

To whom it may concern:

I am writing in response to the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy. As an Iowan, I live in a state where water quality consistently fails to meet my expectations and remains poor despite years of efforts. I support the development of a cleanup plan for nitrogen and phosphorous pollution in Iowa. I expect the plan to clearly state how Iowa will achieve meaningfully cleaner water.

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Patrick McNaughton
752 Franklin St.
Stevens Point , WI 54481
dookess89@hotmail.com

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Ian Moriarty
949 1/2 11th St
Marion , IA 52302-3542
ian.moriarty@yahoo.com

To whom it may concern:

I would like to submit these comments regarding the Iowa Nutrient Reduction Strategy revealed in November. I am a member of the board of directors of the non-profit organizations 1000 Friends of Iowa and the Iowa Environmental Council.

I grew up in Iowa and enjoyed swimming in lakes as a child. Unfortunately, I do not feel safe taking my own children to swim in any Iowa body of water. We have hundreds of impaired waterways in this state, and nitrogen and phosphorous pollution are among the biggest problems.

Iowans have a right to cleaner water. I am concerned that voluntary measures may not be sufficient to deal with the excess nutrients coming from nonpoint sources. I read the comments submitted by EPA Region 7 Administrator Karl Brooks, and I noticed that he identified serious problems with the nonpoint source section of the nutrient strategy. It concerns me that Iowa's draft nutrient strategy highlighted "limitations"

of using numeric criteria to manage water pollution, when the EPA considers numeric criteria an effective tool for managing excessive nutrients.

Iowa DNR staff identified problems with the portion of the draft nutrient strategy on agricultural runoff weeks before the strategy document was released to the public. Frankly, I question whether decision-makers at IDALS are committed to the goal of cleaning up Iowa waterways (as opposed to appeasing agricultural interest groups). I don't understand why the strategy calls for mandatory action to reduce nutrients from point sources but only voluntary action to address nonpoint sources of such pollution.

Thank you for your consideration. I hope the nutrient strategy will be revised and strengthened so that more Iowa waters can again become fishable and swimmable.

Sincerely yours,

Laura Belin

Laura Belin
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515-276-6971
laurabelin@yahoo.com

To whom it may concern:

Dear policymakers,

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Sincerely,
Lance Massey

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515-537-3722
lancemassey@gmail.com

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Susan Wickham
1216 East 33rd Street
Des Moines, IA 50317-2724
breemersm@earthlink.net

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Patricia Headley
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David Witke
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Priscilla Witke
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To whom it may concern:

Iowa's Nutrient Reduction Strategy is an admirable roadmap for actions that are desperately needed to address water quality in Iowa and in the farther reaching effects in the Gulf of Mexico. However, without adequate funding for implementation and enforcement of practices which at this point are voluntary, little impact will be felt.

Many farmers are conscientious in following such recommended practices, but we cannot rely on voluntary compliance to adequately correct the current problems. A stop sign at an intersection is not placed there as a suggestion. Without regulations and enforcement, Iowa will continue to pollute our waterways.

Lorna Caulkins
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JAN 22 2013

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January 18, 2013

Nutrient Reduction Strategy
ANR Program Services
2101 Agronomy Hall
Ames, IA 50011-1010

RE: Comments on Proposed Iowa Nutrient Reduction Strategy

Dear Sir or Madam:

The following comments are submitted on behalf of the City of Council Bluffs and the Des Moines Metropolitan Wastewater Reclamation Authority.

Due to concerns, in particular, over the need to lower nutrient levels contributing to Gulf of Mexico hypoxia and make progress on addressing nutrient levels for in-state waters, DNR, in conjunction with others, developed the above referenced point and non-point nutrient load control strategy. The draft policy is premised on the assumption that Iowa will use a technology-based approach to initially reduce nutrient loadings from most municipal point sources and later adopt site-specific numeric nutrient criteria to protect state waters. Moreover, the ultimate water quality issues regarding impacts of TN and TP will be assessed over time under an “adaptive management” approach.

Federal Regulatory Issues Require Resolution Prior to Strategy Adoption

While our various organizations are supportive of developing an Iowa nutrient load control strategy that results in fairly apportioning responsibility for Gulf related impacts and begins progress on addressing in-state nutrient issues in a cost-effective and sustainable manner, we have a number of serious concerns associated with resolving the federal-state interface for this policy. In particular, the intended results of the state’s proposal can only work if they are deemed consistent with and sufficient to meet compliance requirements under the Clean Water

Act. The strategy presumes it is appropriate to set technology-based requirements for nutrients, as a federal requirement for pollutants “not regulated” under an applicable effluent guideline (in this case secondary treatment). As discussed below, it is not apparent that this position is correct (federal law regulates “secondary treatment” which does not include nutrient removal) or that EPA will defer any more restrictive requirements it deems necessary at the time of permitting.

The success of the proposed strategy is dependent on its legal sufficiency at the time of permitting. Moreover, the cost-effectiveness of the approach is dependent on (1) control of the nutrient that is actually limiting plant growth and (2) ensuring that facilities not causing or significantly contributing to excessive plant growth in downstream waters are not unduly regulated. However, in the past year, EPA has informed other states and permittees that:

1. Adaptive management is not an acceptable substitute for the immediate imposition of stringent nutrient reduction requirements if downstream waters are considered nutrient impaired. (See, EPA Region I permitting of nutrient requirements for the Great Bay Estuary that rejected “adaptive management,” despite admitted uncertainties on the impact of point sources on the system and setting “limits of technology” for TN reduction, even though the municipal impact on algal growth was negligible – final/draft permits and statements of bases for Exeter, Newmarket and Dover, NH may be found on the EPA’s website at – http://www.epa.gov/region1/npdes/permits_listing_nh.html).
2. Federal law does not require the adoption of nutrient technology-based limits for municipalities. (See, e.g., EPA’s recent response denying the petition for rulemaking from NRDC seeking such action on a federal level which indicated that nutrient reduction requirements must be water quality based - attached). This the state and federal “authority” for imposing case by case technology-based limitations is inapplicable. Such requirements must be based, if at all, on water quality-based authority.
3. States that fail to adopt nutrient criteria must implement nutrient limits at the time of permitting using a state’s existing narrative standard; technology-based approaches will not be deemed sufficient to comply with the Act (See, e.g., EPA letters to Colorado, Illinois and actions of EPA Region I in Massachusetts and New Hampshire; EPA response to Congressman Coffman – dated July 24, 2012 - attached)

The recent comments filed by EPA Region VII verify that these are issues that must be addressed to avoid duplicative and wasteful municipal expenditures. For example, EPA has indicated that while the agency “applauds” DNR for engaging in the study as a “great start,” EPA recommends that a more restrictive approach be taken to setting technology-based limits, that no schedules of compliance be allowed and that there will be exceptions to the 10 year moratorium if “water quality-based” limits are set. (EPA comments at 3) Following this advice would negate the basic purpose of the DNR strategy and place municipal entities at risk for far more restrictive limitations. More importantly, EPA indicates that the Iowa strategy *does not* reflect EPA’s latest thinking about numeric criteria development and implementation. While it is uncertain precisely what EPA means by this statement, it is certainly possible that EPA will press for statewide criteria to be developed using methods employed in other states (e.g., EPA in Florida).

When a state has not adopted numeric criteria, EPA typically utilizes other approved criteria (including “Gold Book”) as the basis for applying a state’s narrative standard. We would note that recent EPA actions have proposed or approved stream nutrient criteria in the following ranges:

Colorado:	TN ~ 2.1 mg/l; TP~0.11 mg/l
Florida:	TN~ 1.7-0.7 mg/l; TP~0.46-0.06 mg/l
Wisconsin:	TN – not regulated; TP~ 0.07 mg/l

There is little doubt that broad based implementation of such standards in Iowa would put rivers and streams on the impaired waters list for decades to come, given the robust agricultural economy of the state. Such action would have severe economic ramifications for point source contributors because of EPA’s insistence that such sources be stringently regulated, even if the point source controls will not produce any demonstrable ecological changes (see, e.g., Great Bay nitrogen limitations). Moreover, at the time of permitting EPA will point to actions approved in other states as an indication of proper narrative criteria interpretation. *Id.*

Given these well-known EPA positions, already being implemented in other states it is apparent the Iowa nutrient strategy needs to be amended (and expanded) to better conform to the federal program requirements or there will no assurances that radically different (and more restrictive) requirements will not be imposed at the time of permitting or that the ten year moratorium on more restrictive requirements will be respected by EPA. Moreover, based on EPA’s comments, it is apparent that a central weakness of the strategy is that it is classifying the approach as a state/federal technology-based limitation, rather than a form of water quality-based limit intended to address, at a minimum, Gulf of Mexico concerns. Finally, since both TN and TP are being regulated pursuant to the draft policy, there will be an expectation that both pollutants need to be regulated to preclude in-state impacts from occurring. EPA’s Rivers and Streams Nutrient Criteria development documents noted that such an approach is not a cost-effective way to address nutrient impairments, where they exist. A focus on the limiting nutrient, once identified, is typically sufficient to ensure excessive plant growth does not occur.

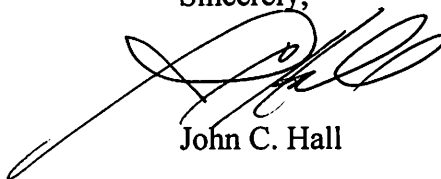
The group believes that the following issues need to be addressed to significantly improve the viability of this approach and make it more cost-effective:

- Fair apportionment of Gulf of Mexico point source load reduction responsibilities needs to be identified by DNR and approved by EPA. As point sources, in general, are about 8% of the “problem” (a very minor component), a specific state point source load reduction requirement should be identified so that the technology-based TN reduction goals may be implemented as necessary (and sufficient) to achieve the point source share. Once point source discharges are below this target, the remaining point source share should be considered “de minimus.” This should prevent EPA from arbitrarily demanding a greater point source reduction at a later date (as has occurred in other watersheds – e.g., Chesapeake Bay).

