January 22, 2020

The Honorable John Barrasso, Chairman, and the Honorable Thomas R. Carper, Ranking Member
US Senate Committee on Environment & Public Works

Dear Chairman Barrasso and Ranking Member Carper,


Members of the Mississippi River Collaborative (MRC) thank you for holding the January 8 hearing to discuss state perspectives of Clean Water Act (CWA) Section 319 funding, and we ask that you add this letter to the hearing record.

Central to MRC’s mission is to reduce nitrogen and phosphorus pollution in the Mississippi River. Much of this work regards nonpoint source (NPS) pollution, so we would like to submit the following comments and recommendations to your Committee.

Section 319 of the CWA was designed to provide states with funds to reduce water pollution from nonpoint sources, i.e., unpermitted pollution. It has resulted in a number of great success stories, but it can also be improved. As you consider changes to Section 319 funding, we ask you to keep the following points in mind.

**Numeric limits for nitrogen and phosphorus.**

As stated in testimony, federal oversight is a key component to the success of any NPS pollution management program. Without EPA using the regulatory power it has over point sources and state implementation of the Clean Water Act, states are limited in what they can accomplish regarding NPS pollution.

In 2011, EPA sent to Regional Administrators a memo called “Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions,” (Attachment 1) that stated the following:

“It has long been EPA’s position that numeric nutrient criteria...are ultimately necessary for effective state programs.”

and

“...numeric standards will facilitate more effective program implementation and are more efficient than site-specific application of narrative water quality standards.”

Yet to date EPA has not established these numeric criteria.

Not only that, but the memo included guidance on eight “Recommended Elements of a State Framework for Managing Nitrogen and Phosphorus,” yet it has done nothing to hold regions or states accountable
Nitrogen and phosphorus are the most important pollutants to consider regarding NPS pollution. If EPA were to establish numeric limits for nitrogen and phosphorus, states would have a clear and specific goal to attain. Science and technology have advanced to a point where reasonable numeric limits for nitrogen and phosphorus are not only attainable, but absolutely vital to holding states accountable for NPS reductions. With numeric limits, states have measurable goals to reach and the federal backing to do so. Recent studies regarding nitrate toxicity and the effects of cyanobacteria fueled by phosphorus pollution make it imperative as a matter of both public health and the environment that these pollutants be brought under control.

Animal feeding operations.
It was encouraging to hear the legislators and witnesses repeatedly mention harmful algal blooms as a dangerous byproduct of NPS pollution, but we urge this Committee to look closer at the causes of those algal blooms. In many cases, they occur near large concentrations of animal feeding operations (AFOs), which were not discussed in testimony, but which are inarguably one of the largest contributors to NPS pollution.

There has been exponential and largely unchecked growth of corporate-run livestock facilities – many unpermitted – in most states, leading to serious challenges in NPS pollution reduction. As stated by one member, there are 400 chickens to every one person in Delaware. Until there are stricter federal regulations on animal feeding operations (specifically the management of animal waste), Section 319 funding will continue in large part to be used to treat the symptoms, not the cause.

State allotment of 319 funding.
State management of 319 funding was touted more than once as ideal to providing the flexibility for states to manage their own unique problems. However, there is a significant downside to the current method of allotment: accountability. State legislators and administrators are under backbreaking pressure from industry lobbyists to keep laws and regulations regarding NPS pollution as lax as possible. This leads to uneven and inadequate rulemaking and enforcement in too many states.

There was some discussion regarding what factors should be weighed if or when a new formula for allotment of 319 funds to states is proposed. This discussion overlooked a major consideration: efficacy. Though witnesses spoke of the key importance of data and performance measures, there was no mention of awarding states funds based on the success of its approved programs or projects. Competition for funds based on program efficacy would not be a bad thing.

In addition, the number and dollar value of applications for 319 funding within states should be considered. In some states, there may be valuable projects that go unfunded while another state spends its allotment on less valuable projects simply because it has more funds and fewer applicants.
January 22, 2020
MRC to EPW
RE: Nonpoint Source Management under Section 319

With the above points in mind, MRC proposes the following:

1. This Committee should recommend to EPA that it implement numeric limits for nitrogen and phosphorus to give states the power they need to effectively combat NPS pollution.
2. This Committee should recommend to EPA that it enhance regulations for waste management at animal feeding operations.
3. This Committee should initiate a study on the allotment and use of Section 319 funds in all states and make recommendations to increase the efficacy of program spending.

MRC members would welcome the opportunity to speak directly to this Committee in more detail on these matters and we make ourselves available for further written or oral testimony. You may contact me at your convenience at kathy@tcwn.org or 865-208-0792.

