EPA UPDATES: NONPOINT SOURCE PROGRAM, AGRICULTURE, AND WATER QUALITY COLLABORATIONS

Presentation by U.S. EPA, Nonpoint Source Management Branch
North American (ICCA) Board Meeting
September 12, 2023

Presentation Outline

- Nonpoint Source Pollution Program Overview
- EPA and Office of Water Priorities
- Gulf of Mexico Hypoxia Task Force and GHP
- 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 and/or sediment
  - ≈10% address pathogens

§319 Program Influences State Programs and Powers Local Watershed Projects

Funds are distributed to states annually

- FY23: $168.17M distributed to states/$13.83M 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:

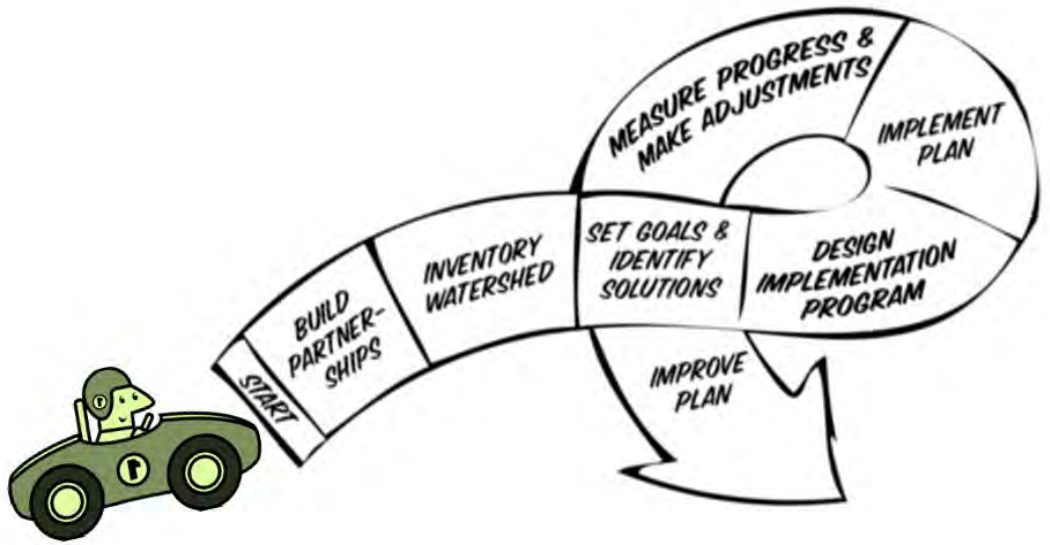
- **Watershed projects:** ≥50% of funds allocated must support on-the-ground projects
- **NPS program work:** staffing, administrative

➢ ***EPA is revising program guidelines; public comment period planned Late Summer-Fall 2023***

- Synthesize lessons learned from the past 10 years of states' experiences with the program
- Ensure equitable access to program benefits
- Support states' efforts to advance climate adaptation and resilience

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 issued implementation guidelines for IIJA funding

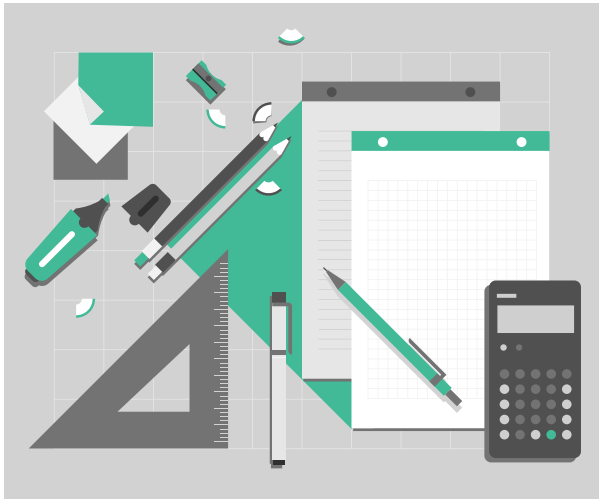
Gulf Hypoxia Grant Program

- 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, especially those that provide benefits to disadvantaged communities
  - Support projects with climate adaptation and mitigation co-benefits
- State grants are underway; grants to other entities are in process

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

Water Quality Management Planning

- Under section 604(b) of the CWA, 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
- FY22-26 implementation guidelines outline priorities around climate and equity/EJ