- Setting GOM-based load targets and classifying the technology-based limits to water quality-based limits may resolve EPA concern regarding schedules of compliance since such schedules are clearly allowed for new water quality-based limitations.
- The policy should not set specific TN concentration levels to be achieved by all point sources, but, as noted above, set a statewide, point source load reduction target/allocation for Gulf of Mexico purposes, within which a range of limitations are considered. This will allow a point-point trading program and likely avoid construction at many facilities that are less than 3 MGD. This allows for Gulf of Mexico-related TN reductions to be focused on the most cost effective locations and could account for in state load losses prior to TN loads reaching the major tributaries (Des Moines, Mississippi and Missouri).
- Stormwater reductions from municipal and commercial entities should be specifically excluded by this policy. These loadings are extremely minor in comparison to agricultural sources and TN control, in particular, it's difficult and very expensive to obtain in stormwater. The cost per pound removed is expected to be prohibitive and therefore not be a good expenditure of municipal resources. (See attached graphic comparing stormwater cost reductions versus other sources) A single load cap would also allow municipal entities to make appropriate tradeoffs between stormwater versus POTW loads – the latter being far more cost effective to address, should EPA press this issue at a later date.
- For in-state nutrient impact considerations, DNR should specify that only the limiting nutrient will be addressed, which will be presumed to be TP unless information indicates otherwise. This is an approach that has been used by most other states, including Minnesota and Wisconsin. A 1 mg/l “preliminary” water quality-based limit could apply to streams identified as impaired, target absent other information sufficient to generate the final limit to be achieved.
- To address the concern over narrative criteria compliance at the time of permitting, DNR will have to develop some type of guidance to implement the existing narrative criteria at the time of permitting. Such guidance could identify the stressor-response “impairment” thresholds (e.g., chl *a* levels, secchi depth, minimum DO violations due to excessive algal swings) that will be used for narrative criteria implementation (that will control the application of the federal regulation at the time of permitting). This guidance would also be helpful in identifying waters that are considered nutrient impaired for future TMDL purposes.

Our group, in conjunction with other municipal stakeholders, would look forward to meeting with DNR to discuss how the proposed nutrient reduction strategy may be better tailored to meet federal program requirements and ensure that a cost-effective nutrient reduction program can be implemented in the near future.

Sincerely,

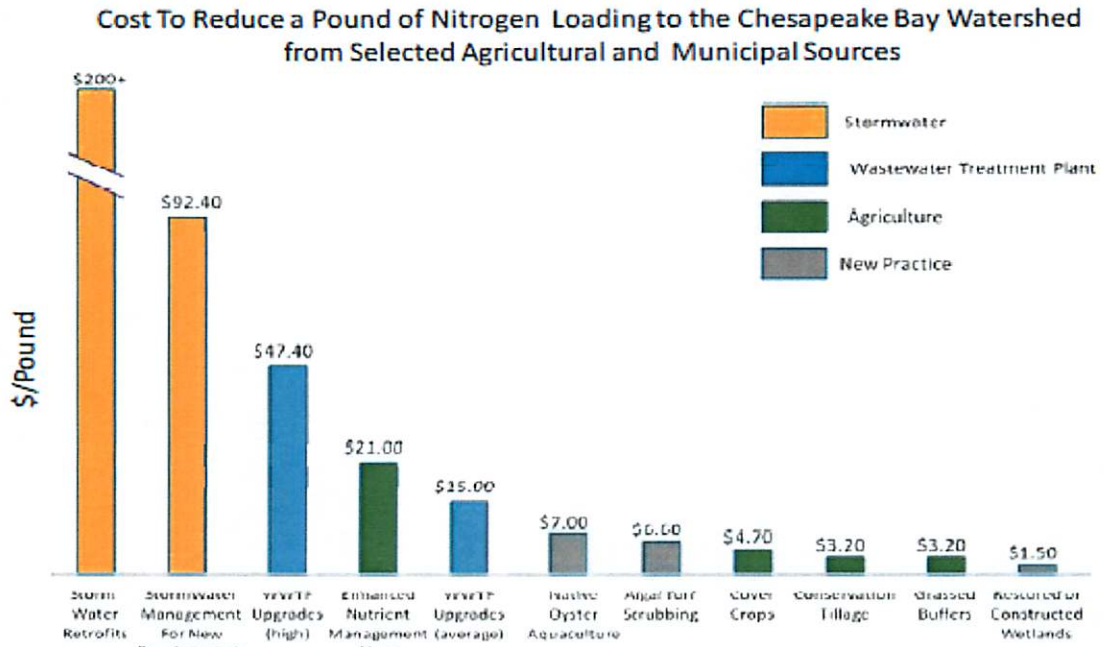
A handwritten signature in black ink, appearing to read 'John C. Hall', with a long, sweeping underline that extends to the left.

John C. Hall

Enclosures

cc: Greg Reeder, Council Bluffs
Royce Hammit, Des Moines WRA
Adam Schnieders, DNR

Attachment



Source: CY Jones, Evan Branosky, Mindy Selman, and Michelle Perez, *How Nutrient Trading Could Help Restore the Chesapeake Bay*, WRI Working Paper, World Resources Institute, 2010.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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JUL 24 2012

Ref: 8EPR-EP

Honorable Mike Coffman
U.S. House of Representatives
Washington, DC 20515-0606

Re: Letter of Proposal of the adoption of nutrient regulations by the Colorado Department of Public Health and Environment.

Dear Congressman Coffman:

Thank you for your letter of May 25, 2012, regarding the proposed adoption of nutrient regulations by the Colorado Department of Public Health and Environment. I understand the importance of this issue to Colorado, and I appreciate the opportunity to provide the following information in response to the questions you included in your letter pertaining to whether provisions of proposed Regulation 85 - which would set effluent limits for nitrogen and phosphorus - are required under federal law and suffice to meet Clean Water Act requirements.

Question 1: Does the Clean Water Act require states to adopt technology-based effluent limitation requirements to control nutrients discharged by municipal facilities? If so, what section of the Act contains this mandate and by what date must it be achieved.

Sections 301 and 402 of the Clean Water Act requires National Pollutant Discharge Elimination Systems permits to include effluent limits to meet water quality standards (i.e., Water Quality-Based Effluent Limits) where technology-based limits are insufficient to do so. The State of Colorado has proposed the use of technology-based effluent limits as a first step in reducing nutrient pollution until the means to establish Water Quality-Based Effluent Limits are developed. 40 CFR 122.44(d), which applies to states via 40 CFR 123.25(a), requires a permit-issuing agency to: (1) determine whether point-source discharges will cause, have a reasonable potential to cause, or contribute to an excursion beyond applicable water quality criteria; and (2) set water quality-based effluent limits in permits when the agency makes an affirmative determination. The regulation applies whether the relevant criteria are expressed numerically or in a narrative form. As Colorado is approved by the Environmental Protection Agency to run their National Pollutant Discharge Elimination Systems Program, the State must maintain programs that are consistent with Section 402 of the Clean Water Act.

Question 2: Has the EPA informed the State of Colorado that it must adopt a technology-based nutrient reduction requirement to address existing nitrogen and phosphorous discharges such as that proposed by Regulation 85? If so, please provide copies of that correspondence that informed the state of this mandate.

SIOS 15 JUL

No, the EPA has not informed Colorado that it must adopt a regulation establishing technology-based limits for nutrients. While it is true the Clean Water Act does not explicitly require states to adopt regulations establishing technology-based limits for nutrients, Regulation 85 is an integral part of the State's approach to protecting water quality and addressing Clean Water Act requirements. States have options and flexibilities for establishing a water quality-based control program that complies with the Clean Water Act. Any such program must include several key elements:

- water quality criteria that protect designated uses (Clean Water Act § 303(c)),
- an antidegradation program (40 CFR 131.12),
- identification of waters for which technology-based effluent limits are not stringent enough to implement any water quality standard applicable to such waters (Clean Water Act § 303(d)(1)(A)).
- total maximum daily loads Total Maximum Daily Load at a level necessary to implement the applicable water quality standards (Clean Water Act § 303(d)(1)(C)).
- Water Quality-Based Effluent Limits in permits issued to point source discharges (Clean Water Act § 301 and § 402).

Colorado's Regulation 31 includes narrative standards, applicable to all waters of the State, for the purpose of controlling substances from anthropogenic sources in amounts, concentrations, or combinations that:

- produce color, odor, or other conditions in such a degree as to create a nuisance or harm existing beneficial uses,
- are toxic to humans, animals, plants, or aquatic life, or
- produce a predominance of undesirable aquatic life.

The plan developed by Colorado Department of Public Health and Environment, with input from a stakeholder workgroup, is to initiate case-by-case implementation of the narrative standards (e.g., during the 2014 303(d) listing cycle), while moving forward with phased adoption of numeric standards for nutrients over the next 14 years. It is expected that for most segments receiving point-source discharges such numeric standards will not be adopted until the 2022-2025 time period. The Department's plan for the next 10+ years, in many cases, is to rely on Regulation 85 limits to reduce nutrient discharges.

It is worth noting here that exemptions and exclusions in Regulation 85 limit its impact on municipal facilities. For example, all municipal facilities with design flows equal to or less than 1 million gallons per day are exempted from meeting Regulation 85 limits. In addition, compliance with the Regulation 85 limits for all municipal facilities in low priority watersheds with design flows greater than 1 million gallons per day, and less than 2 million gallons per day, would be delayed by 10 years. As a result, the Regulation 85 limits would apply to about 15 percent of municipal facilities in designated priority watersheds. Additionally, where compliance is not affordable for a covered facility, Regulation 85 would authorize variances so that affordable control technologies could be implemented to achieve permit limits.

The EPA has participated actively in the Colorado Department of Public Health and Environment work group process. One of our objectives has been to explain Clean Water Act requirements to the Department and to Colorado stakeholders, including the options and flexibilities available for achieving compliance. To that end, the EPA has informed Colorado Department of Public Health and Environment that we are willing to be flexible on the schedule for complying with Clean Water Act requirements, consistent with the EPA's March 16, 2011 Memorandum to the EPA Regional Administrators "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions" signed by Nancy K. Stoner, Acting Assistant Administrator, Office of Water, which clearly articulates this policy position.

