

Mississippi River/Gulf of Mexico Hypoxia Task Force Newsletter

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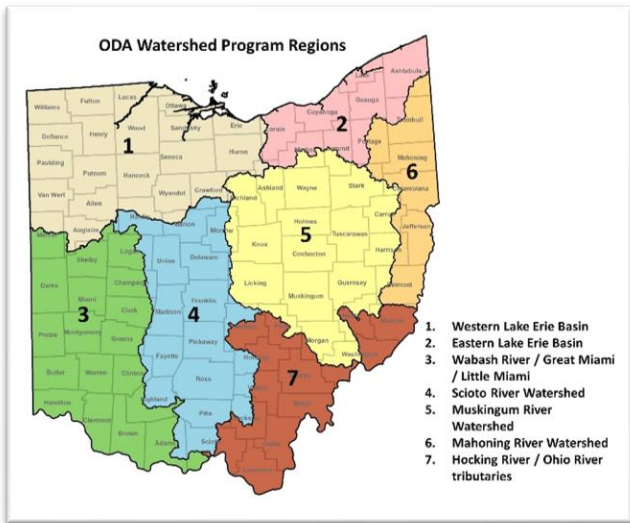
The Hypoxia Task Force recently released its [2019/2021 Report to Congress](#). The report describes progress made through activities directed by the Hypoxia Task Force toward attainment of the goals of the Gulf Hypoxia Action Plan 2008. This is the third Report to Congress since 2015.

The December 14, 2021 Virtual Hypoxia Task Force Meeting [Accomplishments and Next Steps](#) have been posted to the website.

State Activities

Newly Hired Watershed Managers Will Collaborate with Governor DeWine’s H2Ohio Initiative

Governor DeWine’s H2Ohio Initiative is getting a big boost with the hiring of seven watershed managers by the Ohio Department of Agriculture. The positions are part of a statewide watershed planning and management program, created through HB 7, which was passed by the 133rd General Assembly.



The program divides Ohio into seven watershed regions for which each watershed manager will facilitate a planning process with local Soil and Water Conservation Districts and other water quality stakeholders. The process will involve assessing the status of conservation activities, characterizing water quality, establishing priorities, and identifying appropriate H2Ohio Best Management Practices for implementation on farmland. Watershed managers will also lead efforts with partners to leverage additional funding to improve and protect each region's water quality.

Fully assembled as of January 3, 2022, the Ohio Department of Agriculture Watershed Management team has been busy engaging with and strengthening each region's network of water resource stakeholders in preparation for watershed plan development.

The Indiana Science Assessment will Support the State Nutrient Reduction Strategy

The Indiana State Nutrient Reduction Strategy has provided a foundation for nutrient reduction efforts across the Indiana Conservation Partnership (ICP) agencies and others and has enhanced collaboration in conservation implementation. To address scientific questions needed to move the Strategy forward, the Indiana Science Assessment is being developed and implemented, and is comprised of two main components. Component 1 focuses on determining water quality trends statewide and by major watershed basins used in the State Nutrient Reduction Strategy by inputting water quality data from USGS and IDEM monitoring stations into the USGS model known as the Weighted Regressions on Time, Discharge, and Season (WRTDS) model. Component 2 focuses on improving the current method used to quantify nutrient reductions from selected conservation practices, including dissolved nutrients, and determining efficiency of practices in reducing loads.

A Core Team of partners in the state are working together to provide overall guidance on the Science Assessment and include the Indiana State Department of Agriculture (ISDA), the Indiana Department of Environmental Management (IDEM), the USDA-Natural Resources Conservation Service (NRCS), the Indiana Chapter of The Nature Conservancy (TNC), the Indiana Agriculture Nutrient Alliance (IANA), and the Purdue University College of Agriculture. The assessment is also guided by a Science Committee consisting of experts from five academic institutions in Indiana and two federal science agencies (USDA-ARS and USGS) who conduct research related to nutrients and water quality in Indiana. The Science Committee provides scientific input and evaluation of the process. They meet regularly and have been very active, resulting in key decisions and consensus on strategies.

