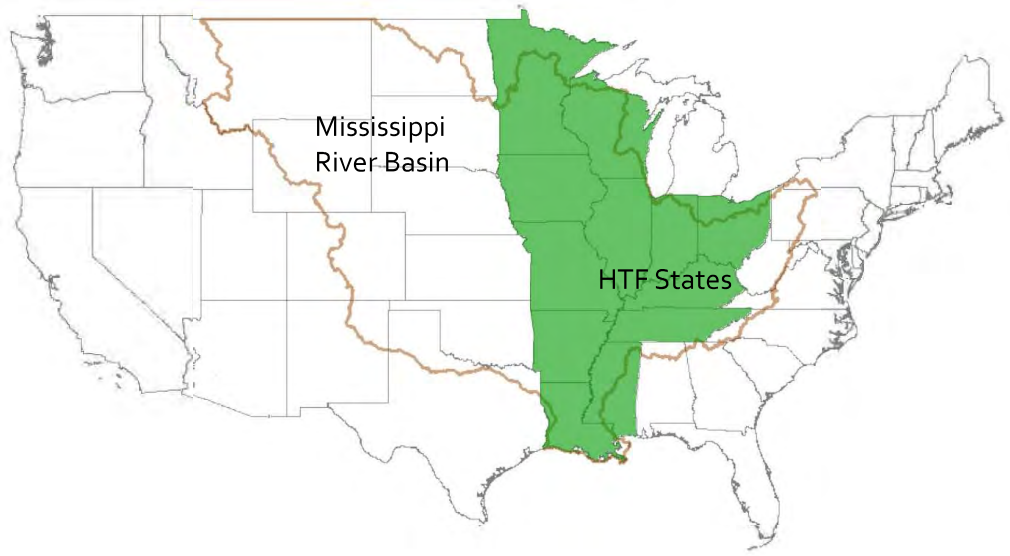
# Hypoxia Task Force (cont.)

## 5 Federal Agencies and Tribes

- US Environmental Protection Agency
- National Oceanic and Atmospheric Administration
- US Army Corps of Engineers
- US Department of Agriculture
- US Department of Interior
- National Tribal Water Council

## 12 States

- Arkansas
- Missouri
- Iowa
- Tennessee
- Minnesota
- Indiana
- Ohio
- Louisiana
- Illinois
- Mississippi
- Kentucky
- Wisconsin




Each state member represents one of the following state agencies, with multiple agencies engaged with the Coordinating Committee:

Agriculture, Environmental Quality, and/or

Natural Resources agencies

# Advancing Climate and Equity/Environmental Justice (EJ) Administration Priorities

# Climate

- EPA is working to implement President Biden's Executive Order: *Tackling the Climate Crisis at Home and Abroad*
  - Understanding and addressing climate change is critical to EPA's mission
- Agriculture is a vital sector that spans ≈40% of U.S. land; Production is highly sensitive to weather and climate
- Since 2005, §319 grants have supported >700 watershed projects that address climate-related issues
  - Ag. BMPs like conservation tillage, cover crops, and nutrient management can improve water quality and offer carbon sequestration benefits
  - Overlap between EPA's vision and recommendations advanced by the Tri-Societies *Advancing Resilient Agriculture: Recommendations to Address Climate Change*

# Equity and Environmental Justice

- EPA is committed to advancing EJ goals for all Americans and ensuring that the benefits of cleaner water provided by the Clean Water Act reach underserved communities
- Executive Order Justice 40 Commitment: *"deliver at least 40 percent of the overall benefits from Federal investments in climate and clean energy to disadvantaged communities."*
- EPA issued *Near-term Actions to Support Environmental Justice in the Nonpoint Source Program* (Sept. 2021)
  - Encourages state actions to advance delivery of NPS benefits to disadvantaged communities and commits EPA to take actions in support of this goal in FY 2022
- EPA is exploring opportunities to:
  - Support states as they weave equity into NPS Management Program Plans and watershed-based plans; and
  - Increase flexibilities under CWA 319 to enhance the delivery of program benefits to disadvantaged communities
    - E.g., technical assistance for 319 application process in rural areas
    - Additional issuance(s) from EPA expected this fall

