UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
WATER

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Dear Mr. Reuther and Mr. Ettinger:

We have reviewed and considered your letter to Administrator Jackson from April 11, 2011, and your Petition on behalf of thirteen organizations from July 30, 2008. This letter constitutes the U.S. Environmental Protection Agency's (EPA) response to your letter and Petition. While the EPA is in agreement with many of your environmental concerns, we are denying the petition for the reasons explained below. We do not believe that the comprehensive use of federal rulemaking authority is the most effective or practical means of addressing these concerns at this time.

You request that the EPA conduct rulemaking to: (1) develop and promulgate numeric water quality standards[1] for nutrients (i.e., nitrogen, phosphorus, chlorophyll *a* and turbidity) for all navigable waters in all 50 states where such criteria do not already exist; (2) promulgate such criteria for the Mississippi-Atchafalaya River Basin (MARB) and the northern Gulf of Mexico (i.e., 31 states) in the alternative; and (3) promulgate the same numeric water quality standards for nutrients in the states along the mainstem of the Mississippi River and the northern Gulf of Mexico (i.e., 10 states) at a minimum. Your Petition also requests that the EPA establish total maximum daily loads (TMDLs) for nitrogen (N) and phosphorus (P) for: (1) the mainstem of the Mississippi River and every segment thereof; (2) the tributaries of the Mississippi River that do not meet the criteria the EPA establishes for N or P; (3) the portion of the contiguous zone within the Gulf of Mexico; and (4) the portion of the ocean that is within the coverage of the Clean Water Act (CWA) in the Gulf of Mexico.

The EPA agrees that N and P pollution presents a significant water quality problem facing our nation. N and P pollution in both fresh and marine systems can significantly impact aquatic life and long-term ecosystem health, diversity, and balance. More specifically, high N and P

[1] Wherever the Petition requests that numeric nutrient water quality "standards" be promulgated, EPA understood this to mean numeric nutrient criteria (NNC).

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loadings result in the increasing prevalence of harmful algal blooms, reduced spawning grounds and nursery habitats, fish kills, and oxygen-starved hypoxic or ''dead'' zones. Public health concerns related to N and P pollution include impaired surface and groundwater drinking water sources from high levels of nitrates, formation of disinfection byproducts in drinking water, and increased exposure of swimmers to toxic microbes such as cyanobacteria.[2,3] Lastly, degradation of water bodies from N and P pollution and eutrophication can result in economic consequences, such as increased costs for drinking water treatment, reduced property values for stream and lakefront areas, commercial fishery losses, and lost revenue from recreational fishing, boating trips, and other tourism-related businesses.

These concerns are nationwide in scope but have particular relevance to the Mississippi Basin, where nutrient loadings to the Mississippi River and its tributaries are both harming upstream water quality and contributing significantly to hypoxia (or the "dead zone") in the Gulf of Mexico. Your Petition correctly identifies the Gulf "dead zone" and upstream N and P pollution as issues of serious concern.

As the Agency has previously recognized, reducing N and P pollution is and should be a high priority for EPA's water programs. On March 16, 2011, EPA released a memorandum entitled "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions"[4] (Framework Memo). The Framework Memo synthesizes key principles that guide Agency technical assistance and collaboration with states and places a strong emphasis on working with states to achieve near-term reductions in nutrient loadings. The Framework Memo includes recommended elements of a State Nutrients Framework as a tool to guide ongoing collaboration between the EPA and states and among federal, state, and local partners in our joint effort to make progress on reducing N and P pollution. Development of numeric nutrient criteria is one aspect of this coordinated and comprehensive approach.