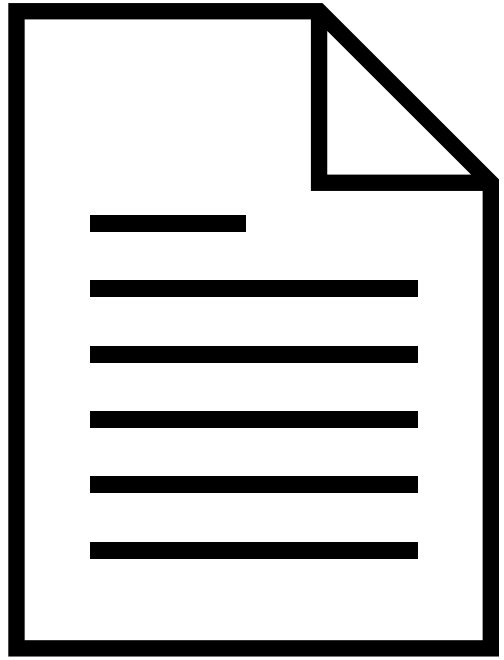
Tackling Nutrient Pollution

Tackling Nutrient Pollution

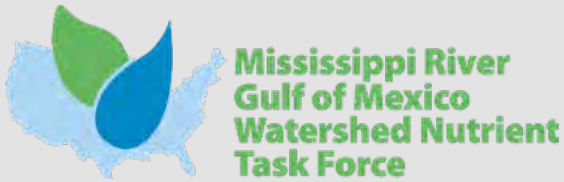
- Nutrient pollution remains one of the U.S.' most widespread, costly, and complex environmental problems
- EPA is committed to re-invigorating partnerships with agricultural stakeholders to address nutrient and other water quality issues
  - Collaboration with USDA and other key stakeholders is critical
  - 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 CWA to drive progress, innovation, and collaboration



Hypoxia 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

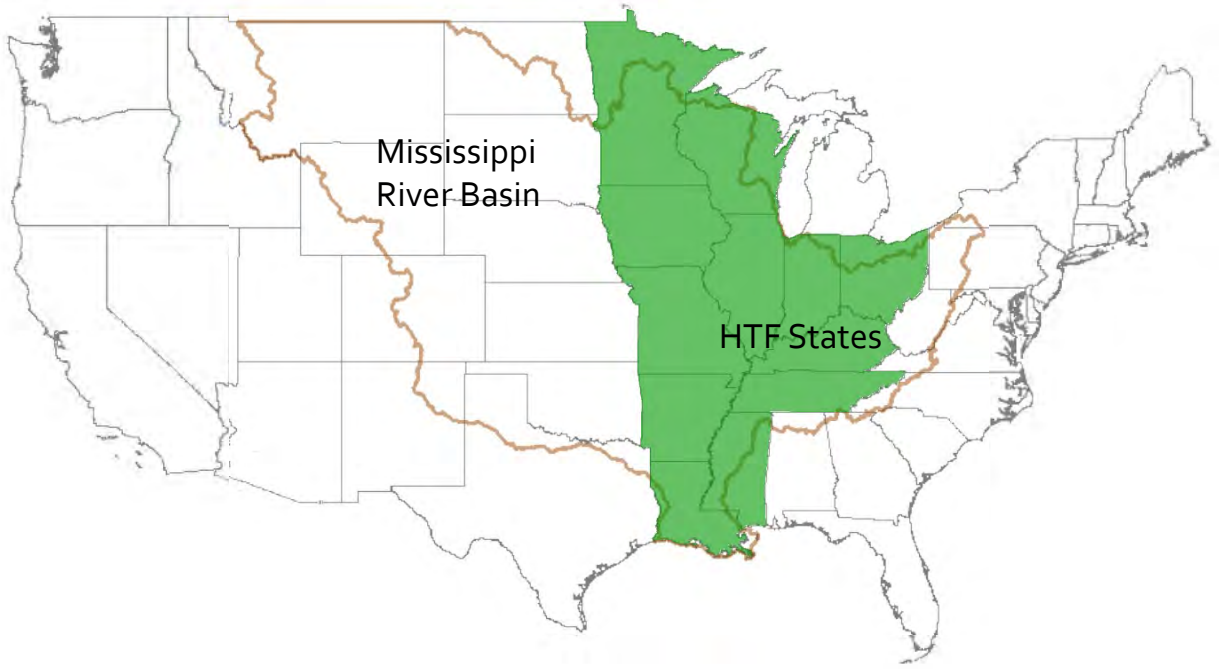
Hypoxia Task Force (cont.)