The Science Assessment involves showing water quality trend results, compiling relevant research for selected practices, analyzing the impact of key factors, and using the results to develop a tool to compile nutrient load reductions around the state.

[Read more](#)

Federal Activities

EPA Releases Policy Memorandum on Accelerating Nutrient Pollution Reductions in the Nation's Waters

On April 5, EPA Assistant Administrator and Hypoxia Task Force Federal Co-chair Radhika Fox released a new policy memorandum that reaffirms EPA's commitment to working across federal agencies, with states, tribes, and territories, and with farmers, ranchers, local water utilities, municipalities and industry to advance progress in reducing excess nutrients in our nation's waters.

To drive continued reductions in nutrient pollution, EPA will support innovation and pursue science-based and data-driven strategies. EPA will deepen collaborative partnerships with agriculture; redouble its efforts to support states, tribes, and territories to achieve nutrient pollution reductions from all sources; and utilize EPA's Clean Water Act authorities to drive progress, innovation, and collaboration. The unprecedented opportunities to invest in clean and safe water through the Bipartisan Infrastructure Law will support accelerated progress, including \$60 million in new support for the Hypoxia Task Force's Action Plan.

EPA also released a [Compendium of State and Regional NPDES Nutrient Permitting Approaches](#), a collection of state and regional practices, policies and procedures for reducing nutrient discharges from point sources. The agency also released a [Clean Water State Revolving Fund Best Practices Guide for Financing Nonpoint Source Solutions](#). This guide showcases innovative approaches that states have developed to use the nation's largest source of clean water funding to restore waters primarily impacted by nonpoint sources.

[Read more](#)

USDA Releases Report Showing Decades of Conservation Trends

In March 2022, the U.S. Department of Agriculture Natural Resources Conservation Service released the report *Conservation Practices on Cultivated Cropland: A Comparison of CEAP I and CEAP II Survey Data and Modeling*, which demonstrates progress made through voluntary conservation over a decade. The report, which will inform future conservation strategies, found significant gains for soil health and soil carbon storage, while also identifying areas needing additional and targeted nutrient management strategies.

"This latest CEAP report shows that farmers have done an outstanding job over the years in using innovative conservation strategies that help mitigate climate change," said NRCS Chief Terry Cosby, "But we have more work to do. Reports like this one help us better understand conservation approaches and make improvements to increase positive impacts. This report will help steer our conservation efforts well into the future to help us adapt to changing trends in production, climate and technology."

A few key findings from the report include the following: farmers increasingly adopted advanced technology; more efficient conservation tillage systems became the dominant form of tillage, improving soil health and reducing fuel use; and structural practices increased, largely in combination with conservation tillage, as farmers increasingly integrated conservation treatments to gain efficiencies. Learn more by downloading the full report or a 4-page summary of findings below.

[Access the report](#)

USDA Awards \$1.5 Million to Midwest Climate Hub, the Ohio State University, and Extension Partners to Promote Climate-Smart Agriculture

As part of an initiative to fund climate research and bolster connections between Extension and USDA's regional Climate Hubs, the Agriculture and Food Research Initiative awarded a \$1.5 million grant to increase Midwest adoption of climate-smart activities that are regionally scalable. Recipients of the grant include the Ohio State University, the Midwest Climate Hub, Central State University, Michigan State University, Purdue University, and the University of Wisconsin. The 3-year project, *Accelerating the Transition to Climate-Smart Strategies by Bolstering the Extension to Midwest Climate Hub Connection*, intends to develop roadmaps for livestock and cropping systems and to improve the shared understanding of diverse stakeholder needs. The project will also “elevate perspectives and voices of historically underserved communities including Black and Indigenous communities and strengthen climate science infrastructure through a re-imagined Extension-Midwest Climate Hub partnership.” Stay tuned for the project website, which is under development.

