Mississippi River/Gulf of Mexico Hypoxia Task Force Newsletter

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Hypoxia Task Force Highlights

The 37th Hypoxia Task Force (HTF) Public Meeting will be held at 1:30-5 p.m. ET on December 14, 2022, in-person in Washington, D.C., with a virtual live-stream. The in-person meeting will be at the U.S. EPA Ruckelshaus Conference Center, 1201 Constitution Avenue, NW, Washington, DC. Meeting information and the agenda will be posted here as it becomes available.

State Activities

Kentucky Publishes Two New Hypoxia Task Force Success Stories

The Kentucky Division of Water is proud to highlight successful partnerships with the Kentucky Division of Conservation and the United States Department of Agriculture (USDA) Natural Resources Conservation Service through two new HTF success stories. Kentucky is also looking to solicit partner input on its draft Nutrient Reduction Strategy Update, which outlines progress made, ongoing initiatives, and an overarching framework to address nutrients from a variety of sources, more information is available at https://eec.ky.gov/nutrientreduction.

View Kentucky's new Stories in the HTF StoryMap

Environmental Review of Louisiana's Mid-Barataria Sediment Diversion Moves Forward

The Mid-Barataria Sediment Diversion is a first-of-its kind project and represents one of the largest and most innovative coastal restoration efforts ever undertaken not just in Louisiana, but nationally and globally. The project is designed to mimic the natural land building processes of the Mississippi River to sustainably restore and nourish thousands of acres of marsh in the Barataria Basin. Louisiana's coastal wetlands have the value-added benefit of assimilating and removing nutrients from the Mississippi River.

The Final Environmental Impact Statement (FEIS) was published by the U.S. Army Corps of Engineers on September 23, 2022, representing a major milestone in the project's environmental review process. The document, which was preceded by a Draft EIS, details the benefits and impacts of the project and includes the Louisiana Coastal Protection and Restoration Authority's updated mitigation plan with significant increased funding for these measures. Project permitting and funding decisions are anticipated later this year.

Read About the Project

Illinois Invests in Agricultural Conservation and Nutrient Management

In September, the Illinois Department of Agriculture (IDOA) announced a new Illinois Nutrient Loss Reduction Strategy (NLRS) and Conservation Planning Assistance grant agreement with USDA's Natural Resources Conservation Service (NRCS). The IDOA-NRCS partnership leverages $3.5 million in Illinois state NLRS funds with $9.8 million of NRCS federal funds to deliver over $13.3 million in new funding to support conservation planning and NLRS staffing and programming.

The partnership will bring up to 40 conservation planners across the state of Illinois who will be located at the Sangamon County Soil and Water Conservation District. The conservation planners will increase Conservation Reserve Program (CRP) technical assistance for planning, implementation, and maintenance, increase capacity to develop new conservation plans, and conduct implementation follow-up with farmers to improve conservation successes.

The conservation planners will also support the Illinois Nutrient Loss Reduction Strategy (NLRS) efforts. The **2021 bi-annual report** indicates an increase in overall nutrients being lost to Illinois streams and rivers. In addition, the new planners will be able to assist with IDOA conservation programs so that Illinois producers and landowners will have more opportunities to improve their nutrient management planning, advance soil health and contribute to the reduction in nutrient losses to Illinois streams, rivers, and lakes.

Read More

Ohio Renews CREP Agreement for the Scioto River Watershed

Since 2004, Ohio and USDA have supported a Scioto River Watershed Conservation Reserve Enhancement Program (CREP) to reduce sediment and nutrient loads and improve wildlife habitat and water quality. This partnership among USDA, State Conservation Agencies, and state and local conservation partners provides funding for conservation practices and maintenance on agricultural land where participants receive enhanced annual rental payments for 15 years.

This year, the Ohio's Department of Agriculture and Department of Natural Resources revised the Scioto River CREP with the USDA Farm Service Agency to meet current Farm Bill provisions and to offer new state-funded incentives to encourage new enrollees. Currently, 59,000 acres are enrolled with a goal of up to 70,000 acres in the watershed. Wetlands, riparian forest buffers, and grass filter strips are the primary conservation practices and under the updated agreement saturated buffers and drainage water management systems will be available to further reduce runoff and nutrients from entering streams.

CREP is 80% Federal and 20% State-funded (cash, in-kind contributions, or technical assistance) and for the Scioto River CREP, Ohio has committed funding and will provide additional payments to participants that enroll or re-enroll. Water quality incentive payments include a $1,500 per-acre payment for new wetland and riparian forest buffer practices and a $500 per-acre payment for new grass filter strips. Ohio will provide a $250 per acre water quality incentive payment to CREP participants that re-enroll and maintain wetlands and grass filter strip conservation practices. Staff training and program rollout is expected in mid-November.