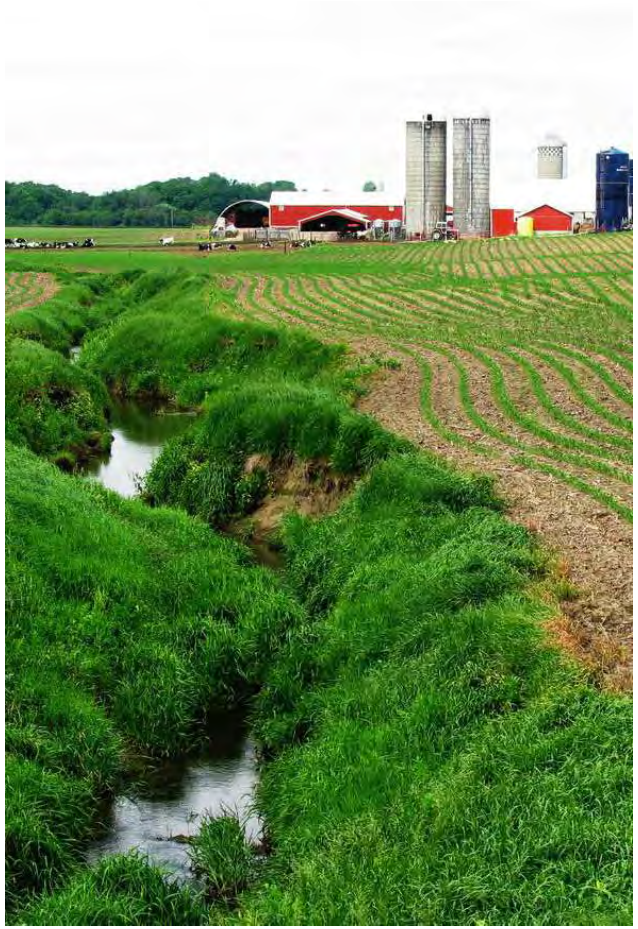
# Natural Hazard Mitigation

- Federal Emergency Management Agency (FEMA) policies and grants now put more emphasis on pre-disaster mitigation and resilience
- States can leverage resources by integrating water quality projects that also reduce risks from natural hazards into Hazard Mitigation Plans (HMPs)
- NPS pollution is exacerbated by many natural hazards
  - Flooding - scour/sediment, increased pollutant contact and loads
  - Landslides, wildfire - erosion, scour, sediment, ash, etc. in receiving waters
- Nature-based solutions can help reduce impact of storms
- Agriculture conservation practices can reduce the risk of multiple natural hazards (e.g. flood, dust, drought) and improve water quality
- EPA is planning to release self-paced training on the hazard mitigation planning-water quality connection on its website in the next few months

# The Soil Health - Natural Hazards Link

**There is a connection between agricultural conservation and soil health practices in hazard mitigation.**

- **2018 Farm Bill** set aside 10% of conservation program funds for sourcewater protection.*
- Per **USDA NRCS,** healthy soil is "water in the bank" - soil organic matter improves water retention and can mitigate flood and drought.