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 CWA 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 outlines approaches to ensure EJ and equity are incorporated into state NPS programs
- EPA is exploring opportunities to:
  - Support states as they weave equity into NPS Management Program Plans and watershed-based plans; and
  - Increase flexibilities to meet needs of disadvantaged communities
    - E.g., technical assistance for 319 application process in rural areas

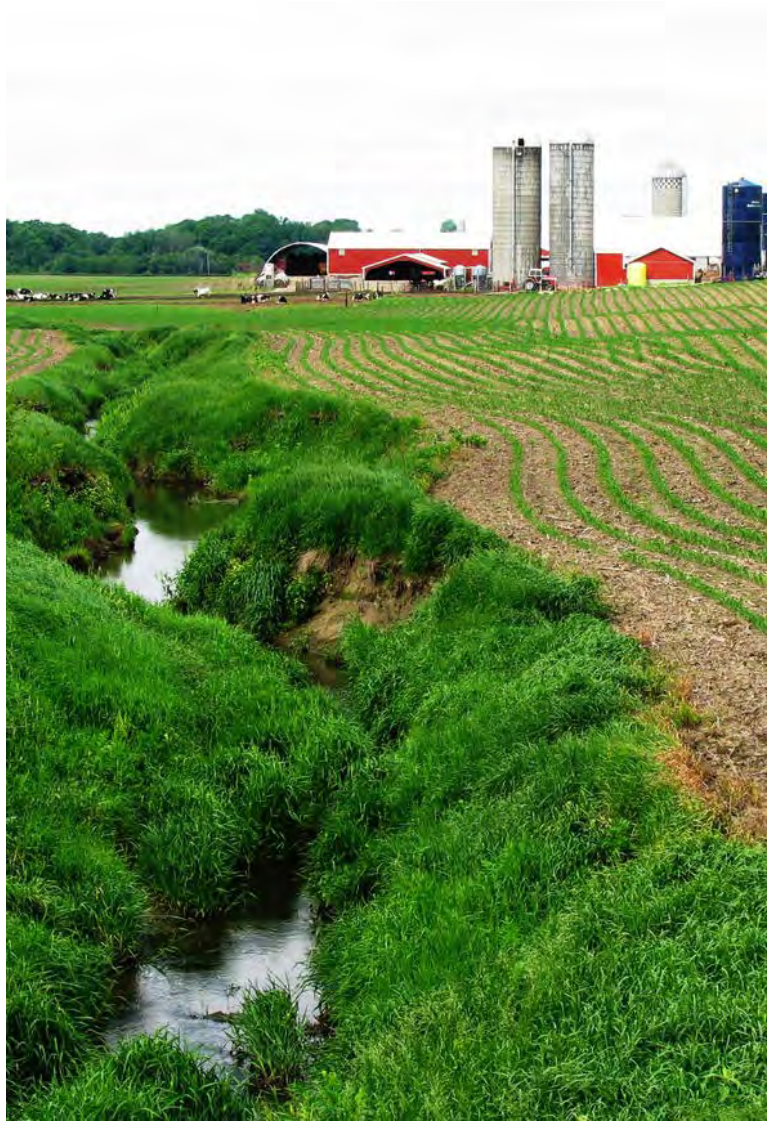
Natural Hazard Mitigation

- 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 released *Creating Co-Benefits Through Hazard Mitigation Planning and Water Resource Management* training resource

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.