We are taking several actions to provide technical assistance to states in the MARB for the development of numeric nutrient criteria (NNC), including: (1) the analysis of state and national data sets for setting nutrient thresholds; (2) the use of new data analysis tools; and (3) reviews of the scientific defensibility of draft and proposed NNC. For example, Minnesota adopted numeric phosphorus, chlorophyll *a*, and Secchi depth criteria for all lakes statewide in 2008. The EPA worked closely with the State early in the process and during rulemaking by providing technical input to ensure that the criteria were scientifically defensible. In 2010, Wisconsin adopted numeric phosphorus criteria for rivers and lakes statewide and at the same time adopted NPDES rules for implementation of those phosphorus criteria. The EPA similarly worked closely with Wisconsin in providing both technical and programmatic guidance for the development of NNC for phosphorus, which the Agency recently approved, and for the development of NPDES implementation rules, which EPA is presently reviewing.

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[2] Villanueva, C.M. *et al.,* 2006. Bladder Cancer and Exposure to Water Disinfection By-Products through Ingestion, Bathing, Showering, and Swimming in Pools. *American Journal of Epidemiology* 165(2):148–156.

[3] USEPA. 2009. *What is in Our Drinking Water?.* United States Environmental Protection Agency, Office of Research and Development. *http:// www.epa.gov/extrmurl/research/process/ drinkingwater.html.* Accessed December 2009

[4] http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/memo_nitrogen_framework.pdf

The CWA and the EPA's implementing regulations at 40 CFR Part 131 require states and authorized tribes to designate the use(s) for waters within their jurisdiction, and to adopt water quality criteria to support and protect those uses. The EPA has provided to states and authorized tribes guidance, technical assistance, and publications of recommended criteria for pollutants, including N and P at the ecoregional level.[5] The EPA has also published a number of guidance documents outlining different approaches for developing NNC by waterbody type.[6] The EPA continues to be engaged and committed to providing the most current scientific information to strengthen the underlying rationale and defensibility of the criteria development process. Some of these efforts have included, but are not limited to: (1) the publication of an additional NNC development technical support document on use of stressor-response approaches;[7] (2) providing technical support to MARB states to develop NNC through N-STEPS[8] (Nutrient Scientific, Technical Exchange, Partnership and Support); (3) continuing to strengthen and communicate the science that supports NNC development to state water quality agencies and the public;[9] (4) consulting with the EPA's Science Advisory Board regarding scientific methods to develop numeric nutrient criteria;[10] and (5) engaging with state coalition efforts to advance NNC development.[11]

The EPA is also improving its tracking, accountability and transparency tools to measure state progress towards developing and adopting N and P criteria. The EPA has established three new measures addressing proposal and adoption of N and P criteria for states and territories for the following major waterbody types: (1) lakes and reservoirs (excluding the Great Lakes); (2) rivers and streams; and (3) estuaries.[12] The first two cumulative measures indicate state progress from year to year. Under the first measure, a state receives credit when it *adopts* an N or P criterion that covers an entire major waterbody type; the EPA must approve each criterion in order to receive the credit. Similarly, the second measure gives credit for each N or P criterion a state *proposes*[13] for each major water type. The third measure indicates whether a state is providing current and specific milestone information regarding N and P criteria adoption for three or more waterbody types. Complete details for these accountability measures are included within the EPA's *National Water Program Guidance.*[14]

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[5] http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/ecoregions/index.cfm

[6] http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/guidance_index.cfm

[7] http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/finalstressor2010.pdf

[8] http://n-steps.tetratech-ffx.com/

[9] http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/, http://n-steps.tetratech-ffx.com/

[10] http://yosemite.epa.gov/sab/sabproduct.nsf/95eac6037dbee075852573a00075f732/5972e2a88464d45e85257591006649d0!OpenDocument; http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/FL%20Estuaries%20TSD?OpenDocument

[11] http://www.gulfofmexicoalliance.org/index.php, http://www.neiwpcc.org/, http://www.orsanco.org/

[12] http://water.epa.gov/aboutow/goals_objectives/waterplan/def_wq11.cfm#WQ-1

[13] "*Proposed* (in WQ-1b) by states and territories means that a state or territorial agency has either (a) proposed and published the criteria for public comment, (b) formally provided the criteria for review to a legislative body, legislative committee, public commission, or similar body as part of a prescribed regulatory process, (c) recommended the criteria to a legislature, public commission, or agency responsible for promulgating standards under its own public process, or (d) otherwise issued the draft criteria to begin a similar public process. For federal promulgations, proposed means that EPA has issued a Federal Register notice of proposed rulemaking that seeks public comment."