Thank you.

Kathy Hawes, Coordinator
Mississippi River Collaborative

for

Albert Ettinger, Counsel to Mississippi River Collaborative
Environmental Law & Policy Center (Chicago, IL)
Harpeth Conservancy (Nashville, TN)
Healthy Gulf (New Orleans, LA)
Iowa Environmental Council (Des Moines, IA)
Tennessee Clean Water Network (Knoxville, TN)
MEMORANDUM

SUBJECT: Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions

FROM: Nancy K. Stoner
Acting Assistant Administrator

TO: Regional Administrators, Regions 1-10

This memorandum reaffirms EPA’s commitment to partnering with states and collaborating with stakeholders to make greater progress in accelerating the reduction of nitrogen and phosphorus loadings to our nation’s waters. The memorandum synthesizes key principles that are guiding and that have guided Agency technical assistance and collaboration with states and urges the Regions to place new emphasis on working with states to achieve near-term reductions in nutrient loadings.

Over the last 50 years, as you know, the amount of nitrogen and phosphorus pollution entering our waters has escalated dramatically. The degradation of drinking and environmental water quality associated with excess levels of nitrogen and phosphorus in our nation’s water has been studied and documented extensively, including in a recent joint report by a Task Group of senior state and EPA water quality and drinking water officials and managers. As the Task Group report outlines, with U.S. population growth, nitrogen and phosphorus pollution from urban stormwater runoff, municipal wastewater discharges, air deposition, and agricultural livestock activities and row crop runoff is expected to grow as well. Nitrogen and phosphorus pollution has the potential to become one of the costliest and the most challenging environmental problems we face. A few examples of this trend include the following:

1) 50 percent of U.S. streams have medium to high levels of nitrogen and phosphorus.
2) 78 percent of assessed coastal waters exhibit eutrophication.
3) Nitrate drinking water violations have doubled in eight years.

1 An Urgent Call to Action: Report of the State-EPA Nutrients Innovations Task Group, August 2009.
4) A 2010 USGS report on nutrients in ground and surface water reported that nitrates exceeded background concentrations in 64% of shallow monitoring wells in agriculture and urban areas, and exceeded EPA's Maximum Contaminant Levels for nitrates in 7% or 2,388 of sampled domestic wells.²

5) Algal blooms are steadily on the rise; related toxins have potentially serious health and ecological effects.

States, EPA and stakeholders, working in partnership, must make greater progress in accelerating the reduction of nitrogen and phosphorus loadings to our nation’s waters. While EPA has a number of regulatory tools at its disposal, our resources can best be employed by catalyzing and supporting action by states that want to protect their waters from nitrogen and phosphorus pollution. Where states are willing to step forward, we can most effectively encourage progress through on-the-ground technical assistance and dialogue with state officials and stakeholders, coupled with cooperative efforts with agencies like USDA with expertise and financial resources to spur improvement in best practices by agriculture and other important sectors.

States need room to innovate and respond to local water quality needs, so a one-size-fits-all solution to nitrogen and phosphorus pollution is neither desirable nor necessary. Nonetheless, our prior work with states points toward a framework of key elements that state programs should incorporate to maximize progress. Thus, the Office of Water is providing the attached “Recommended Elements of a State Nutrients Framework” as a tool to guide ongoing collaboration between EPA Regions and states in their joint effort to make progress on reducing nitrogen and phosphorus pollution. I am asking that each Region use this framework as the basis for discussions with interested and willing states. The goal of these discussions should be to tailor the framework to particular state circumstances, taking into account existing tools and innovative approaches, available resources, and the need to engage all sectors and parties in order to achieve effective and sustained progress.

While the Framework recognizes the need to provide flexibility in key areas, EPA believes that certain minimum building blocks are necessary for effective programs to manage nitrogen and phosphorus pollution. Of most importance is prioritizing watersheds on a state-wide basis, setting load-reduction goals for these watersheds based on available water quality information, and then reducing loadings through a combination of strengthened permits for point-sources and reduction measures for nonpoint sources and other point sources of stormwater not designated for regulation. Our experience in almost 40 years of Clean Water Act implementation demonstrates that motivated states, using tools available under federal and state law and relying on good science and local expertise, can mobilize local governments and stakeholders to achieve significant results.