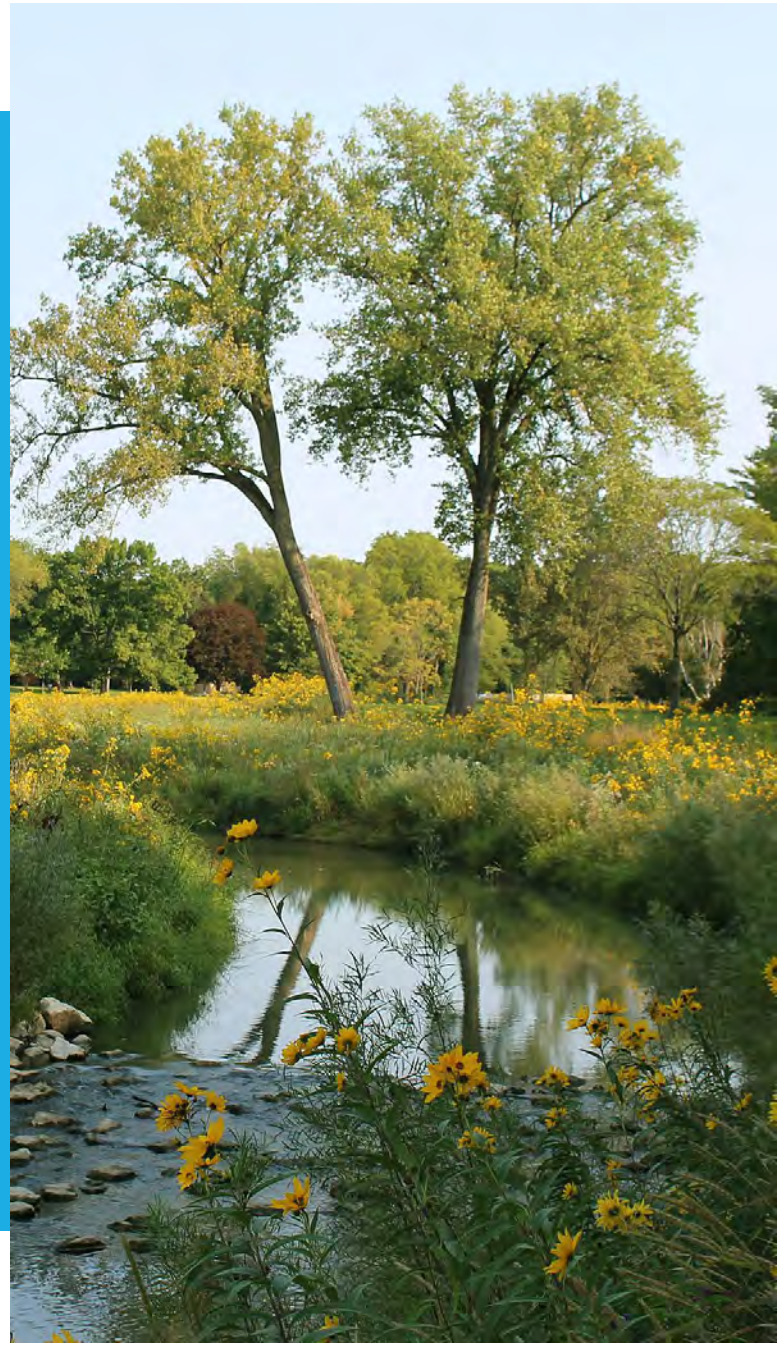
**Does not include Conservation Reserve Program*

EPA and the National Water Quality Initiative (NWQI)

Check out: *Planning and Implementing Agricultural Water Quality Projects Through the National Water Quality Initiative: a Practitioners Guide* (May 2021)

- A partnership between USDA NRCS, EPA, and state water quality/nonpoint source programs (since 2012)
- Goal: accelerate adoption of water quality focused conservation practices in high priority watersheds
- Leverages 319 funding and USDA Environmental Quality Incentive Program (EQIP) $ to maximize impacts in priority watersheds
  - Between FY21-22, $9,048,080 in 319 funding was invested in NWQI watersheds, which was matched by $7,464,989 in nonfederal funding*
- For FY24, sourcewater protection projects count towards required 3 waters/state/year.

*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 7-20-23.



FY21-22 NWQI Monitoring Data

- 41 states and Puerto Rico named 123 NWQI monitoring watersheds for FY22 and beyond
- Of the 61 waters with monitoring results, 31 waters or ≈51% in 14 states and showed improvement(s) for one or more NWQI pollutants
- Of those 31 waters that reported improvements, improvements in 19 (or 61%) were attributed to agricultural conservation practices
- Based on 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 as of 2022*

*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

- Aimed to identify existing enhanced efficiency fertilizers (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)
  - 90% of results completed (NH3 volatilization, yield, leaching). Waiting on the last soil to be tested for N2O.
  - Plan is to make announcements in late fall early winter on Stage 2 results (Greenhouse trials)

Field Trials:

- USDA/ARS in the process of planning potential field trials that may include some of these technologies
- The Foundation for Food & Agriculture Research has related activities under the Efficient Fertilizer Consortium (announced November 2022, https://foundationfar.org/news/ffar-announces-efficient-fertilizer-consortium/)

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?
- Share your thoughts on EPA's draft, revised NPS program guidelines during the public comment period

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Thank You!

Questions and Discussion