[14] http://water.epa.gov/aboutow/goals_objectives/waterplan/def_wq11.cfm#WQ-1

In addition to working with upstream states in the MARB, EPA is playing a lead role in addressing Gulf Hypoxia. The EPA Administrator chairs the Gulf Coast Ecosystem Restoration Task Force. The Task Force was created by President Obama through Executive Order 13554, is comprised of five Gulf states and 11 federal organizations, and is charged with developing a restoration strategy that proposes a Gulf Coast ecosystem restoration agenda that could potentially address a range of priority water quality issues, including Gulf Hypoxia. The EPA also co-chairs the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (Gulf Hypoxia Task Force), which is comprised of 17 state and federal agencies. The Gulf Hypoxia Task Force provides a forum for state water quality and agriculture agencies to partner on local, state, and regional efforts to mitigate nutrient loading, encouraging a holistic approach that takes into account upstream sources and downstream impacts. The federal agency partners on the Task Force are providing coordinated support as states move forward to develop nutrient reduction strategies/state frameworks for managing N and P pollution in the MARB.

Finally, the EPA continues to work with USDA and USGS to focus on achieving water quality goals throughout the Mississippi River watershed and in the Gulf of Mexico. These federal agencies are collectively working to coordinate implementation of projects funded under the USDA Natural Resource Conservation Service's "Mississippi River Basin Initiative" (MRBI) with the goals and implementation strategies of CWA section 319 watershed plans, TMDLs, and other relevant state plans. The EPA, USDA, and USGS are also targeting monitoring investments to best assess water quality trends and demonstrate water quality improvements. Examples of watersheds where the EPA and USDA are coordinating with local groups to reduce nitrogen and phosphorus loadings are the Root River Watershed in Minnesota and the Wabash River Watershed in Ohio and Indiana. Stewardship initiatives in these areas are coordinating across multiple USDA agencies, state agencies, the EPA, and other stakeholders to target implementation of suites of best management practices to achieve significant reductions in N and P pollution.

The EPA believes that the most effective and sustainable way to address widespread and pervasive nutrient pollution in the MARB and elsewhere is to build on these efforts and work cooperatively with states and tribes to strengthen nutrient management programs. This approach, in the Agency's judgment, is preferable to undertaking an unprecedented and complex set of rulemakings to promulgate federal NNC for a large region (or even the entire country). The development of NNC for 50, 31 or 10 states at one time would be highly resource and time intensive and involve the EPA staff across the entire Agency, as well as support from technical experts outside the Agency. The Agency would need to develop a technical record for each affected state, a task of substantial magnitude in light of the need for thorough review and analysis of state water quality data and the frequency and severity of nutrient-related impacts. Completing the rulemaking process would pose a daunting management challenge given the complexity of the technical issues, large volume of comments from stakeholders and local governments, and the need for the Agency to respond to the array of comments filed. Following rulemaking, implementation of federal standards simultaneously in multiple states would likewise place sizable regulatory and oversight burdens on the EPA, as well as affected states. Therefore, the Agency believes that the use of its rulemaking authority, especially in light of the sweeping scope of the Petition, is not a practical or efficient way to address nutrients at a national or regional scale.

That is not to say that the EPA's authority to promulgate federal NNC is not a useful tool that may have a role to play in nutrient management initiatives. The EPA has used this authority in one recent instance (Florida) to develop federal NNC and retains its discretion to use it elsewhere, as appropriate. However, long-standing policy, consistent with the CWA, has been that states should develop and adopt standards in the first instance, with the EPA using its own rulemaking authority only in cases where it disapproves a new or revised standard, or affirmatively determines that new or revised standards are needed to meet CWA requirements. While the EPA may at some future time use its authority in response to specific circumstances, the EPA's current approach, consistent with the CWA and Agency policy, is to address N and P pollution and accelerate state adoption of NNC by working in partnership with states and stakeholders to reduce nutrient loadings from both point and non-point sources.