It has long been EPA’s position that numeric nutrient criteria targeted at different categories of water bodies and informed by scientific understanding of the relationship between nutrient loadings and water quality impairment are ultimately necessary for effective state

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programs. Our support for numeric standards has been expressed on several occasions, including a June 1998 National Strategy for Development of Regional Nutrient Criteria, a November 2001 national action plan for the development and establishment of numeric nutrient criteria, and a May 2007 memo from the Assistant Administrator for Water calling for accelerated progress towards the development of numeric nutrient water quality standards. As explained in that memo, numeric standards will facilitate more effective program implementation and are more efficient than site-specific application of narrative water quality standards. We believe that a substantial body of scientific data, augmented by state-specific water quality information, can be brought to bear to develop such criteria in a technically sound and cost-effective manner.

EPA’s focus for nonpoint runoff of nitrogen and phosphorus pollution is on promoting proven land stewardship practices that improve water quality. EPA recognizes that the best approaches will entail States, federal agencies, conservation districts, private landowners and other stakeholders working collaboratively to develop watershed-scale plans that target the most effective practices to the acres that need it most. In addition, our efforts promote innovative approaches to accelerate implementation of agricultural practices, including through targeted stewardship incentives, certainty agreements for producers that adopt a suite of practices, and nutrient credit trading markets. We encourage federal and state agencies to work with NGOs and private sector partners to leverage resources and target those resources where they will yield the greatest outcomes. We should actively apply approaches that are succeeding in watersheds across the country.

USDA and State Departments of Agriculture are vital partners in this effort. If we are to make real progress, it is imperative that EPA and USDA continue to work together but also strengthen and broaden partnerships at both the national and state level. The key elements to success in BMP implementation continue to be sound watershed and on-farm conservation planning, sound technical assistance, appropriate and targeted financial assistance and effective monitoring. Important opportunities for collaboration include EPA monitoring support for USDA’s Mississippi River Basin Initiative as well as broader efforts to use EPA section 319 funds (and other funds, as available) in coordination with USDA programs to engage creatively in work with communities and watersheds to achieve improvements in water quality.

Accordingly the attached framework envisions that as states develop numeric nutrient criteria and related schedules, they will also develop watershed scale plans for targeting adoption of the most effective agricultural practices and other appropriate loading reduction measures in areas where they are most needed. The timetable reflected in a State’s criteria development schedule can be a flexible one provided the state is making meaningful near-term reductions in nutrient loadings to state waters while numeric criteria are being developed.

The attached framework is offered as a planning tool, intended to initiate conversation with states, tribes, other partners and stakeholders on how best to proceed to achieve near- and long-term reductions in nitrogen and phosphorus pollution in our nation’s waters. We hope that the framework will encourage development and implementation of effective state strategies for managing nitrogen and phosphorus pollution. EPA will support states that follow the framework but, at the same time, will retain all its authorities under the Clean Water Act.
With your hard work, in partnership with the states, USDA and other partners and stakeholders, I am confident we can make meaningful and measurable near-term reductions in nitrogen and phosphorus pollution. As part of an ongoing collaborative process, I look forward to receiving feedback from each Region, interested states and tribes, and stakeholders.

Attachment

Cc: Directors, State Water Programs
    Directors, Great Water Body Programs
    Directors, Authorized Tribal Water Quality Standards Programs
    Interstate Water Pollution Control Administrators
Recommended Elements of a State Framework for Managing Nitrogen and Phosphorus Pollution

1. Prioritize watersheds on a statewide basis for nitrogen and phosphorus loading reductions
   A. Use best available information to estimate Nitrogen (N) & Phosphorus (P) loadings delivered to rivers, streams, lakes, reservoirs, etc. in all major watersheds across the state on a Hydrologic Unit Code (HUC) 8 watershed scale or smaller watershed (or a comparable basis.)
   B. Identify major watersheds that individually or collectively account for a substantial portion of loads (e.g. 80 percent) delivered from urban and/or agriculture sources to waters in a state or directly delivered to multi-jurisdictional waters.
   C. Within each major watershed that has been identified as accounting for the substantial portion of the load, identify targeted/priority sub-watersheds on a HUC 12 or similar scale to implement targeted N & P load reduction activities. Prioritization of sub-watersheds should reflect an evaluation of receiving water problems, public and private drinking water supply impacts, N & P loadings, opportunity to address high-risk N & P problems, or other related factors.

2. Set watershed load reduction goals based upon best available information
   Establish numeric goals for loading reductions for each targeted/priority sub-watershed (HUC 12 or similar scale) that will collectively reduce the majority of N & P loads from the HUC 8 major watersheds. Goals should be based upon best available physical, chemical, biological, and treatment/control information from local, state, and federal monitoring, guidance, and assistance activities including implementation of agriculture conservation practices, source water assessment evaluations, watershed planning activities, water quality assessment activities, Total Maximum Daily Loads (TMDL) implementation, and National Pollutant Discharge Elimination System (NPDES) permitting reviews.