Read About CREP

Federal Activities

USDA Increases Assistance and Encourages SMART Nutrient Management Planning

SMART Nutrient Management Planning helps farmers save money on fertilizer costs, which have increased significantly in the past year, with the added benefit of healthier soils, fewer greenhouse gas emissions, and cleaner water. Producers could save an average of nearly $30 per acre on fertilizer costs if they implemented a nutrient management plan. Nutrient management not only improves water quality, but also is an important part of climate-smart agriculture. Excess nutrients on the land can lead to nitrogen losses to the atmosphere. Nutrient management maximizes crop-nitrogen uptake and has a compelling and cost-effective role to play in mitigating greenhouse gas emissions from agriculture. The Inflation Reduction Act will deliver $19.5 billion in new conservation funding to support climate-smart agriculture, including for NRCS to improve opportunities for nutrient management. USDA recently announced it is targeting funding, increasing program flexibilities, launching a new outreach campaign to promote nutrient management's economic benefits, and expanding partnerships to develop nutrient management plans.

Read NRCS Chief Terry Cosby's Message

EPA sends Mississippi River Restoration and Resiliency Strategy to Congress

In response to Congressional direction in a report accompanying EPA's Fiscal Year 2021 Appropriation law, EPA has worked with federal partners, engaged with stakeholders, and developed a *Mississippi River Restoration and Resiliency Strategy* (MRRRS). The MRRRS inventories existing federal and state investments in the Mississippi River Basin, identifies gaps, and makes policy recommendations for improving water quality, restoring habitat and natural systems, improving navigation, eliminating aquatic invasive species, and building local resilience to natural disasters. Development of the strategy has facilitated enhanced communication between federal partners and stakeholders, promoted consideration of how climate change and equity and environmental justice concerns in the Basin could be addressed by federal programs, and serves as a point of departure for future coordinated actions to address a range of environmental, economic, and social concerns in this vital American waterway.

Read the Report

2022 Gulf of Mexico Hypoxic Zone is Below Average

Louisiana State University and Louisiana Universities Marine Consortium scientists said the Gulf of Mexico hypoxic zone was below average in this summer's NOAA-supported measurement cruise of the zone. The cruise took place from July 25 through August 1, finding that the hypoxic zone was approximately 3,275 square miles as compared to the average size of the zone for the past five years of 4,280 square miles. The scientists believe that below average summer discharge contributed to the smaller zone size. In June, NOAA had forecasted a hypoxic zone of 5,364 square miles using Mississippi River discharge and nutrient runoff data from the U.S. Geological Survey. While the cruise ended with a lower measurement, the results were still within the margin of uncertainty for the NOAA forecast. The HTF has set a goal of reducing the hypoxic zone to less than 1,900 square miles by 2035. To do this, the HTF works in coordination with partners, farmers, and

stakeholders to implement conservation and support nutrient reduction efforts in the Mississippi/ Atchafalaya River Basin.

Read More

EPA Updates the Compendium of Tools to Track Conservation

Remote sensing technologies, including satellite imagery and aerial photography, are increasingly being used to characterize and track crop areas, cover crops, riparian vegetation, and pasture-based practices for overall conservation system assessment and tracking. There are several available technologies (free and publicly available, commercial, and state specific) that can be used to track agricultural conservation in the United States. The document has recently been updated to reflect the most up-to-date HTF awareness of these technologies.

Access the Compendium

EPA Releases the Pollutant Load Estimation Tool

EPA's Clean Water Act (CWA) Section 319 Nonpoint Source Program has released a new web-based modeling tool for estimating nonpoint source pollutant loading in watersheds. The Pollutant Load Estimation Tool (PLET) provides a user-friendly web interface to create a customized model. It employs simple algorithms to calculate nutrient and sediment loads from different land uses and the load reductions that would result from the implementation of various conservation practices, including those for agricultural and urban areas.

The design for PLET was inspired by the need for a more accessible, efficient, and interactive version of the program's Spreadsheet Tool for Estimating Pollutant Loads (STEPL). It computes surface runoff; nutrient loads, including nitrogen, phosphorus, 5-day biological oxygen demand, and sediment delivery based on various land uses and management practices. The web-based tool means there is no need to download and install files to a local computer and PLET also provides greater integration with EPA's Grants Reporting and Tracking System (GRTS) for CWA Section 319 data tracking. A web browser and internet connection are the only requirements to access the tool.

Learn More and Access PLET

Resources

Join USDA Webinar on Addressing Water Quality Outcomes Through Nutrient and Water Management

Despite many successes from farmer-led conservation efforts documented in a March 2022 NRCS report, data revealed **national increases in subsurface nitrogen and soluble phosphorus lost to the environment** over a 10-year period. Agrichemical loss, a function of source and transport mechanisms, must be addressed with a two-pronged approach. This includes both nutrient and water management, especially as shifts in climate patterns complicate efforts to reduce agricultural nutrient sources. The NRCS recently highlighted ***SMART* nutrient management planning** which includes the 4Rs of nutrient stewardship (right Source, right Method, right Rate and right Timing) and emphasizes smart activities to reduce nutrient loss by assessment of comprehensive, site-specific conditions, recognizing that nutrient needs–as well as risks for nutrient losses–vary even within a field.

