2021 Virtual Hypoxia Task Force Meeting

Accomplishments and Next Steps

The Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (Hypoxia Task Force, HTF) is a partnership of 12 states, 5 federal agencies, and a tribal representative who work collaboratively to reduce the hypoxic zone in the northern Gulf of Mexico and improve water quality throughout the Mississippi and Atchafalaya River Basin (MARB). The HTF goal, subject to the availability of resources, is to reduce the 5-year average size of the hypoxic zone in the northern Gulf of Mexico to less than 5,000 square kilometers by 2035, with an interim target of reducing nitrogen and phosphorus loads delivered to the Gulf by 20 percent by 2025. The HTF met virtually on December 13-14, 2021 to hold a public meeting and two executive sessions; public meeting materials can be found here. This document summarizes the main outcomes of the meetings.

State Progress

The HTF and the public heard from Arkansas, Iowa, Minnesota, and Wisconsin on their work and ideas regarding implementation of their nutrient reduction strategies. Key findings from these presentations include:

Arkansas recently updated their Nutrient Reduction Strategy (ANRS), with defined nutrient-focus watersheds and assessments of total nitrogen and total phosphorus concentration trends from 1990 to 2019 at the Hydrologic Unit Code (HUC)-8 watershed level, about 700 square miles per watershed. The ANRS establishes priority-setting procedures and goals for watershed implementation including, for tier-1 watersheds, increase or maintain downward nutrient trends; for tier-2 watersheds, enhance water quality monitoring and increase or maintain downward nutrient trends; and for other watersheds, continue efforts to reduce nutrients.

Iowa discussed the state Water Quality Initiative and a commitment through 2039 to devote $15 million annually for nonpoint source pollution to advance the Iowa Nutrient Reduction Strategy (NRS). Federal programs that expand on this state work include the USDA Regional Conservation Partnership Program (RCPP), EPA Farmer to Farmer Program, and the American Rescue Plan Act (ARPA)-supported projects.

Minnesota provided an overview of the Agricultural Water Quality Certification Program (MAWQCP), which supports conservation implementation and training. Program outcomes after five years include 1,152 certified producers, 805,073 certified acres, 160 endorsements, MAWQCP-certified farms averaging 20% higher net income than non-certified farms, and better debt-to-asset and operating expense ratios. Random audits have shown 99% of farms remain in active certification status. Next steps include a water quality trading pilot program, farmers climate market guide, and MAWQCP bridge-payments to climate smart farms.

Wisconsin described their *Producer-led Watershed Protection Program* that, since 2016, has provided project funding to 34 producer groups that each reach 30 or more farmers. Projects involve farmer-to-farmer outreach, education, and research through groups that participate in

cost-share, demonstrations, and/or attending events. Through this work, a producer-led tracking project shows a 20% increase in no-till acres across 211 farms, with estimated reductions of 84,860 tons of soil erosion and 54,072 pounds of phosphorus, and a 20% increase in cover crops with estimated reductions of 75,364 tons of soil erosion and 41,492 pounds of phosphorus.

During Executive Session, all states provided brief overviews of their progress; updates from the eight states that did not report out in the public meeting are provided here:

Illinois recently published the Illinois Nutrient Loss Reduction Strategy 2021 Biennial Report, describing efforts to improve water quality by reducing nitrogen and phosphorus levels in Illinois lakes, streams, and rivers. The Report documents progress made to reduce nutrients from wastewater treatment plants and urban and agricultural runoff.

Through the **Indiana** Conservation Partnership (ICP), eight state agencies and organizations are working together to provide technical or financial assistance for implementing conservation projects. The 2020 Conservation Accomplishments report showed that landowners helped prevent over 1 million tons of sediment, 2.2 million pounds of nitrogen, and 1.1 million pounds of phosphorus from entering state waters. Cover crops were planted on 232,000 acres with ICP assistance, resulting in sequestration of more than 145,000 tons of carbon which equates to the emissions of more than 28,900 cars.