Question 3: Does the Clean Water Act or its implementing regulations allow a state to assume that a technology-based requirement, such as Regulation 85, is sufficient to meet narrative criteria requirements at the time of permitting.

The Clean Water Act generally envisions a combination of technology-based and water quality-based limits. Permitting authorities are required to develop water quality-based effluent limits when technology-based effluent limits are not sufficient to ensure compliance with water quality standards. Questions about whether Regulation 85 limits are sufficient to protect water quality standards are best addressed on a permit-by-permit basis, because it is important to consider site-specific circumstances.

Question 4: Does the following statement, contained in the Statement of Basis and Purpose for Regulation 85, constitute an explicit State policy or regulation interpreting the State's narrative water quality criteria, so that effluent limitations established pursuant to Regulation 85 will satisfy the requirements of the Clean Water Act and its implementing regulations? "Compliance with Regulation #85 will be deemed to be compliance with the narrative standards unless and until the Commission adopts subsequent revisions to Regulation #85 and/or Regulation #31."

As mentioned above, questions about whether Regulation 85 effluent limits are sufficient to protect water quality standards are best addressed on a permit-by-permit basis. However, the requirements of the Clean Water Act and the EPA's implementing Part 122 regulation apply to discharge permits issued

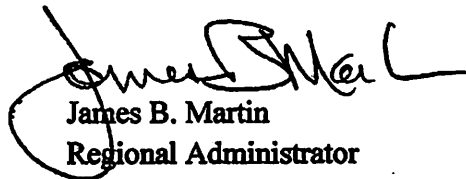
by Colorado Department of Public Health and Environment, regardless of Statement of Basis and Purpose language adopted by the Commission. As noted above, states have options and flexibilities for establishing a water quality-based control program that complies with the Clean Water Act.

Question 5: Does the Clean Water Act require that both nitrogen and phosphorous be limited in permits to prevent adverse ecological impacts from nutrient discharges?

As a general matter, if a reasonable potential analysis demonstrates that discharges of nitrogen and/or phosphorous will cause or contribute to an exceedance of any applicable water quality standard, then Water Quality-Based Effluent Limits are to be included in the discharge permit.

Again, we appreciate your writing; and I hope the above information will help clarify the EPA's position. If you have additional questions, please contact me or Sandy Fells, Regional Congressional Liaison, at 303-312-6604 or fells.sandy@epa.gov.

Sincerely,



James B. Martin
Regional Administrator

cc: Chris Urbina, Director, CDPHE





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

DEC 14 2012

OFFICE OF WATER

Ms. Ann Alexander, Esq.
Natural Resources Defense Council
2 North Riverside Plaza, Suite 2250
Chicago, Illinois 60606

Dear Ms. Alexander:

Thank you for the November 27, 2007, letter to Administrator Johnson and the accompanying petition on behalf of the Natural Resources Defense Council and ten other organizations requesting that the U.S. Environmental Protection Agency publish updated information about secondary treatment nutrient removal capability and establish new technology-based nutrient limits as part of the secondary treatment standards. The EPA has thoroughly considered the information you provided in the petition. The EPA's decisions concerning your requests are guided by the Agency's commitment to carry out the objective of the Clean Water Act to restore and maintain the nation's waters.

NRDC's first request cites CWA Section 304(d)(1) in asking the EPA to publish updated information on the degree of nutrient reduction attainable through secondary treatment of effluent discharged by municipal wastewater treatment plants, typically known as publically owned treatment works. In response, the EPA is publishing the most current data available on the degree of effluent reduction attainable through the application of secondary treatment. With respect to nutrients in particular, the EPA notes that secondary treatment technology is not designed for nutrient removal. Nevertheless, the EPA sought out information on incidental removals of nutrients by secondary treatment. Not unexpectedly, however, we found that insufficient data exist to draw any general conclusions about the ability of secondary treatment to remove nutrients.

NRDC's second request is for the EPA to establish new generally applicable technology-based nitrogen and phosphorus (nutrients) limitations as part of the secondary treatment regulations for POTWs. After careful consideration; the EPA is denying this request. We find that a uniform set of nationally applicable, technology-based nutrient limits is not warranted at this time. An effort to set such uniform national limits would require POTWs to incur high costs even where such costs are not necessary to protect water quality. In addition, the record indicates that some POTWs face technical constraints to installing more advanced treatment. Instead of pursuing national rulemaking to establish uniform technology-based requirements, the EPA is effectively pursuing the control of nutrient discharges at POTWs by means of site-specific, water-quality-based permitting. The reasons for this decision are discussed more fully below.

I. The EPA Has Completed a Current Up-To-Date Review of Pollutant Reduction Attainable through the Application of Secondary Treatment

Citing CWA Section 304(d)(1), NRDC first requested that the EPA publish information on the degree of effluent reduction attainable at the present time through the application of secondary treatment for nutrient pollution. In response, the EPA has decided it is advisable at this time to publish updated information on the performance of secondary treatment. Accordingly, the EPA is publishing the “Secondary Treatment Performance Report” (EPA, 2012a).¹ This report summarizes the most current information on the degree of effluent reduction of the conventional pollutants biochemical oxygen demand and total suspended solids attainable by the application of secondary treatment at POTWs. The report gives this information for POTWs with discharge volumes greater than or equal to 10 million gallons per day.

NRDC’s petition asks that the EPA specifically publish information on nutrient reductions attainable by secondary treatment technology. The technology that formed the basis for the EPA’s secondary treatment regulations, however, is not designed to remove nutrients. Nevertheless, in light of the petition, the EPA did investigate whether there are data on incidental nutrient removals at POTWs that employ secondary treatment technology and only such technology (i.e., without the addition of further, more advanced treatment). We found, however, that very little nutrient removal data exist for such POTWs and we note that such POTWs are not required to report incidental nutrient removal information to the EPA. Where nutrient discharge monitoring data do exist (which is only at about 30 percent of all POTWs), generally it is at facilities that employ not just secondary treatment technology but also more advanced treatment technologies. Consequently, the EPA was unable to draw any general conclusions about incidental nutrient removals at POTWs that employ only secondary treatment technology.

II. Establishment of Nutrient Limits in the Secondary Treatment Standard to Control POTW Nutrient Discharges Is Not Warranted at This Time

The petition also requests that the EPA amend its secondary treatment regulations to establish generally applicable nutrient limits at POTWs. It asserts that the CWA requires the EPA to address POTW pollutant discharges and establish limits achievable by secondary treatment (Pet. at 45). This part of the petition invokes the EPA’s authority to establish secondary treatment regulations for POTWs under CWA Section 301(b)(1)(B).²

Reducing and eliminating the environmental harm caused by nutrient pollution is one of the EPA’s top priorities. The Agency has devoted considerable effort and resources to comprehensively evaluating and addressing nutrients from significant non-point and point sources, including POTWs. After careful consideration of the information and arguments presented in your petition³, the EPA has determined that it is not warranted at this time to revise the secondary treatment regulations to establish new effluent limitations for nutrients. As explained further below, we conclude that the need to control

¹ The “Secondary Treatment Performance Report” (EPA, 2012a) will be provided to NRDC early in 2013.

² CWA Section 301(b) states that “there shall be achieved . . . (1)(b) for [POTWs]. . . effluent limitations based upon secondary treatment as defined by the Administrator pursuant to Section 304(d)(1).”

³ EPA has also considered NRDC’s follow-up letter of April 21, 2010, and has also considered, among other things, comments on this petition submitted by the National Association of Clean Water Agencies (NACWA) in letters dated February 29, 2008, Sept. 24, 2009, June 8, 2010, and November 9, 2012, and follow up information submittals by NACWA.

nutrients at POTWs is a highly site-specific matter that is not well-suited to being carried out through a uniform national rule; that not all POTWs nationwide need to meet minimum technology-based limits for nutrients to protect water quality; and that many POTWs would incur high costs individually, and POTWs overall would incur annual costs of tens of billions of dollars nationally to meet such uniform technology-based limits. Instead, as a preferred approach, the EPA finds that the water-quality based permitting provisions of the CWA and the EPA's implementing regulations give the EPA and the authorized states the flexibility to decide where POTW nutrient controls are needed, and to establish such controls, as part of comprehensive efforts to address surface water impairment due to excessive levels of nutrients from both POTWs and other sources.

III. Background on Secondary Treatment

The term "secondary treatment" is not defined in the CWA, and the Act therefore gives the EPA broad discretion to define the term. The legislative history shows that Congress intended secondary treatment to serve as a technology floor consisting of removal efficiencies between 50 and 90 percent for organic suspended solids and BOD through biological treatment. The EPA's existing secondary treatment regulations satisfy the CWA's requirements to establish secondary treatment standards because they set numerical limitations on BOD, TSS, and pH. In short, the EPA has broad discretion to determine whether to revise the existing regulatory definition of secondary treatment to establish new nationally applicable effluent limitations for nutrients as NRDC requests. The EPA finds there are a number of factors that are relevant to this determination, as we describe in the following sections.