3. Ensure effectiveness of point source permits in targeted/priority sub-watersheds for:
   A. Municipal and Industrial Wastewater Treatment Facilities that contribute to significant measurable N & P loadings;
   B. All Concentrated Animal Feeding Operations (CAFOs) that discharge or propose to discharge; and/or
   C. Urban Stormwater sources that discharge into N & P- impaired waters or are otherwise identified as a significant source.

4. Agricultural Areas
   In partnership with Federal and State Agricultural partners, NGOs, private sector partners, landowners, and other stakeholders, develop watershed-scale plans that target the most effective practices where they are needed most. Look for opportunities to include innovative approaches, such as targeted stewardship incentives, certainty agreements, and N & P markets, to accelerate adoption of agricultural conservation practices. Also, incorporate lessons learned from other successful agricultural initiatives in other parts of the country.
5. **Storm water and Septic systems**

Identify how the State will use state, county and local government tools to assure N and P reductions from developed communities not covered by the Municipal Separate Storm Sewer Systems (MS4) program, including an evaluation of minimum criteria for septic systems, use of low impact development/ green infrastructure approaches, and/or limits on phosphorus in detergents and lawn fertilizers.

6. **Accountability and verification measures**

A. Identify where and how each of the tools identified in sections 3, 4 and 5 will be used within targeted/priority sub-watersheds to assure reductions will occur.

B. Verify that load reduction practices are in place.

C. To assess/demonstrate progress in implementing and maintaining management activities and achieving load reductions goals: establish a baseline of existing N & P loads and current Best Management Practices (BMP) implementation in each targeted/priority sub-watershed, conduct ongoing sampling and analysis to provide regular seasonal measurements of N & P loads leaving the watershed, and provide a description and confirmation of the degree of additional BMP implementation and maintenance activities.

7. **Annual public reporting of implementation activities and biannual reporting of load reductions and environmental impacts associated with each management activity in targeted watersheds**

A. Establish a process to annually report for each targeted/priority sub-watershed: status, challenges, and progress toward meeting N & P loading reduction goals, as well as specific activities the state has implemented to reduce N & P loads such as: reducing identified practices that result in excess N & P runoff and documenting and verifying implementation and maintenance of source-specific best management practices.

B. Share annual report publically on the state’s website with request for comments and feedback for an adaptive management approach to improve implementation, strengthen collaborative local, county, state, and federal partnerships, and identify additional opportunities for accelerating cost-effective N & P load reductions.

8. **Develop work plan and schedule for numeric criteria development**

Establish a work plan and phased schedule for N and P criteria development for classes of waters (e.g., lakes and reservoirs, or rivers and streams). The work plan and schedule should contain interim milestones including but not limited to data collection, data analysis, criteria proposal, and criteria adoption consistent with the Clean Water Act. A reasonable timetable would include developing numeric N and P criteria for at least one class of waters within the state (e.g., lakes and reservoirs, or rivers and streams) within 3-5 years (reflecting water quality and permit review cycles), and completion of criteria development in accordance with a robust, state-specific workplan and phased schedule.
Decades of Delay: EPA Leadership Still Lacking in Protecting America’s Great River

For over 20 years, EPA has documented the devastating effects of nitrogen and phosphorus pollution on water quality and strongly encouraged states to take measures to combat it. In “Decades of Delay,” the Mississippi River Collaborative examines what progress, if any, the main-stem states have made toward reducing nitrogen and phosphorus pollution and outlines specific steps EPA can and should take to protect public health, aquatic life, and local economies from its devastating effects.

Nutrient pollution from agriculture, municipalities, and industries causes drinking water contamination, harmful algae growth, fish kills, and the Gulf Dead Zone. Though EPA has consistently and emphatically urged states to take measures to combat nitrogen and phosphorus pollution, its encouragement has come without enforceable regulations, specific deadlines, or funding for implementation. Not surprisingly, the problem persists, especially in the Mississippi River, despite a variety of Clean Water Act tools and viable regulatory options available to states.

In this analysis, Mississippi River Collaborative (MRC) members looked at the 10 states bordering the Mississippi River (MN, WI, IA, IL, MO, KY, TN, AR, MS, and LA) to see how each handled nitrogen and phosphorus pollution in five areas: 1) numeric criteria, 2) assessment, 3) permits, 4) clean-up plans called TMDLs, and 5) nutrient reduction strategies.

1) NUMERIC CRITERIA. Has the state established numeric limits for nitrogen and phosphorus in its waters?

Numeric limits for nitrogen and phosphorus are fundamental to protecting aquatic life, recreation and human health. Since 2003, EPA has urged states to adopt numeric criteria for nutrients. To date, no state has numeric limits for nitrogen, and only two (MN and WI) have numeric limits for phosphorus.