Kentucky used part of the recent EPA grants to develop a tool for farmers to use to identify and adopt water conservation practices and build a water quality management plan. Kentucky is supporting erosion and stormwater control practices while presenting options for incorporating climate change impacts, which may influence wet weather events.

Louisiana's Nutrient Reduction and Management Strategy involves state agencies and partners managing nutrients through meeting regulatory requirements and supporting incentive-based approaches. Statewide, there are over 450 ambient water quality monitoring sites, and BMP implementation is supported with key resources provided by the Farm Bill, state funding, and private sector partner support. The efforts of the HTF's NPS measures workgroup are appreciated to aid in tracking voluntary practices within the basin.

Mississippi is conducting an analysis to track success through time, using the same method as the HTF trends workgroup; this work includes performing statewide analyses of nutrient concentrations, yields, and loads, using a multilinear dataset. The state is also supporting data updates to the SPARROW model for Mississippi, with assistance from the U.S. Geological Survey (USGS).

Missouri has a dedicated sales tax for addressing soil and water conservation that provides approximately $50 million or more each year to fund BMP implementation. Missouri's watershed approach is used to assess impaired waters and supports restoration and protection plans (RAPs). In the last 10 years the Missouri Department of Natural Resources has assessed all 80 watersheds in the state and is nearing completion of the RAPs, which supports the state nutrient reduction strategy. Finally, the state is exploring how to promote perennial cover as part of the strategy.

Ohio's integrated, collaborative approach to reducing nutrient pollution and improving water quality, H2Ohio, is in its second year. Ohio is supporting wetlands in the landscape by providing $5 million for new projects in the MARB. The state is using dedicated HTF funds to accelerate

nine-element watershed plans through local coordinators and facilitating wastewater improvement. Forty percent of available agriculture lands are enrolled in program incentives with state support.

The **Tennessee** Nutrient Reduction Task Force (Task Force) is comprised of stakeholders and partners—including state agencies, local government agencies, universities, and nonprofit organizations—working to maintain and improve nutrient management in the state. The Task Force is developing the state's nutrient reduction framework by furthering its knowledge of underlying science, studying other state strategies, and leveraging available external resources. With EPA funding, the Tennessee Department of Environment and Conservation is conducting trend analyses of nitrogen and phosphorus in nutrient-impaired streams; developing multimedia approaches to reach stakeholders; promoting soil health partnerships to reduce nutrient runoff; and expanding wastewater plant optimization.

Three **Sub-Basin Committees** are members of the HTF Coordinating Committee, and they also provided updates and reports on their collaborative work. They are the Lower Mississippi River Sub-basin Committee, the Upper Mississippi River Basin Association (UMRBA), and the Ohio River Valley Water Sanitation Commission. These committees are advocates for the HTF action plan and state strategies, and facilitate education, outreach, and collaboration at all levels. The **Lower Mississippi River Sub-Basin Committee** provided a background on multi-state efforts. The **Upper Mississippi River Basin Association (UMBRA)** noted that they are finalizing a plan to improve knowledge and leverage state capacities to address nutrient losses. They will host a series of workshops over the next two years on implementing conservation practices that provide multiple benefits. The **Ohio River Valley Water Sanitation Commission (ORSANCO)** developed a 2020-2025 Plan for the Ohio River Basin, in cooperation with the U.S. Army Corps of Engineers and the Ohio River Basin Alliance, with goals of abundant clean water, healthy and productive ecosystems, education, flood risk management, and recreation. The Ohio River partners have also been active in nutrient trading, with 200,000 nitrogen and phosphorus credits generated through 2021.

Federal Agency Updates

EPA

Radhika Fox, EPA Assistant Administrator for the Office of Water and HTF federal Co-chair, provided an overview of EPA activities and introduced Bruno Pigott, Deputy Assistant Administrator, who will also engage with the HTF. EPA is implementing the Bipartisan Infrastructure Law (BIL), including $50 billion to address drinking water, storm water, and other water quality projects and the unprecedented opportunity to provide $60 million over five years to help HTF states implement the Gulf Hypoxia Action Plan and advance their state nutrient reduction strategies. EPA noted the Office of Water would soon release a nutrient strategy (released in April 2022).