Historically, sewage treatment processes were grouped together as primary or secondary based on the technology by which pollutant removal was accomplished, as well as the pollutants removed by those technologies. Primary treatment removes pollutants through liquid-solid separation techniques. Secondary treatment employs biological treatment systems to reduce pollutants, particularly degradable organic materials, not effectively removed by primary treatment. In establishing the secondary treatment regulations, the EPA used the approach, consistent with other sections of the CWA pertaining to establishment of technology-based effluent limits, of evaluating performance data from well-designed and operated treatment plants to determine which pollutants would be effectively and consistently reduced. The EPA selected activated sludge treatment, the most common technology at the time for reducing degradable organic materials not effectively removed by primary treatment, as the primary basis for evaluating the removal performance of pollutants typically expected to occur in the influent to POTWs: BOD, ammonia-nitrogen and other forms of nitrogen, phosphorus, and TSS. The EPA determined that only BOD, TSS, and pH could be effectively and consistently reduced and thus required POTWs to remove 85 percent, on a monthly basis, of BOD and TSS, and to maintain an effluent pH between 6.0 and 9.0. The Agency did not specify numeric limits for nitrogen and phosphorous under secondary treatment because it found under normal conditions activated sludge treatment systems do not effectively or consistently remove these pollutants.⁴

POTWs were required to meet secondary treatment requirements, which represented a minimum technology-based standard of treatment, by 1977. We note that the CWA originally also set a further deadline of 1983 for POTWs to meet a higher (or advanced) level of technology-based treatment termed "Best Practicable Waste Treatment Technology. The Act's legislative history shows that Congress expressly envisioned that nutrients were one of the categories of additional constituents that would be

⁴ 48 FR 52272, 52273 (Nov. 16, 1983).

addressed by advanced treatment.⁵ However, in the Municipal Wastewater Treatment Construction Grants Amendments of 1981, Congress, recognizing the shortfall of federal funding for the construction of facilities, repealed the 1983 deadline for all POTWs to achieve compliance with BPWTT requirements.⁶

IV. Obstacles to Developing a Uniform National Technology-based Standard for Nutrients at POTWs

To be sure, for many POTWs across the country, nutrient removal technologies can and should be installed, even though it may be costly, in order to meet the water-quality based requirements of the CWA.⁷ Nevertheless, while this may be the case at various individual POTWs, the EPA finds there are obstacles to developing a uniform technology-based standard for nutrients that would apply to all POTWs nationwide. After close examination of the most current data, the EPA finds that many POTWs would require significant upgrades to their existing technologies designed to meet secondary treatment standards in order to install nutrient removal technologies. Moreover, at certain POTWs, installing nutrient removal technologies would either be technologically difficult (e.g., due to land constraints) or would involve extremely high costs⁸.

We also note that the feasibility of replacing current secondary treatment systems to add nutrient removal is highly site-specific, depending on numerous factors unique to each site. These include the current system's size, design, and retention time, the system's age and remaining useful life, whether combined sewer systems are present (which create significantly higher influent flows during periods of high rainfall), the availability and cost of land for any necessary expansion, zoning codes and local land use concerns, and differences in sludge generation and associated dewatering and disposal costs. In addition to the fact that certain upgrades are technologically difficult or are not affordable at many POTWs, the high variability in what each POTW can achieve at its specific location means it would be very challenging to develop a uniform national rule containing one set of requirements.

Current system size is a particularly important factor in determining the cost of upgrading systems designed to meet secondary treatment standards. Small POTWs are generally less technologically

⁵ See H. Rep. No. 92-911, Report of the Committee on Public Works, U.S. House of Representatives, with Additional and Supplemental Views, Federal Water Pollution Control Act Amendments of 1972, at 87-88 (March 11, 1972) ("The term 'best practicable waste treatment technology' covers a range of possible technologies. . . . Particular attention should be given to treatment and disposal techniques which recycle organic matter and nutrients within the ecological cycle. . . . In defining 'best practicable waste treatment technology' for a given case, consideration must be given to new or improved treatment techniques which have been developed and are now considered to be ready for full-scale application. These include . . . phosphorus and nitrogen removal. . . .")

⁶ See report of the Senate Committee on Environment and Public Works, Clean Water Act Amendments of 1981, S. Rep. No. 97-204 at 17 (Oct. 7, 1981). In the same legislation, Congress extended the deadline for achieving standards based on secondary treatment to 1988 for certain POTWs.

⁷ NRDC said in their April 21, 2010, letter to EPA Office of Water Assistant Administrator Peter Silva that the 2009 EPA report "An Urgent Call to Action: Report of the State-EPA Nutrient Innovations Task Group" (EPA, 2009) suggested that EPA "[c]onsider redefining the secondary treatment requirement for wastewater treatment plants to include nitrogen and phosphorus by adding them to the list of pollutants that require technology-based effluent limits." However, the same report notes that not all POTW permits may need numeric phosphorus and nitrogen limits to address water quality issues.

⁸ Feasibility studies conducted for two POTWs in King County, Washington demonstrated the effect that installation of nutrient reduction technologies had on the capacity of the existing facilities. In both instances, new systems were necessary in addition to upgrades to the existing systems to handle the volume of wastewater. At one of the two POTWs, there was no land available on which to build the necessary additional capacity (King County, 2012 and 2011).

sophisticated than large POTWs and thus many would require significant upgrades to remove nutrients at a higher unit cost.⁹ Many small POTWs only have basic lagoons and trickling filters to meet secondary treatment requirements. Small POTWs, moreover, have a limited ability to pay for upgrades because they have a small customer base.¹⁰

If the EPA were to establish new nutrient limitations as part of the secondary treatment standards, they would apply to all POTWs nationally and thus impose technology retrofit or replacement costs regardless of whether their discharges are causing or contributing to water quality problems. Based on recent analysis of costs and efficiencies of nutrient removal technologies, the EPA has determined that retrofitting or replacing secondary treatment technologies at POTWs with a flow of at least 0.5 million gallons per day (MGD)¹¹ to incorporate advanced nutrient removal would impose costs of from 5 to 12 billion dollars annually (based on a seven percent interest rate) depending on whether facilities could retrofit their current systems or would need to replace them (EPA, 2012b). Not included in this estimate of costs are POTWs with flows of at least 0.5 MGD that have waivers from secondary treatment, use trickling filters or stabilization basins without activated sludge, or that were determined to already have the necessary treatment in place. The POTWs for which the EPA estimated costs represent about 33 percent of all POTWs nationwide but represent nearly 90 percent of the total municipal wastewater treated. The capital investment required to retrofit existing technology is estimated to cost 45 billion dollars. The capital investment required to replace existing technology is estimated to cost 130 billion dollars. Requiring nutrient limits for POTWs of all sizes would result in higher total capital investment costs. On a per gallon basis, it would be more expensive for small POTWs than large POTWs to upgrade to accomplish nutrient reductions because many of the small POTWs would need to replace their current systems. As noted by Symbiont (Symbiont, 2011), smaller POTWs have a proportionately higher cost to achieve nutrient removal, as much as 200 dollars per MGD.

As explained further below, the EPA's decision to deny NRDC's request to add technology-based nutrient limitations to the Agency's secondary treatment standards reflects a reasoned balancing of relevant policy concerns entirely consistent with the intent of Congress, which believed that it would be wasteful of public funds to define secondary treatment in such a way as to require facilities to achieve unnecessary degrees of advanced treatment (U.S. Senate, 1981). The EPA's decision is also consistent with the CWA's legislative history concerning the removal of the deadline for POTWs to meet BPWTT, especially given Congress's express mention that it was under the advanced level of treatment represented by BPWTT that nutrients could be addressed.

⁹ A study conducted for the State of Illinois examined unit costs for upgrading POTWs to remove nutrients. The study determined that the unit cost for installing phosphorus controls varies greatly based on the size of the POTW with a range of more than 200 dollars per MGD between large POTWs (discharge flow of 10 MGD or higher) and small POTWs (discharge flow of 1 MGD or less) (Symbiont, 2011).

¹⁰ It should be noted further that although large POTWs typically have more sophisticated secondary treatment technologies than small POTWs, such as activated sludge treatment, many may not be able to expand due to the availability and cost of adjoining land parcels.

¹¹ EPA used the CAPDET model (Computer-Assisted Procedure for the Design and Evaluation of Wastewater Treatment Systems) to estimate the costs associated with nutrient treatment (EPA, 2012b). The limitations of the CAPDET model restricted EPA's ability to estimate the costs for POTWs with smaller flows. Moreover, the cost estimates for POTWs with flows of at least 0.5 MGD do not include costs to install nutrient controls at facilities which use trickling filters or stabilization basins which are more prevalent at POTWs with flows less than 1 MGD.

V. The Continuation of the EPA's Water-Quality-Based Approach for Controlling POTW Nutrient Discharges is Warranted

While nutrient pollution does warrant advanced treatment control at some POTWs to protect water quality, it is unnecessary at others. The CWA requires application of effluent limitations for nutrients that are met by using advanced treatment where necessary to meet applicable water quality standards. These limitations are called water quality-based effluent limits or WQBELS (CWA section 301(b)(1)(C); 40 C.F.R. §§ 122.4(d); 122.44(d)(1)(vii)(A); applicable to the states at 40 C.F.R. § 123.25). Specifically, where secondary treatment is insufficient to protect the quality of the receiving waterbody, POTWs must meet any more stringent water quality-based effluent limits derived to achieve water quality standards.

The EPA's long-held view, consistent with the requirements of the CWA, is that given the site-specific variation in technological feasibility and costs of nutrient treatment systems, as well as how aquatic ecosystems respond to nutrient additions, POTW nutrient discharges are best addressed through water-quality-based permitting. There are approximately 16,000 POTWs in the U.S., but only about 4,300 are major dischargers with a flow greater than one million gallons per day. As illustrated by an analysis of discharges into the Chesapeake Bay discussed below, advanced nutrient treatment is not necessary at many smaller POTWs in watersheds where water quality standards can be met in other ways, for example, through a combination of controls on stormwater, agricultural point and nonpoint sources and larger POTWs.

In many areas water quality-based permit limits can prevent or correct nutrient-related impairments more effectively than national technology-based nutrient limits due to site-specific variability of waterbody response to nutrients. The EPA's strategy, articulated in the March 16, 2011 memorandum from Nancy Stoner, the EPA Acting Assistant Administrator for the Office of Water, entitled "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions" (Framework Memo) (EPA, 2011), envisions a number of different approaches which can be tailored to specific circumstances on a state or watershed-based level through close cooperation among the EPA, states, other federal agencies, and stakeholders. This collaborative watershed approach to nutrient controls is accomplishing substantial nutrient reductions in several notable watersheds such as the Long Island Sound (CTDEP, 2007a) and the Great Lakes (Great Lakes Commission, 2012), as well as in many smaller but no less important watersheds. For instance, approximately 8,000 nutrient-related total maximum daily loads (TMDLs) have been established throughout the United States (EPA, 2012c). A number of states have issued POTW permits with numeric nutrient limits. These states include Connecticut, Rhode Island, New Jersey, Pennsylvania, California, and Washington. In addition, the State of Wisconsin began setting water quality-based permit limits for phosphorus in streams, rivers, and lakes, and issued rules that describe how phosphorus criteria will be implemented through watershed-adaptive management plans. Other progress being made by states to control nutrient discharges includes efforts made by North Carolina, which has required nutrient monitoring for more than 96 percent of permitted flows in the state.

