

EPA Proposes Accelerating Nutrient Reductions

Alert

05.05.2022

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Recent action at the state and federal levels indicates more regulatory controls for phosphorous and nitrogen are coming soon.

The U.S. Environmental Protection Agency (EPA) issued a [Nutrient Reduction Memorandum](#) recently announcing the agency's intent to deepen partnerships with the U.S. Department of Agriculture (USDA), continue its work with states and tribes on nutrient reduction strategies, and use powers under the Clean Water Act (CWA) to address nutrient pollution. Relatedly, Missouri has already circulated a draft rule proposing phosphorus limits for individual discharge permits for all industrial dischargers with phosphorus in typical discharge as well as domestic point sources with a flow exceeding 1,000 gallons per day.

EPA's Nutrient Reduction Memorandum

After identifying impacts of nutrient pollution to recreational waters, drinking water, and aquatic ecosystems such as the "dead zone" in the Gulf of Mexico, EPA has been working with states for decades to develop water quality standards for nitrogen and phosphorus. This effort has been slow as states, especially Midwest states, attempt to reconcile nutrient regulations with significant agriculture uses, many of which are exempt from dredge and fill and non-point source requirements under the CWA. While specific tactics are still developing, EPA indicates it plans to use the following principles to guide efforts over the coming years:

1. Advancing equity and environmental justice
2. Building and fostering partnerships

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3. Following the science and investing in data-driven solutions
4. Supporting innovation

Environmental Justice

In addition to geographic areas of focus, EPA continues to focus on environmental justice in connection with nutrient effluents. EPA connects nutrient pollution and economic impacts to environmental justice communities and prioritizes support for small, rural and disadvantaged groups, especially where local resources are insufficient make nutrient reduction improvements.

Environmental Justice (EJ) is one of the five governing principles EPA names to guide its work to reduce nutrient pollution. The focus on EJ communities and water is consistent with other actions by the EPA. As an example, on March 8, 2022, [EPA announced](#) significant investment in drinking water with a focus on disadvantaged communities, including both urban and rural communities. In September 2021, EPA issued its Near-term Actions to Support Environmental Justice in the Nonpoint Source Program Memo, which will also be leveraged as part of EPA's prioritization of EJ areas for nutrient reductions.

Partnership with U.S. Department of Agriculture and Industry Stakeholders

In its Nutrient Reduction Memorandum, EPA commits to deepen its collaborative partnership with the USDA to expand the agencies' joint capacity to evaluate water quality impacts of USDA's investments under the Farm Bill and better understand the impacts from specific watersheds. EPA's goal is to provide better data to assist USDA in targeting funding to locations and practices that will result in the most significant nutrient reductions from agricultural sources, particularly in areas where agriculture is a major contributor to water quality concerns. EPA will also work with USDA to promote conservation practices to increase farm income and sustainability while improving watershed quality in agricultural areas.

Watershed Assessments and TMDLs

The memo describes EPA's efforts to encourage states and tribes to use a One Water approach to protect drinking water sources, as well as ecosystem health and other water quality benefits. EPA indicates it will actively support states in developing and implementing nutrient reduction strategies, including expanding the use of watershed tools to identify source areas, track the adoption of nutrient reduction practices, and provide data to quantify progress in nutrient reduction.

Specifically, EPA indicates it will use the CWA's assessment and listing process for waterbodies to support development of Total Maximum Daily Loads (TMDLs) for nutrient pollution in impaired watersheds and promulgate revised effluent limitation guidelines (ELGs) for specific industries with higher nutrient contributions. Both Kansas and Missouri have lists of applicable TMDLs, available here: [Kansas TMDLs](#) & [Missouri TMDLs](#). EPA also aims to increase the number of individual point source permits with nutrient

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limits and incentivize nutrient credit purchasing from industry and agriculture through collaboration.

EPA Rulemaking

Finally, the memo announces eventual rulemaking to authorize National Pollutant Discharge Elimination Systems (NPDES) permitting programs to include market-based approaches like water quality trading and third-party credit aggregation to meet applicable effluent limitations. EPA did not specify an expected date that it would begin the process of rulemaking.

What the memo lacks in concrete detail, EPA makes up for in promises of additional guidance for states related to EPA's existing authority of the CWA. EPA has already issued a similar [memo](#) related to EPA's expectation for the use of state revolving funds (SRFs) that will receive Infrastructure Law funds to address and mitigate nutrient pollution impacts in small, rural communities. The memo promises rulemaking to explicitly allow NPDES programs to include market-based approaches like water quality trading and third-party credit aggregation to meet applicable effluent limitations.

State Rulemaking

EPA expects its strategy will lead to a more robust adoption and implementation of numeric nutrient criteria in states and expanded numeric criteria to more bodies of water. Changes to regulations and permitting strategies in Missouri have already begun, as an example. Missouri already has a nutrient management plan and an established foundation for a water quality trading framework. However, Missouri's adopted numeric criteria for nitrogen, which only apply to lakes and reservoirs, could be expanded to include other water body types. Second, the Missouri Department of Natural Resources (MDNR) could be required to incorporate any industry-specific ELGs into the states regulations and individual permits. Third, Missouri could add a phosphorus limit. In fact, MDNR has started proposing phosphorus limits for permits in the renewal process and has informally circulated a draft rule that would add phosphorus limits on individual discharge permits for all industrial dischargers with phosphorus in typical discharge as well as domestic point sources with a flow exceeding 1,000 gallons per day. MDNR indicated it may issue a proposed phosphorous rule as soon as December 2022, which could be effective as early as August 2023 though as currently contemplated, the earliest compliance date is 2029.

Funding Innovative Approaches Under the Bipartisan Infrastructure Law

EPA states its intent to use funding sources under the recently enacted Bipartisan Infrastructure Law to accelerate progress for nutrient reduction under specific program where projects are already defined, such as the Chesapeake Bay program, the Gulf Hypoxia Task Force for the Mississippi River basin, and the National Estuary Program watersheds program. Significantly, the EPA's focus on the Mississippi River basin will likely impact all 15 states that border or contain the Mississippi and Missouri Rivers; as well as metropolitan areas in Kansas City, Omaha, Minneapolis, Jefferson City and St. Louis.

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What Next?

Planning ahead is key to managing compliance with new state and federal nutrient reduction requirements, including more stringent best management practices and effluent limitations. Successful planning includes becoming familiar with state nutrient plans to identify watersheds of highest concern, whether the receiving water body has been (or is proposed to be) listed a 303(d) list for nutrients or whether a TMDL exists or is currently under development. In Region 7, that includes the Missouri Department of Natural Resources' [Nutrient Loss Reduction Strategy](#), the Kansas's Department of Health and Environment's [Surface Water Nutrient Reduction Plan](#), the Iowa Department of Natural Resources' [Nutrient Reduction Strategy](#), and the Nebraska Nutrient Management Plan. Engaging with the agencies during their respective rulemakings, 303(d) listing and TMDL processes prior to permitting will help entities develop feasible permit conditions. Finally, becoming informed of potential infrastructure funding sources under the Bipartisan Infrastructure Law may help offset economic impacts of costly nutrient reduction requirements moving forward.

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