MRC Recommendation: EPA must adopt numeric phosphorus criteria for each of the eight states that have yet to do so, and numeric nitrogen criteria for all 10 states.

2) ASSESSMENT. Does the state assess its waters for nitrogen and phosphorus pollution?

Water quality assessment and monitoring are key to Clean Water Act implementation. Assessments allow states to determine which streams are impaired by pollution and where to set limits. Without adequate monitoring, it is impossible to determine whether water quality goals are being met.

Shockingly, only 1.6% of rivers and streams in the 10 states are assessed for phosphorus, 0.6% for nitrates (and then only for drinking water,) and 3.7% for dissolved oxygen (a solid indicator of nutrient pollution.) When it comes to lakes and reservoirs, the numbers are slightly better, but still low, at 26.3% for phosphorus, 1.4% for nitrogen, and 4.0% for dissolved oxygen. (See Figure below.)

MRC Recommendation: EPA should require states to assess their waters for nitrogen and phosphorus pollution and to prioritize pollution reduction plans accordingly.

3) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS. When the state issues a permit for nitrogen or phosphorus discharges, does that permit include limits sufficient to achieve the state’s water quality standards? Does it check for adherence to those limits?

Sewage treatment plants and other industrial sources of pollution must get approval in the form of a NPDES permit before they can discharge into state waters.
Unfortunately Mississippi River states do not utilize the NPDES permitting system to ensure that nitrogen discharges are sufficiently limited to achieve the state’s water quality standard, and 61.7% of all permits regulating phosphorus discharges have neither limits nor monitoring requirements.

**MRC Recommendation:** EPA needs to strengthen the NPDES program by increasing federal oversight, ensuring adequate pollution limits are established, demanding proper reporting and monitoring of discharges, and assuming control of programs when states demonstrate they will not follow federal requirements.

### 4) TOTAL MAXIMUM DAILY LOADS (TMDLs)

When a state shows that a waterbody is impaired, or polluted, is it preparing clean-up plans (TMDLs) according to EPA regulations? Are TMDLs monitored or reviewed to make sure pollution reduction is occurring?

States and EPA maintain a public list of impaired waters. For each, a state must prepare a TMDL stating how it plans to reduce the pollution causing that impairment. An effective TMDL needs to include provisions to track, reduce, and monitor pollution from direct discharges (point sources) and runoff (non-point sources.)

This analysis found few TMDLs (none in six states; just 5% in the remaining four states) that contain provisions addressing both sources of pollution. Among those TMDLs that include reduction plans for nonpoint sources, 92% lacked any follow-up mechanism to see if reductions even occurred.

**MRC Recommendation:** EPA needs to make sure TMDL review and approval is consistent among its regions, all of which should ensure that TMDLs approved to address nitrogen and phosphorus pollution include implementation plans for both sources of pollution, timelines, monitoring, and review triggers.

### 5) NUTRIENT REDUCTION STRATEGIES

Have states developed nutrient reduction strategies in accordance with EPA’s 2011 Framework?

In 2011, EPA developed a framework of eight policy guidelines that states should establish – *at a minimum* – to manage nitrogen and phosphorus pollution. EPA stressed the importance of developing these nutrient reduction strategies, but left participation and implementation up to the states.

As expected, the voluntary nature of the Framework rendered it ineffective in achieving any notable nitrogen or phosphorus pollution reductions. In over five years, no state has implemented more than two of the eight minimum plan elements.

**MRC Recommendation:** EPA should ensure that states develop nutrient reduction strategies containing implementation plans (including reduction goals, responsible parties, funding mechanisms, milestones, measurement metrics, and reasonable timelines) for each of the eight minimum elements.

EPA’s mandate, as stated on its mission page, is “to protect human health and the environment.” Both are being threatened by nitrogen and phosphorus pollution in the Mississippi River and elsewhere. Public beaches are frequently closed to protect people and pets from illness. Safe drinking water supplies are threatened, as in Toledo in 2014 (from algae blooms) and Des Moines in 2015 (from excess nitrates.) Algae blooms rob aquatic life of its oxygen, causing so-called dead zones where fish and other species cannot live. (The Gulf of Mexico Dead Zone, where the Mississippi River empties into the Gulf, is the second largest in the world.)

“Decades of Delay” clearly demonstrates that states are either unwilling or unable to solve this problem. It is time for EPA to step up and provide leadership and assistance to establish safe and viable pollution limits and provide the regulatory framework and enforcement to back them up. The protection of human health and the environment in the Mississippi River states demands it.