POTW water quality-based permit limits are driving the growing trend in the installation of advanced nutrient treatment systems. As shown in the EPA's 2008 Clean Watersheds Needs Survey, 31 percent of POTWs with discharges greater than 10 MGD had treatment systems to remove nitrogen, or phosphorous, or both (EPA, 2008a). POTWs discharging more than 10 MGD account for 70 percent of

national POTW discharge flow. Based on funding requests, an additional 18 percent of POTWs nationwide anticipate installing nitrogen or phosphorus treatment systems, or both, within the next ten years, resulting in a total of 49 percent of POTWs that will have advanced treatment systems.

VI. Past Petitions to Amend Secondary Treatment Regulations to Establish Effluent Limitations for Nutrients

Prior to NRDC's petition, the EPA received two similar petitions to amend the secondary treatment regulations to include nutrients. The EPA denied both Peter Maier's petition, submitted in 1993, and the Chesapeake Bay Foundation's Petition, submitted in 2003. Today's decision on NRDC's current petition is consistent with the Agency's decisions on both of these past petitions.

Mr. Maier challenged the EPA's denial of his petition in a lawsuit brought before the U.S. Court of Appeals for the Tenth Circuit. The Tenth Circuit upheld the EPA's denial, agreeing with the Agency that the CWA does not require the EPA to establish generally applicable technology-based secondary treatment limitations for all pollutants that might be reduced by secondary treatment. Maier v. EPA, 114 F.3d 1032 (10th Cir. 1997). Rather, the court found that the CWA grants the EPA discretion to determine whether it should set generally applicable technology-based limits for specific pollutants such as nutrients. The Tenth Circuit noted that:

“We should not order the agency to develop generally-applicable parameters [for nutrients] based on the use of new technology, even if cost effective, in the face of the Agency's reasoned judgement that the use of such technology is irrelevant to the attainment of water quality standards in many circumstances.”

The court found, moreover, that the EPA's decision to control POTW nutrient discharges through individual permits rather than by adding nutrient limits to secondary treatment standards was supported by the Agency's reasoned explanation that nutrient effects on water quality are highly variable depending on the characteristics of the receiving water, and that water quality-based nutrient limits protect water quality where necessary.

The EPA denied the Chesapeake Bay Foundation petition requesting establishment of technology-based nitrogen limits as part of the secondary treatment standards for similar reasons. POTW nutrient controls are best determined case-by-case for each receiving water segment, providing a better-tailored site-specific response to water quality issues than uniform technology-based regulations. The EPA reasoned, as it did in its denial of the Maier petition, that technology-based nitrogen limits would impose unnecessary expenses on some POTWs where such controls are not needed to protect water quality. The EPA also noted that the Agency and the states in the Chesapeake Bay watershed were already making significant progress to control POTW discharges through water quality-based permitting. The Chesapeake Bay Foundation did not bring a judicial challenge to the EPA's decision.

VII. NRDC's Suggested Uniform Approach for Establishing POTW Requirements is Not Always Necessary to Protect Water Quality

How POTWs should control nutrients to ensure attainment of water quality standards depends upon a variety of water quality-based factors. The water quality-based permitting approach allows permitting

authorities to take relevant physical, chemical, and biological factors into account to ensure that pollutants from POTWs are controlled so not to cause or contribute to an excursion above water quality standards. For example, when establishing a water quality-based effluent limit, the permit writer may consider information about the waterbody (i.e. the size, type, and ecoregion), nutrient loadings from other point and nonpoint sources, controls on those other sources of nutrients, and ambient nutrient concentrations in receiving water. At this time, the EPA believes a discharger-specific approach to POTW nutrient permitting is better suited for protecting water quality in a particular waterbody or watershed because this approach provides permit limits as stringent as necessary, in combination with controls on other point and nonpoint sources, to protect water quality standards.

VIII. NRDC's Suggested Uniform Approach Would Impose Significant Unnecessary Costs on Many POTWs

The EPA fundamentally disagrees with NRDC's claim that in most cases, minor retrofits to existing POTWs would enable them to cost-effectively reduce nutrient levels in their discharges. (Pet. At 14). Many POTWs in the United States, the majority of which are small systems,¹² would require substantial upgrades at a very high cost to individual POTWs and to POTWs as a whole across the country. The cost estimates for many of the treatment systems discussed in NRDC's petition are based on the incorrect assumption that most POTWs are already using activated sludge systems, nitrification units, filtration processes, or methanol or chemical addition. Although the petition cites examples of POTWs NRDC claims could achieve significant nutrient reduction with only minor modification, upon investigation, the EPA found that most of the facilities cited are already using some type of advanced treatment method in addition to activated sludge systems in order to meet their permit requirements.

Moreover, many smaller POTWs throughout the country are currently conducting secondary treatment with only trickling filters, lagoons, or oxidation ponds. There is a provision in the Act, Section 304(d)(4), that allows these treatment methods, which generally provide lesser treatment than standard activated sludge systems, to be deemed the equivalent of secondary treatment. In order to construct the nutrient removal technologies discussed in NRDC's petition, such small POTWs, which typically have a limited customer base from which to draw funding, in general would have to completely revamp their systems at a very significant cost. The EPA does not believe in general that there are minor, inexpensive modifications to POTWs using trickling filters, lagoons, or oxidation ponds that would allow them to meet the nutrient limits suggested by NRDC, and NRDC offers no examples of what those minor modifications might be.

The EPA conducted an analysis of the costs and efficiencies of various nutrient removal technologies to examine the claims in NRDC's petition. As noted, most of the POTWs cited in NRDC's petition already have treatment that is considered to be advanced treatment and thus cannot be considered examples of the performance of secondary treatment alone. In addition, several of these POTWs have reported design flows that are at least twice the volume of the actual flow. It is much easier for POTWs to retrofit secondary treatment systems with the needed additional treatment steps for nutrient removal if there is excess capacity in the secondary treatment system. Excess capacity is a site specific condition. It is important to note that POTWs located in areas where growth is anticipated may not be able to use excess capacity to retrofit their systems to achieve nutrient removal.

¹² There are approximately 16,000 POTWs in the United States. About 11,700 POTWs, or 73 percent, are classified as "minor" facilities because they have discharge flows of less than 1 million gallons per day.

The EPA has determined that the national cost of retrofitting or replacing secondary treatment technologies at all POTWs to incorporate even the less stringent nutrient limitations advocated in the petition (1.0 mg/L total phosphorus and 8.0 mg/L total nitrogen)¹³ would likely exceed 5 billion dollars annually, with a total commensurate capital cost likely to exceed 50 billion dollars based on a seven percent interest rate (EPA, 2012b). These cost estimates have a broad range due to the site-specific nature of upgrade and replacement requirements. There is considerable uncertainty about the exact amount of money required to upgrade POTWs due to a range of site-specific factors such as the age and remaining useful life of treatment systems and components, whether treatment systems could be retrofitted or would have to be replaced, whether combined stormwater systems are present (which create significantly higher influent flows during periods of high rainfall), local differences in electricity costs, availability and cost of land for any necessary facility expansion, differences in amounts of treatment chemicals needed, differences in sludge generation and associated dewatering and disposal costs, and differences in construction loan rates and payback periods. Despite uncertainty about the exact cost, however, the EPA is confident that even at the lower end of the cost estimate range based on conservative assumptions, POTW upgrades to meet NRDC's request would at a minimum require tens of billions of dollars annually.¹⁴

To support its claim that nutrient treatment is affordable, NRDC also cited a number of studies that provided per capita cost estimates for nutrient treatment ranging from \$3.60/year to almost \$20/year (Pet. at 35-41.) The EPA's own estimates of per capita costs are higher, finding that these costs range from about \$5/year at the low end of the range for retrofit costs to around \$63/year at the high end of the range for replacement costs based on a seven percent interest rate (EPA 2012b). In any event, beyond the per capita costs, the EPA finds, as noted, that it is also important to consider the high aggregate costs, estimated in the tens of billions of dollars annually, of a nationwide rule. Given that NRDC's suggested uniform approach for establishing nutrient controls at POTWs is not always necessary to protect water quality, as discussed elsewhere in this letter, the EPA finds that such a uniform approach would impose significant unnecessary costs on many POTWs.

IX. The EPA and Authorized States Continue to Make Significant Progress Controlling POTW Nutrient Discharges through Water Quality-Based Permitting

The significant progress the EPA and authorized States have made controlling POTW nutrient discharges through water quality-based permitting has been fostered through ongoing national regulatory, policy, and information initiatives by the EPA and authorized states to better control nutrients from all sources, including POTWs. State development of numeric nutrient criteria is one such activity resulting from such initiatives. Twenty-five states now have some form of either state-wide or waterbody-specific numeric nutrient criteria (EPA, 2012c). Many of the remaining states have initiated, or plan to begin, processes to develop numeric nutrient criteria.

¹³ NRDC contends that limits of 0.3 milligrams per liter total phosphorus and 3.0 milligrams per liter total nitrogen are consistently attainable using current technology, and that limits of 1.0 milligrams per liter total phosphorus and 8.0 milligrams per liter total nitrogen averaged yearly can be met with existing technology that uses only improved conventional biological treatment processes.

¹⁴ The petition notes that federal funds may be available to defray the cost of achieving nutrient removal. The availability of federal funds, however, is speculative.

The EPA's ongoing support for state efforts to control nutrients is reflected in several key policy directives, including the EPA's 1998 "National Strategy for the Development of Regional Nutrient Criteria," (EPA, 1998) the 2001 national action plan for the establishment of numeric nutrient criteria (EPA, 2001), the 2007 memorandum directing the EPA regional offices to accelerate progress towards the development of numeric nutrient water quality standards (EPA, 2007b), and the March 16, 2011, Framework Memo to the EPA regional offices (EPA, 2011). The Framework Memo synthesizes essential principles that guide Agency technical assistance and collaboration with states, places a strong emphasis on working with states to achieve near-term reductions in nutrient discharges, and emphasizes development of numeric nutrient criteria and effective use of water quality-based permits.