To learn more about the **CEAP Watersheds** science that supports this initiative, and **water quality outcomes** that can be achieved through SMART nutrient and water management strategies, tune in on October 27, 2022, at 1 p.m. ET, for a live, moderated NRCS Conservation Outcomes Webinar Series focused on **Achieving Water Quality Outcomes Through Nutrient and Water Management**.

USDA Ask the Expert Blogs Feature Conservation Outcomes

To raise awareness of the benefits of water quality conservation efforts, the NRCS highlighted conservation outcomes in interviews with three NRCS subject matter experts. In **Measuring Voluntary Conservation Outcomes Across the Nation's Croplands,** NRCS' Acting Conservation Effects Assessment Project (CEAP) Modeling Team Lead discusses the conservation practices and associated environmental outcomes between two farmer surveys: the first conducted from 2003 to 2006 (CEAP I), and the second from 2015 to 2016 (CEAP II). During August's National Water Quality month, the *Ask the Expert* blogs focused on NRCS efforts to protect and improve water quality. The blog also shares examples of CEAP findings and conservation insights in **Water Quality Outcomes of Voluntary Conservation** and, the NRCS National Water Quality and Quantity Leader discussed **Voluntary Edge-of-Field Water Quality Monitoring**.

Upper Mississippi River Restoration Releases Third Status and Trends Report

The Upper Mississippi River Restoration (UMRR) program published its third status and trends report, providing a clear and quantitative assessment of how the Upper Mississippi River ecosystem is doing, how we know that, and why it matters. This report presents an unprecedented, in-depth knowledge of any large river ecosystem in the world. The river is changing for a variety of reasons, but mostly because of changing hydrology and invasive species. The Upper Mississippi River System is a large and diverse ecosystem with many regional differences and changes in the river are occurring differently and at different rates within the Upper Mississippi River System. The results of this report were previewed to the HTF during its December 2021 meeting.

Learn More

STAR Program Summarizes Illinois Farmers' Conservation Efforts

Farmers in Illinois use the Saving Tomorrow's Agricultural Resources (STAR) tool to make significant conservation effort advancements; the STAR tool is an important engagement strategy in advancing Illinois' Nutrient Loss Reduction Strategy. The recently released ***Crop Year 2021 STAR Annual Report*** describes the impactful work of Illinois farmers after a year of virtual engagement and during a time of below average rainfall and above average temperatures. In 2021, the STAR tool was used by 472 farmers across 85,579 acres in Illinois. The most effective conservation practices include no-till, strip till, and cover crop implementation. Using these management methods helped Illinois farmers keep an estimated 73,692 tons of sediment out of waterways, retain an estimated 98,244 pounds of nutrients in fields, and provide climate benefits equivalent to the removal of 38,942 tonnes of greenhouse gas emissions from the atmosphere for one year.

The Illinois STAR program has also been successful in the re-establishment of in-person outreach efforts in 2021. Other states have also adopted STAR, including Iowa, Missouri, and Colorado.

Learn More

Illinois Corn and Soybean Growers Report Conservation Achievements

Illinois Precision Conservation Management (PCM), a conservation program supported by the Illinois Corn Growers Association and more than 30 organizations, recently released *The Business Case for Conservation: Cost-Benefit Analysis of Conservation Practices*, a 2015–2021 report that provides an overview of PCM's dataset sourced from over 12,000 Illinois agricultural fields and includes an analysis of the cost and environmental impact of various conservation practices. The conservation practices analyzed in PCM's report include various forms of nutrient management, tillage, and cover crop techniques employed on Illinois farms and provide estimated reduction of 578,550 pounds of nitrate-N, 84,040 pounds of phosphorus, and 124,875 tons of sediment. In their report, Illinois PCM noted the most profitable fields with high productivity soils used low/no till systems and used lower nitrogen fertilizer rates, with most being applied in the spring. The report also includes testimonials of farmers who have worked with PCM in developing and implementing management plans. The PCM program provides an important service in helping farmers identify the most cost-effective conservation practices while meeting production goals and water quality goals established in the Illinois Nutrient Loss Reduction Strategy.

Read the Report

Midwest Transforming Drainage Database Available

Transforming Drainage data from 39 research sites across the Midwest are now available for wider use. The data are available from the **National Agriculture Library Ag Data Commons** and at **https://drainagedata.org/**. **Site Summary documents** for each of the 39 sites are now available, that describe the drainage installation and layout, site data available in the database, and summarized research results. They also provide citations for published work that explains or uses the site data. This information provides important context for using the data and a clear and useful summary of the research at this site for multiple purposes.

Learn More

Visit the EPA Hypoxia Task Force Website

To learn more about the work of the Hypoxia Task Force, visit our website, which features recent reports and measurements, important documents, upcoming actions, and learning opportunities. The "In the Spotlight" section of the homepage provides a great introduction.

Check out the HTF Homepage

Sign Up for the HTF Newsletter

The *Mississippi River/Gulf of Mexico Hypoxia Task Force Newsletter* is a quarterly publication produced by EPA's Office of Water in partnership with the Hypoxia Task Force. The newsletter provides a snapshot of recent state activities, federal agency activities, publications, and resources.

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