U.S. Department of Agriculture

Farm Production and Conservation

USDA, through the BIL, will assist in upgrading aging wastewater and drinking water infrastructure and, through the Farm Bill, continues to support its priority watersheds programs such as the Mississippi River Basin Healthy Watersheds Initiative (MRBI) and the National

Water Quality Initiative (NWQI). USDA is also supporting the Regional Conservation Partnership Program and activities of the America the Beautiful initiative, which includes a commitment to preserve at least 30% of land, freshwater, and ocean resources by 2030 and develop an American Conservation and Stewardship Atlas.

Research, Education, and Economics

The USDA Research, Education, and Economics mission area offers support for HTF states through the services of thousands of scientists, researchers, and research staff through the Agricultural Research Service, the National Institute of Food and Agriculture, and the Economics Research Service. NIFA supports the Southern Extension & Research Activities Committee 46 (SERA-46), the Land Grant University collaborative that works to strengthen networks, conservation systems research, outreach, and monitoring/tracking progress to achieve the HTF goal.

National Oceanic and Atmospheric Administration

National Oceanic and Atmospheric Administration (NOAA) presented data on the 2021 hypoxic zone forecast, measured size, and retrospective model analysis as well as provided an update on emerging technologies for monitoring the size of the hypoxic zone in the Gulf. These technologies offer new options for understanding Gulf hypoxia, in addition to the annual cruise to measure the hypoxic zone. NOAA has also invested $2.7 million in research projects investigating the impacts of the Gulf hypoxia zone on living marine resources. Thus far, these projects have produced 20+ peer reviewed studies.

U.S. Department of Interior

USGS, a bureau within the U.S. Department of the Interior, provided an update on new tools that bring increased data and spatial resolution to efforts that reduce excess nutrients in surface water. The mobile-friendly and continuously updated National Water Dashboard provides a “one-stop” perspective of real-time hydrologic conditions and is presented with current weather and hazard data from partner agencies. Also underway is the USGS Next Generation Water Observing System (NGWOS), which will provide high-resolution, real-time data to support research, modeling, and assessment; the Illinois River Basin will be studied to inform other watersheds in the MARB on monitoring technology advancements.

Partner Updates

Basin Metrics

The National Great Rivers Research and Education Center, the Upper Mississippi River Basin Association and USGS, and the HTF Point Source and Water Quality Trends Workgroups all made presentations to the HTF on their work to track trends in basin metrics ranging across water quality, hydrology, habitat, point source reductions, and conservation practices. These efforts will all inform assessments of progress toward the HTF 2025 interim target to reduce nutrient loads by 20 percent, and the HTF’s 2035 goal for reducing the size of the Gulf hypoxic zone.

Mississippi River Cities & Towns Initiative

The Mississippi River Cities & Towns Initiative provided an update on a new partnership with Ducks Unlimited, Two Degrees Apart, and other partners to mitigate future, larger floods due to climate change while sequestering carbon and capturing 7.6 million pounds of nitrogen through conservation of 60,000 acres involving 30 cities through eight states.

Agricultural Nutrient Policy Council

The Agricultural Nutrient Policy Council (ANPC) recently published their report, *American Agriculture's State, Regional, and National Initiatives to Reduce Nutrient Losses in the Mississippi River Basin* to draw attention to the work of farmers across the MARB as states implement their nutrient reduction strategies and highlight the sustained efforts of the agricultural trade associations that support farmers. The report highlights recent initiatives in each of sixteen surveyed states.

Public Comments, Wrap-Up/Next Steps

The HTF heard comments from 13 members of the public and received a number of written materials as input; members of the public can reach out to the HTF at any time throughout the year by writing to OW-hypoxia@epa.gov or contacting any state regarding their nutrient reduction strategy.

The HTF Co-chairs thanked the Task Force members for their engagement, recognized state members for their efforts to implement their nutrient strategies and thanked federal agencies for supporting the states' efforts. The Co-chairs offered support to all the states and workgroups as they continue to make progress.