Additionally, for the past several decades the EPA has collaborated with and provided technical support to local, regional, and state regulators in planning and implementing cost-effective advanced treatment projects for POTWs where nutrient removal is necessary. The EPA has recently published three comprehensive assessments of nutrient removal technologies titled "Advanced Wastewater Treatment to Achieve Low Concentration of Phosphorus" (EPA, 2007c), "Municipal Nutrient Removal Technologies Reference Document" (EPA, 2008b), and the "Nutrient Control Design Manual: State of Technology Review Report" (EPA, 2010a). However, as noted, there are existing POTWs that could not implement the technologies discussed in these documents through minor modifications. The cost and technological feasibility of implementation of advanced treatment technologies depends on the site-specific factors discussed above.

One notable example of a comprehensive approach to reducing nutrient discharges is the analysis performed jointly by the EPA, the Chesapeake Bay states, and the District of Columbia (the jurisdictions) to support water quality standards attainment in the Chesapeake Bay. The EPA and the jurisdictions worked collaboratively to set annual loadings caps for nitrogen, phosphorus, and sediment in the Bay and its tidal tributaries through the 2010 Chesapeake Bay TMDL process. The EPA and the jurisdictions, moreover, set nutrient loading allocations for point and nonpoint sources in the Chesapeake Bay watershed in order to meet the loadings caps and attain dissolved oxygen, clarity, and chlorophyll-a water quality criteria in the Bay and its tidal tributaries (EPA, 2010b). State-developed plans to implement the TMDL at the watershed level demonstrate, among other things, the serious and expensive commitments made by communities and states to successfully control POTW nutrient discharges where needed, together with reductions by other point and non-point sources, to achieve the Bay's water quality standards. The analysis of where nutrient controls are needed, performed for these implementation plans, indicates that 420 POTWs responsible for the vast majority of POTW nutrient loadings to the Chesapeake Bay need, and either have or will install, advanced treatment systems. Significantly, it is anticipated that water quality standards will be met in the Chesapeake Bay and its tidal tributaries without requiring approximately 3,300 smaller POTWs in the watershed to bear the expense of installing advanced treatment systems.

As previously mentioned, the EPA's collaborative watershed approach for controlling nutrient discharges has achieved substantial nutrient reductions in several notable watersheds across the United States in addition to the Chesapeake Bay such as the Great Lakes and the Long Island Sound. The Great Lakes, for instance, represents an unprecedented international success in reducing nutrient discharges, accomplished in large part through water quality-based permitting of POTWs. Total phosphorus discharged to the Great Lakes has been reduced below levels specified in the Agreement for Lake

Superior and Lake Michigan, and is at or near the levels needed for Lake Erie and Lake Ontario (Great Lakes Commission, 2012).

Many local governments are confronting difficult financial conditions. Their ability to finance POTW improvements by raising revenues or issuing bonds has declined during the economic downturn and ongoing economic recovery. While technology-based standards serve a foundational role by providing a minimum for dischargers to meet in order to make progress towards achieving water quality standards, raising the technology-based minimum standards for all POTWs may impose unnecessary costs on some municipalities. Given the reduced ability of states, tribes, and municipalities to finance POTW improvements, and given that the EPA already has in place the water quality-based permitting approach available to address POTW nutrient discharges, this is not the appropriate time to revise the definition of secondary treatment in a fundamental way that may impose unnecessary costs on some municipalities.

X. Rulemaking to Establish Technology-Based Nutrient Limits as Part of the Secondary Treatment Standards Is Not Warranted At this Time Given the EPA's Limited Resources and Competing Program Priorities

In considering your request, the EPA has also taken into account its own resource constraints and programmatic priorities. The amount of agency resources in terms of dollars and staff time to undertake rulemaking of this magnitude would be considerable. Such a rulemaking would entail engineering analyses, including site visits and sampling, costing analyses, loading reduction analyses, analyses to statistically derive the limits, benefits analyses and multiple procedural steps to comply with a number of statutes, including not only the Administrative Procedure Act but also the Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), the Unfunded Mandates Reform Act (UMRA), and a number of Executive Orders. Based on the EPA's experience developing effluent guidelines for industrial categories, the cost of a rulemaking to establish secondary treatment numeric nutrient limits would be at least 10 million dollars (approximately two million dollars annually for five years) plus six full-time employees per year. At the same time, the Agency's budget has not been increasing. It would be very difficult given these budget constraints to undertake this type of rulemaking without a significant shift away from other priorities.

Courts generally recognize the need to allow Agencies to prioritize their own discretionary authorities. See, e.g., Heckler v. Chaney, 470 U.S. 821, 831-32 (1985). In the discussion above, the EPA has explained why a uniform, national technology-based rule to add nutrients to the secondary treatment regulations would not make sense at this time, given technological feasibility and cost issues and given that the EPA is otherwise pursuing a more effective water-quality-based approach to nutrient controls at POTWs. The EPA accordingly finds it is not warranted at this time to divert its limited resources away from competing program priorities in order to pursue the regulatory revisions requested by NRDC.

XI. Conclusion

Based on several decades of experience, and consistent with its past decisions on similar petitions, the EPA concludes that setting uniform, nationwide technology-based nutrient limits is not warranted, for the reasons discussed above. The EPA's preferred strategy, which is in effect across the country, is instead to seek to comprehensively control and manage all major sources of nutrients contributing to water quality impairments in particular watersheds, including POTWs and other significant point and

non-point sources of nutrients, through water quality-based permitting of point source discharges and nonpoint source management measures.

Reducing and eliminating the environmental harm caused by nutrient pollution will continue to be one of the EPA's top priorities. The EPA welcomes further discussions with NRDC and other stakeholders as the Agency continues to build on several decades of accomplishments in comprehensively evaluating and addressing nutrients from all significant non-point and point sources, including POTWs.

Please see the enclosure referencing the documents cited in this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael H. Shapiro". The signature is written in a cursive style with a large initial "M".

**Michael H. Shapiro
Deputy Assistant Administrator**

Enclosure

References

U.S. Senate. 1981. *Clean Water Act Amendments of 1981*. Senate Report Number 204, 97th Congress, Oct. 7, 1981.

U.S. EPA. 1998. U.S. Environmental Protection Agency. *National Strategy for the Development of Regional Nutrient Criteria*. Federal Register. June 25, 1998. Volume 63, Number 122.
<http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/strategy/nutsi.cfm>

U.S. EPA. 2001. U.S. Environmental Protection Agency. Office of Water. *Development and Adoption of Nutrient Criteria into Water Quality Standards*. November 14, 2001.

CTDEP. 2007a. Connecticut Department of Environmental Protection. *Long Island Sound Watershed-based Permitting Case Study*. July, 2007. http://www.epa.gov/npdes/pubs/wq_casestudy_factsht1.pdf

U.S. EPA. 2007b. U.S. Environmental Protection Agency. Office of Water. *Nutrient Pollution and Numeric Water Quality Standards*. Memorandum. May, 25, 2007.
http://water.epa.gov/scitech/swguidance/standards/upload/2009_01_21_criteria_nutrient_policy20070525.pdf

U.S. EPA. 2007c. U.S. Environmental Protection Agency. Region 10. *Advanced Wastewater Treatment to Achieve Low Concentration of Phosphorus*. EPA 910-R-07-002. Seattle, WA. (April).
http://www.epa.gov/region10/pdf/tmdl/awt_report.pdf

U.S. EPA. 2008a. U.S. Environmental Protection Agency. Office of Water. *Clean Watersheds Needs Survey 2008: Report to Congress*. EPA-832-R-10-002. Washington D.C. November.
<http://water.epa.gov/scitech/datait/databases/cwns/upload/cwns2008rtc.pdf>

U.S. EPA. 2008b. U.S. Environmental Protection Agency. Office of Water. *Municipal Nutrient Removal Technologies Reference Document*. Washington, D.C. (September).
<http://water.epa.gov/scitech/wastetech/upload/mnrt-volume1.pdf>

U.S. EPA. 2010a. U.S. Environmental Protection Agency. Office of Water. *Nutrient Control Design Manual: State of Technology Review Report*. EPA/600/R-09/012.
<http://www.epa.gov/nrmrl/pubs/600r09012/600r09012.pdf>

U.S. EPA. 2010b. U.S. Environmental Protection Agency. *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment*. Washington, D.C. (December 29, 2010).
http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/FinalBayTMDL/CBayFinalTMDLExecSumSection1through3_final.pdf

King County Department of Natural Resources and Parks. 2011. *Assessment of Nitrogen Removal Technologies at West Point Plant and Their Impact on Future Water Reuse Program Development*. Seattle, Washington. March 2011.

Symbiont. 2011. *Evaluation of Practical Technology-based Effluent Standards for Phosphorus and Nitrogen in Illinois*. West Allis, Wisconsin. October 18, 2011.

U.S. EPA. 2011. U.S. Environmental Protection Agency. Office of Water. *Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions*. Memorandum. March, 16, 2011.
http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/memo_nitrogen_framework.pdf

Great Lakes Commission. 2012. *Priorities for Reducing Phosphorus Loadings and Abating Algal Blooms in the Great Lakes – St. Lawrence Basin: Opportunities and Challenges for Improving Great Lakes Aquatic Ecosystems*. Report of the Phosphorus Reduction Task Force to the Great Lakes Commission.
Ann Arbor, MI. September, 2012.
http://www.glc.org/announce/12/pdf/FINAL_PTTaskForceReport_Sept2012.pdf

King County Department of Natural Resources and Parks. 2012. *Assessment of Nitrogen Removal Technologies at the South Treatment Plant and Their Impact on Future Water Reuse Program Development*. Seattle, Washington. June 2012.

U.S. EPA. 2012a. U.S. Environmental Protection Agency. Office of Water. *Secondary Treatment Performance Report*. Washington D.C. November, 2012.

U.S. EPA. 2012b. U.S. Environmental Protection Agency. Office of Water. POTW Nutrient Control Cost Estimates Record Document. Washington D.C. December 4, 2012.