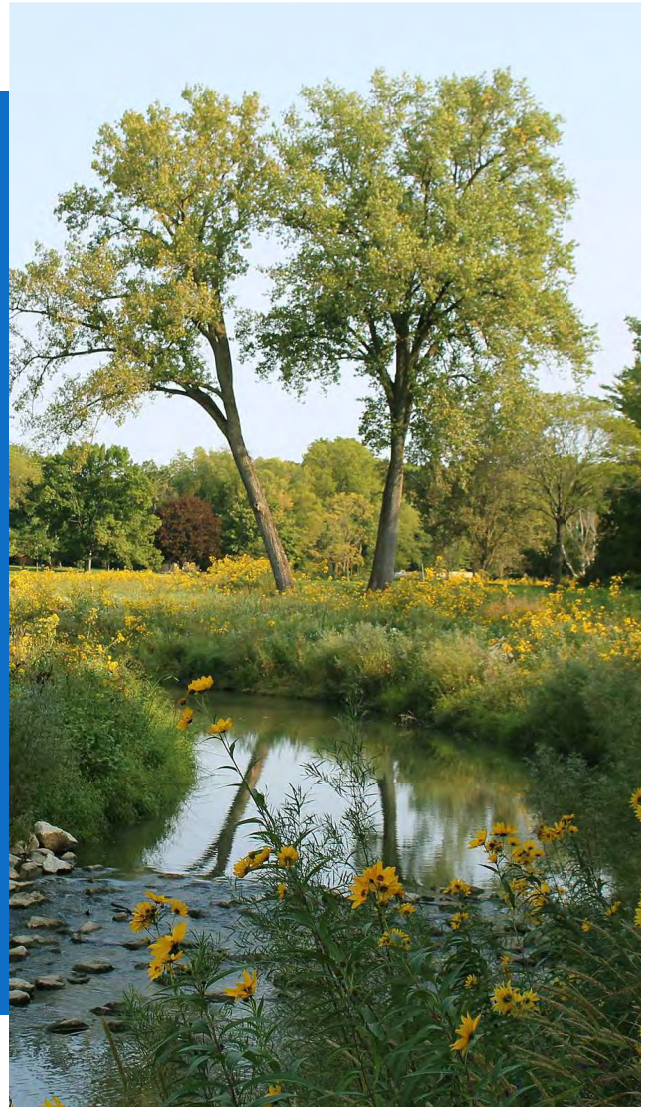


**Does not include Conservation Reserve Program*

# EPA and the National Water Quality Initiative (NWQI)

- A partnership between USDA NRCS, EPA, and state water quality/nonpoint source programs (since 2012)
- Goal: to accelerate the adoption of water quality focused conservation practices in high priority watersheds
- Leverages CWA Section 319 funding and USDA Environmental Quality Incentive Program (EQIP) $ to maximize impacts in priority watersheds
  - Between FY17-20, $20,344,093 in 319 funding was invested in NWQI watersheds, which was matched by $22,501,850 in nonfederal funding*
- EPA published *Planning and Implementing Agricultural Water Quality Projects Through the National Water Quality Initiative: a Practitioners Guide* (May 2021)

* Budget amounts applied across the entirety of the project regardless of the footprint of the project which could include one or many HUC12 watersheds. Funds could have been applied in the HUC12 watershed from the NWQI listing or from an adjacent one if multiple are listed. Data are entered continuously in GRTS and additional projects/funds for open grants can be added daily. These projects represent a snapshot from a data download completed on 10-25-21.



# FY17-20 NWQI Monitoring Data

- 46 states and Puerto Rico named 116 NWQI monitoring watersheds for FY21 and beyond
- Substantially more improvements were noted in monitored waters compared to the previous cycle; of the 103 waters with monitoring results, 37 waters or 36% in 20 states and Puerto Rico showed improvement(s) for one or more NWQI pollutants (compared to 27% based on FY16 data)
- Of those 37 waters that reported improvements, improvements in 27 (or 73%) were attributed to agricultural conservation practices
- Based on Grants Reporting and Tracking System (GRTS) and Assessment and Total Maximum Daily Load Tracking and Implementation System (ATTAINS) analyses:
  - 18 NWQI watersheds that were not meeting water quality standards as of 2017 were attaining standards*

*More improvements may be attributable to NWQI activities, however, reasons for de-listings (e.g. restoration activities) are not always noted in ATTAINS.

# Next Gen Fertilizer Challenges

- A Joint EPA-USDA Partnership and Competition on Next Gen Fertilizers to advance agricultural sustainability in the U.S.
- In collaboration with The Fertilizer Institute, the International Fertilizer Development Center, The Nature Conservancy, and the National Corn Growers Association

**Challenge 1: Closed October 2020**

- Aims to identify existing EEFs currently on or near-market that meet or exceed certain environmental and agro-economic criteria

**Challenge 2: Closed November 2020**

- Aimed to identify concepts for novel fertilizers and other product technology innovations

**Next Steps:**

- Greenhouse trials underway with 16 participants that advanced to Stage 2 of Challenge 1 (https://www.epa.gov/innovation/eefs-environmental-and-agronomic-challenge)
  - 75% of the results completed (NH3 volatilization, yield, leaching), 25% remaining (N2O emissions). Anticipate completion in early 2023
- Discussions with partners regarding showcasing event possibly in Fall 2023 or at the Commodity Classic (February 2023)

# CCC-EPA Engagement Opportunities

- CCA Board members can participate in state and local water quality partnerships
- Information exchange between EPA, state water quality agencies, and CCAs
- Technical exchange on agricultural topics (e.g., webinars)
- Engagement opportunities to explore:
  - Watershed planning and implementation
  - Collaborating on high impact water quality conservation practices
  - Collaborating in priority areas
  - States' Nonpoint Source Management Program priorities and milestones
  - Know your state's 319 RFP processes and timing where applicable
  - Other ideas unique to local boards/regions?

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Thank You!

**Questions and Discussion**