The petition also asks that the EPA take the significant step of establishing *federal* N and P TMDLs for the entire Mississippi River mainstem, all the mainstem's impaired tributaries, and certain portions of the Gulf of Mexico. Generally, the development of lists of impaired waters and TMDLs, and the submission of those lists and TMDLs to EPA for review and approval, is the responsibility of the states. CWA section 303(d); 40 CFR section 130.7(b) (1); 40 CFR section 130.7(c) (1); 40 CFR section 130.7(d). As is the case with water quality standards, the EPA has broad discretion regarding coordination and oversight of state development of impaired waters lists and TMDLs. For the MARB waters at issue, the EPA believes that the best use of its resources and personnel is to provide national technical and policy guidance regarding impaired waters listing and TMDL development associated with nutrient pollution, working in partnership with states and stakeholders at both the national and Regional level to reduce nutrient loadings from both point and non-point sources.

The 31 MARB states have been quite active in addressing their CWA section 303(d) listing and TMDL responsibilities for nutrient-impaired waters. Of the 71,000 303(d) List impairments nationally, 15,305 (21%) can be categorized as nutrient-related.[15] The 31 MARB states have listed over 10,000 nutrient-related impairments throughout the MARB. Of the 44,400 TMDLs nationally, 8,009 (19%) can be categorized as nutrient-related. All of the 31 MARB states have developed TMDLs to address nutrient-related causes of impairment. Over 5,000 nutrient-related TMDLs have been completed throughout the 31 MARB states at levels necessary to attain and maintain the applicable narrative and numeric water quality standards. Of these approximately 5,000 TMDLs, the 31 MARB states developed over 4,400 nutrient-related TMDLs, and the EPA established 682 nutrient-related TMDLs. There are likely many waters in the MARB that have yet to be assessed by the states for nutrient impairment. The EPA believes that collaborative national technical and policy support to listing and TMDL development, along with targeted state and regional efforts, is a more sustainable and likely successful approach in achieving nutrient reductions in the near and longer term than the EPA unilaterally developing impaired waters lists and TMDLs for multiple states at one time.

[15] Note that "nutrient-related" is defined as including the following parent impairment categories in EPA's Assessment, TMDL Tracking and Implementation System (http://www.epa.gov/waters/ir/): nutrients, organic enrichment/oxygen depletion, noxious plants, algal growth, and ammonia. Database accessed on March 29, 2011.

For the above reasons, and after careful consideration of the issues you raised and actions you requested, the EPA is hereby denying the Petition. In taking this action, the EPA is not determining that NNC are not necessary to meet CWA requirements with respect to the waters you identified. Rather, in this petition response, EPA is exercising its discretion to allocate its resources in a manner that supports targeted regional and state activities to accomplish our mutual goals of reducing N and P pollution and accelerating the development and adoption of state approaches to controlling N and P.[16]

The EPA agrees that N and P pollution is a significant water quality problem in the MARB and northern Gulf of Mexico. The EPA also recognizes that nutrient over-enrichment and eutrophication is a national problem that requires state action with strong technical support and oversight from the EPA. As an important national priority, the EPA is strongly committed to working in partnership with other federal agencies, state and local agencies, and other stakeholders in promoting the development and adoption of effective nutrient controls and developing TMDLs where they are needed. The EPA will periodically assess progress and, as provided in the Framework Memo, is not foreclosing the possibility that there may be circumstances where, despite the best efforts of all, Agency action may be appropriate and the EPA could exercise its CWA section 303(c)(4)(B) authority.

Sincerely,

Michael H. Shapiro
Deputy Assistant Administrator

[16] EPA lacks clear legal authority to promulgate NNC for the contiguous zone of U.S. coastal waters, i.e., the portion of the Gulf of Mexico beyond the territorial sea, which is requested in the Petition. These waters are not considered navigable waters or Waters of the U.S. under CWA sections 303(c) and 502.