U.S. EPA. 2012c. U.S. Environmental Protection Agency. Office of Water. *Water Quality Assessment and Total Maximum Daily Loads Information (online database)*. Updated September 26, 2012.
<http://www.epa.gov/waters/ir/>



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January 11, 2013

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Mr. Bill Northey
Secretary Iowa Department of Agriculture and
Land Stewardship Wallace State Office Building
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RE: Iowa Nutrient Reduction Strategy – Ducks Unlimited Comments

Dear Mr. Gipp and Mr. Northey:

Thank you for the opportunity to comment on *Iowa Nutrient Reduction Strategy – A science and technology-based framework to assess and reduce nutrients to Iowa waters and the Gulf of Mexico*. Ducks Unlimited is a non-profit wetland conservation organization dedicated to conserving, restoring, and managing wetlands and associated habitats for North America's waterfowl, which also benefits other wildlife and people. Iowa DU has approximately 20,000 members located throughout the state who care deeply about the quality of water, conservation of our resources, and our quality of life. Since 1985, DU has invested more than \$17 million and conserved approximately 63,000 acres in Iowa.

DU appreciates the strategic, science and technology-based approach in the development of the Nutrient Reduction Strategy (NRS). Regarding the NRS, we recognize that there are many unknowns and data gaps that remain with this critical issue. We recommend that as the NRS moves forward, science and technology continue to play a key role in the development, expansion and implementation of each of the eight actions. We also encourage more specifics to be included in the action items as the NRS is refined. DU has also limited its comments to agricultural landscapes where we do most of our work, rather than focus on point sources.

We heartily endorse the use of protected, restored and enhanced wetlands as a key Best Management Practice (BMP)/tool for reducing nutrients and sediments. We also encourage the use of wetlands to slow stream/river flows to reduce in-stream erosion. However, we encourage a strong stance to protect all existing wetlands and guard against the destruction of wetlands or other negative impact to wetlands within the NRS. We support the use of mitigated wetlands as a nutrient reduction tool, but only after the application of “avoid, minimize and mitigate” sequencing, and only within the context of existing federal and state wetland and water laws. Existing wetlands should not be drained and/or impacted to be mitigated elsewhere as part of the NRS.

One excellent source of supplemental information on the positive impacts and contributions of wetlands and other BMPs is the Broughton Creek study, which examines the negative impacts caused by wetland drainage to the watershed and adjacent water bodies. The study provides recommendations on how wetlands can provide tangible and measurable improvements in reducing nutrient and sediment loadings.

For more information, see: YANG, W., X.WANG, S. GABOR, L. BOYCHUK, P. BADIOU. 2008. Water quantity and quality benefits from wetland conservation and restoration in Broughton's Creek Watershed. Research report submitted to Ducks Unlimited Canada. <http://www.ducks.ca/our-science/our-research/broughtons-creek/>

In relation to Actions 1 & 2, we support the prioritization of watersheds, as well as the determination of watershed goals. We encourage public participation in both of these action items, as well as a robust process to ensure all stakeholders have input and understand how priorities and goals were developed. It will be critical that science-based accountability and verification be in place to accurately measure progress.

We also stress the importance of setting realistic/achievable goals with phased timelines to ensure meeting explicit numerical objectives and reporting meaningful progress. This will be essential to secure overall plan success.

For Action 4, DU supports voluntary programs to implement conservation programs and BMPs. However, without a high degree of implementation, we are concerned that lack of progress on reducing nutrients and sediments will increase the likelihood of regulatory measures. Therefore we recommend that this action expand strategies and actions to secure a high degree of landowner engagement and implementation, in addition to science-based verification systems.

For Action 6, we stress the importance of developing a science-based, peer reviewed accountability and verification system that accurately and critically evaluates both point and non-point based sources. Much more detail needs to be supplied, including appropriate benchmarks, criteria, measures, etc.

For Action 7, we applaud the NRS adaptive management approach as well as plans for an open and transparent reporting process. We would encourage the WRCC to secure public input in regards to the NRS evaluation and whether it should be reviewed and updated.

We also encourage the development of a public communication/outreach strategy to garner public support for the NRS. This will be critical to ensure long-term funding and resources.

In regards to funding the NRS, we suggest a much more detailed and exact plan/budget to ensure successful delivery and implementation of conservation practices and BMPs. Currently we do not have a five -year Farm Bill authorization and in all likelihoods the new Farm Bill will have reduced funding levels for conservation. Although state budgets are better now than in past years, that may change within the life span of the NRS. We encourage expansion of current state funding programs, including but not limited to REAP, Lake Restoration funding, Watershed Protection Fund, Farm Bill programs, etc. However we also recommend the NRS leaders, partners and stakeholders consider a funding mechanism for Iowa's Water and Land Legacy so that permanent long term funding can be secured for land and water conservation in the state.

In our 75 year history, Ducks Unlimited has learned that implementing landscape solutions is what yields success for any plan or strategy. Iowa can develop the best priorities, plans, accountability and verification systems, and have excellent communication and outreach - but if we fail to fund and implement on-the-ground and in-the-water conservation and BMPs, then the NRS will fail and our environment and economy will suffer.

We strongly recommend that the NRS and governing bodies utilize an active and robust wetland conservation program to reduce nutrients and sediments. We encourage the partnering with NGOs like Ducks Unlimited to put more and better wetlands/BMPs back on the landscape, utilizing a host of existing programs such the Wetland Reserve Program, *Lake Restoration Program*, Conservation Reserve Enhancement Program, REAP, as well as new programs developed and funded to specifically address Iowa's nutrient issues. We welcome the invitation to work with all of the partners and stakeholders in developing this further.

On behalf of Iowa Ducks Unlimited, thank you again for the opportunity to comment. We stand ready, and will continue to work with state, federal and private partners to ensure our wetlands, soil and water resources are conserved for all to enjoy and utilize. Feel free to contact me should you have any questions. Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Frank C. Mertz". The signature is written in dark ink and includes a stylized flourish at the end of the name.

Frank Mertz
State Chairman

Cc: DU – Rebecca Humphries
DU – Jon Kruse; Mike Shannon; Kurt Dyroff; Gildo Tori



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JAN 22 2013

January 18, 2013

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Mr. Chuck Gipp, Director
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Re: Iowa Environmental Council Comments on the Iowa Nutrient Reduction Strategy

Dear Secretary Northey and Director Gipp:

The Iowa Environmental Council respectfully offers the following comments on the Iowa Nutrient Reduction Strategy (Nutrient Strategy). This strategy was released for public comment on November 19, 2012, and was prepared by the Iowa Department of Agriculture and Land Stewardship and the Iowa Department of Natural Resources, with technical assistance from an Iowa State University-led team of scientists.

These comments represent the views of the Iowa Environmental Council, an alliance of approximately 60 organizations, board members from business, farming, the sciences and education, and thousands of individual supporters across the state. We want to thank you for extending the comment deadline by two weeks, which allowed more Iowans, including many of our members, their first opportunity to review the Nutrient Strategy and offer comments and ideas to improve it.

The next step must be to carefully consider the viewpoints of all Iowans who submitted comments and consider incorporation of some of the best ideas into the Nutrient Strategy. In order for this document to truly be an "Iowa Nutrient Reduction Strategy," all Iowans need to know that their interest in clean water and demand for accountability for nonpoint source pollution reductions has been heard and has been heeded. Inclusion of these public concerns

will strengthen the strategy and ensure the public acceptance and buy-in necessary to meet the ambitious reductions goals.

A lot is at stake. Many of the Council's supporters remember past promises of clean-ups, past reliance on all voluntary compliance, and in the meantime, have to tell their children they cannot swim in the rivers and streams of their childhood.

The Iowa Environmental Council would like to make the following comments on the Nutrient Strategy:

- 1. The strategy's main implementation plan for agricultural nonpoint sources is to rely entirely on voluntary conservation programs to meet reduction goals without demonstrating how these programs would be able to achieve the level of adoption of conservation practices outlined in the science assessment.** The strategy needs to include a reasonable plan with goals and timelines along with accountability mechanisms for failure to achieve progress toward increasing farmer adoption of conservation practices. While some progress has been made through adoption of conservation practices, none of the successes highlighted in the section on Iowa Conservation Progress (pages 13-14 of the strategy) have demonstrated the ability of current conservation programs to secure the level of practice adoption across the Iowa agricultural landscape identified in the ISU science assessment as being necessary to reach the 41% nitrogen reduction and 29% phosphorus reduction goals of the Nutrient Strategy.

Milestones and accountability are critical for the strategy, especially given the strong headwinds which have always faced voluntary conservation programs. The Iowa Farm and Rural Life Poll reports that in the decade prior to the 2011 survey, 72 percent of responding farmers said they spent less than \$5,000 on conservation efforts. Half reported spending nothing. One third said even if more money and technical assistance were available, they would not pursue additional conservation practices.

Voluntary conservation programs will likely remain a part of farmland conservation in Iowa for the foreseeable future. Even if the alternative conservation scenarios proposed by the Iowa State team are suggestions, not policy recommendations, it is clear that *significant* increases in farmer adoption of certain conservation practices will be necessary to achieve the goals of the strategy.

Unfortunately, as written, the strategy is not specific about what increases in practice adoption it aims to achieve, or by when. It articulates no plan for securing participation of those producers who have consistently not participated in conservation programs. This lack of goals for practice adoption is in addition to the fact that the strategy does not articulate specific water quality goals or interim pollution reduction milestones for Iowa's rivers and lakes.

The number of Iowa farmers who have implemented conservation practices is significant, and their efforts have produced important results. Unfortunately, the strategy continues to place conservation minded farmers at a comparative disadvantage to their peers who can choose not to participate in programs without facing consequences.

- 2. The strategy needs to make a compelling case for how the reduction of nitrogen and phosphorus pollution would benefit Iowans.** As noted in the first paragraph of the executive summary, “The Iowa Nutrient Reduction Strategy is a science and technology-based framework to assess and reduce nutrients to Iowa waters and the Gulf of Mexico.” The threats from nutrient pollution to clean water are self-evident to many Iowans. The strategy failed to emphasize the serious threats and short and long-term consequences of unsafe waters and why we need to reduce nutrient pollution for the benefit of Iowa waters.