[Learn more](#)

Legacy Phosphorus National Assessment Information Added to USDA's Conservation Effects Assessment Project (CEAP) Website

USDA posted new webpages to share information about the new CEAP Legacy Phosphorus Assessment project, which features both field work and modeling research and assessments. The webpages include a brief description of why legacy sources of phosphorus are a conservation concern, where they can be found in the landscape, and what work will be conducted under the USDA five-year project co-led by the Natural Resource Conservation Service and the Agricultural Research Service. The phosphorus assessment draws on numerous sites and regions represented in the [CEAP Watersheds National Network](#). It also draws on and will enhance models developed and used in both CEAP Watersheds and CEAP Croplands Components. Also included are products from a December 2021 USDA Legacy Phosphorus Modeling Workshop, including presentation slides and video recordings provided by developers of major watershed models, workshop discussion group summaries, and one page with brief descriptions of how each model does or does not currently represent legacy phosphorus sources and processes.

[Visit the new website](#)

New USGS/EPA Study Highlights Some Success in Controlling Excess Nitrogen and Phosphorus in the Mississippi River Basin

A [new study](#) by the U.S. Geological Survey and EPA compared long-term nutrient loading near the mouth of the Mississippi River with changes in nutrient balances in the Mississippi River Basin to better understand drivers of water quality trends from 1975 to 2017. Decadal analysis of river nitrogen (N) loads showed that following a 46% increase between 1975 and 1985, there was a 22% decrease between 1985 and 1995, and then loads remained relatively constant from 1996 onward. For river phosphorus (P) loads, there was a decrease of less than 10% between 1975 and 1995. Then, after a 22% increase between 1995 and 2005, river P loads remained relatively constant. Nutrient balances—which were calculated as N and P inputs in the watershed (fertilizer, manure, waste-water treatment facilities, atmospheric deposition [N only], fixation [N only], and

weathering [P only]) minus outputs (crop uptake and removal in harvest, and emissions [N only])—were positive throughout the study period, but the rate of increase slowed from 1986 onward, indicating some success in controlling nutrients at the source. Annual nutrient balances and river loads were positively correlated between 1975 and 1985, but after, a disconnect between both the N and P balances and river loads emerged, and the subsequent river load patterns were different for N versus P. The study results showed that the surplus of nutrient inputs likely led to the accumulation of legacy nutrients in the watershed, which eventually influenced long-term changes in river loads. However, legacy nutrients were not the only factor which may have caused a disconnect between nutrient balances and river loads over time. The study also explored the influence of “latent” processes that could not be quantified directly due to limited data availability; these processes could potentially include changes in watershed buffering capacity, best management practices, tillage practices, tile drainage, and precipitation. In the case of N, unmeasured latent processes were just as important in explaining changes in river loads as changes in nutrient balances, and in the case of P, they were even more important. The study found that changes in both N balances in the watershed and latent processes increased N retention in the basin and reduced river N loads over time. In contrast, changes in P balances did not lead to a steady reduction in river P loads; rather, latent processes were more influential. The effect of these latent processes on river P loads changed over time—at first, latent processes had a positive effect on water quality by reducing river P loads, but from 1986 onward, latent processes were associated with reduced P retention in the watershed and increased P loads in the river.

[Read more](#)

Resources

EPA Releases Nonpoint Source Watershed Projects Data Explorer

EPA released an enhanced web mapping application to explore nonpoint source (NPS) watershed projects throughout the nation. The application contains information on the location of implemented NPS projects, how Section 319 grant funds are used, and progress toward meeting pollution reduction goals. Interested community members, local watershed partners, and other non-governmental stakeholders can use the Data Explorer to understand the work being done in their watersheds to restore and protect water quality. Enhanced features include a dynamic map with integrated reports that update based on the map view, data filters to narrow search criteria to focus results, and customizable reports for download. The application also allows for integrated watershed management, by integrating NPS program information with other EPA data systems, such as [How's My Waterway](#).

[Access the Explorer](#)

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](#)

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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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