Excess nitrogen and phosphorus in Iowa waters along with eroded sediment are the largest water pollution problems in Iowa that are seriously affecting Iowans’ use of our surface water for recreation and drinking water as well as impacting aquatic life in our rivers and lakes. Yet the strategy makes only passing reference to the significant impact of nutrient pollution on Iowa waters and why reduction of nitrogen and phosphorus is necessary to restore and protect local waters. If we expect Iowans to take action that will require significant changes in wastewater treatment and farming practices that will have significant private and public costs, it is essential that the strategy articulate that these changes provide benefits right here in Iowa AND to water quality downstream in the Gulf of Mexico.

- 3. The strategy must include a strong commitment for development of numeric nutrient criteria for lakes and streams.** The criteria are one element of accountability that is totally absent from the strategy. These criteria are necessary to set goals for reduction of nitrogen and phosphorus pollution in Iowa waters that will restore and protect recreation, drinking water and aquatic life uses. The March 16, 2011 EPA memo “Recommended Elements of a State Framework for Managing Nitrogen and Phosphorus Pollution” (commonly referred to as the Stoner memo) says that state nutrient reduction strategies do not replace the need for states to adopt numeric nutrient criteria. In fact, the development of a work plan and schedule for numeric criteria development is a required element of the EPA framework.

The EPA Stoner memo states that “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 programs” (EPA Stoner memo, page 3). Yet the Iowa strategy includes several statements that indicate opposition to the idea of adopting numeric nutrient criteria, including an entire section in the strategy background on “Numeric Nutrient Criteria Limitations” (page 6-8).

The strategy does include a section entitled “Develop Work Plan for Numeric Criteria Development”; however the strategy emphasizes nutrient reductions from point and nonpoint sources in the near-term, “with evaluation of the *need for* nutrient water quality

standards long-term” (pages 22-23, emphasis added). This statement seems to question whether Iowa needs to adopt standards that will limit nutrient pollution levels in Iowa waters. This statement is particularly troublesome given the large number of nutrient impaired waters in Iowa including important recreational lakes and drinking water sources.

The strategy did not even take advantage of an opportunity to build upon recent efforts (e.g. recreational lake criteria) that were nearly through the regulatory process in the fall of 2011, but were pulled prior to final adoption. These criteria had the support of Iowans and would provide needed protection to Iowa’s important public lakes that often suffer from algae blooms that make swimming and other water recreation unpleasant and, at times, unhealthy.

While progress can be made now toward meaningful reductions in nitrogen and phosphorus pollution that is already impairing our lakes and rivers, ultimately, numeric standards are needed to set the restoration targets and, once water quality is restored, to prevent new impairments.

- 4. The Council supports the recommendations for expanding the roles for Certified Crop Advisors (CCAs) discussed on page 19 in the “Strengthen Outreach, Education, Collaboration” section of the Nutrient Strategy.** The Council further supports the use of CCAs to assist with the development of individualized stewardship or conservation plans for all farms. These farm stewardship plans would identify conservation needs on the farm and help initiate a planning process to review and select appropriate practices for nutrient reduction that will work best on the individual farm operation. The CCAs could continue to provide assistance with the implementation and evaluation of the effectiveness of these conservation plans over time. To ensure transparency and accountability, the plans should be public records.

One important component of these new stewardship plans should be increased use and enforcement of Iowa’s existing Soil Erosion Law under Section 161A.43 through 161A.66 of the Iowa Code. This law establishes the duty of property owners in Iowa to establish and maintain soil and water conservation practices as established by the commissioners of their county Soil and Water Conservation Districts in order to “conserve the fertility, general usefulness, and value of the soil and soil resources of this state, and to prevent the injurious effects of soil erosion.” This law is little known by the public and underutilized and could be especially effective in areas where excessive erosion (greater than twice the applicable soil loss limit) is occurring and the land owner has chosen not to participate in voluntary conservation programs.

- 5. The strategy must develop more specific implementation plans including sources of funding for evaluating net reductions of nitrogen and phosphorus rather than just quantifying reductions from adoption of new practices.** Use of a regular nutrient load estimate (nutrient budget) based on the ambient water monitoring data network, as mentioned in “Accountability and Verification Measures” on page 21, will be essential to

track progress of the reduction strategy. Another promising idea mentioned in the strategy is development of an Iowa Natural Resource Inventory (NRI) of management practices as mentioned under “Public Reporting” on page 22.

Both the monitoring and inventory of natural resources will be necessary for the public to track progress toward our reduction goals. The Iowa NRI will be especially important given the rapid changes in land use that are occurring in Iowa due to economic incentives driven by current high commodity prices for corn and soybeans. This includes reduction of CRP acreage in Iowa as well as conversion of pasture and other perennial cover to cropland. As documented in the strategy’s science assessment, decreases in perennial cover will result in increases in nitrogen and phosphorus pollution runoff to waterways. Also many farmers in Iowa have been installing additional drainage tile in fields to improve *production in wet* areas or to bring new acreage into crop production. We know from the science assessment that increasing tile drainage will result in increases in nitrate losses from crop fields.

- 6. Additional research is needed on the effectiveness of stream restoration practices to reduce sediment losses from eroding stream banks and to improve natural stream processes that remove nitrogen and phosphorus.** Erosion of stream banks is a significant source of sediment and phosphorus that is contributing to impairment of streams and lakes in Iowa and downstream. The science assessment evaluated practices that will reduce soil erosion on cropland, but did not include evaluation of practices that would reduce sediment losses from stream banks. Stream bank stabilization may be an effective practice in some watersheds and it would be useful to have measures of effectiveness and costs for this practice so that it could be compared to other conservation options. In addition, stream restoration practices that improve habitat and function of streams can enhance natural in-stream processes that remove nitrogen and phosphorus before it is transported downstream.
- 7. Implementation of the Nutrient Strategy should be coordinated with implementation of the Iowa Nonpoint Source Management Plan (NPSMP) developed by a broad set of Iowa stakeholders to address nutrient pollution along with other nonpoint source pollution problems affecting Iowa waters.** Funding for implementation of the NPSMP that the state of Iowa receives through the Section 319 program is an important source of revenue for targeted conservation activities focused on restoration of nutrient impaired waters in Iowa. The Nutrient Strategy should build off of existing watershed plans completed under this program. These include TMDL watershed restoration plans for the Upper Des Moines River, Raccoon River and Cedar River where drinking water sources are impaired by high nitrates. These 3 TMDLS cover approximately 27% of the state of Iowa and include prioritized HUC-12 sub-watersheds. In addition, there are several completed TMDL watershed restoration plans that focus on phosphorus reductions for watersheds above lakes that are impaired by too much phosphorus that is causing frequent algal blooms. Utilizing work already completed under the 319 program would help get the Nutrient Reduction Strategy off to a good start.

8. **Going forward, the Iowa Nutrient Reduction Strategy development and implementation needs to be an open process that provides the opportunity for all Iowans to actively participate in the process.** The document states on page 9 that the Iowa Department of Agriculture and Land Stewardship and the Iowa Department of Natural Resources worked cooperatively with EPA Region 7 to develop the strategy. In November of 2011, DNR shared detailed information on the point source policy recommendations in the strategy with the Iowa Environmental Council and other environmental and conservation groups. At several occasions in 2012, the ISU science team presented findings of the science assessment at public meetings. However, the only information related to the nonpoint source policy recommendations shared with the public was that recommendations would take an “aggressive voluntary” approach. Only selected stakeholders representing agribusiness and commodity agricultural groups were consulted on the nonpoint source policy recommendations.

9. **A structure of funding and authority must accompany the increased expectations for the Water Resources Coordinating Council (WRCC) to lead implementation of the Nutrient Strategy.** A long-term funding mechanism needs to be established to provide resources for the planning and implementation of the strategy and to support the work of the WRCC. The strategy proposes to assign major responsibility for implementation of the nonpoint source reductions to the WRCC, including assessing and prioritizing HUC-8 and HUC-12 watersheds for nitrogen and phosphorus reduction and setting measures of success including indicators for measuring progress toward nutrient reduction goals. The WRCC has been in existence since 2008, but to date has not received adequate funding to achieve their existing mission and now is being asked to take on the task of implementing the nutrient strategy. Without a long-term funding mechanism there is little reason to believe the WRCC will be able to accomplish this task.

Thank you for the opportunity to comment on the Nutrient Strategy. If you have questions or need further clarification of these comments, the Council’s staff and member organizations are ready to assist you.

Sincerely,



Ralph Rosenberg
Executive Director
Iowa Environmental Council

January 18, 2013

JAN 22 2013

Chuck Gipp, Iowa Department of Natural Resources
Bill Northey, Iowa Department of Agricultural and Land Stewardship
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Secretary Northey and Director Gipp:

Thank you for the opportunity to provide comments on the Iowa Nutrient Reduction Strategy Plan (hereafter “the Plan”). We commend Iowa’s efforts to develop a comprehensive framework to address the state’s contribution to the hypoxia issue in the Gulf of Mexico and to work to clean up Iowa’s waterways.

The Nature Conservancy’s mission is to conserve the lands and waters on which all life depends. We are a global nonprofit organization with a very local presence, having successfully worked in Iowa for the past 50 years engaging private landowners and local communities to conserve and steward Iowa’s natural resources. Our vision in Iowa is to have healthy lands and waters and sustainable agricultural systems that support biodiversity and provide for the needs of people in Iowa and the world. The Nature Conservancy is a pragmatic organization that is grounded in science. For more than a decade, we have been actively working with partner organizations, stakeholders and private landowners throughout the Mississippi River basin to address altered hydrology and water quality issues that affect the upper basin as well as the Gulf of Mexico. In Iowa, this work includes our on the ground efforts to implement on-farm practices in the Boone River watershed to address soil health, water quality, and aquatic biodiversity and our work in the Cedar River basin focused on restoring altered hydrology and reconnecting the river to its floodplain, both of which benefit water quality. The Nature Conservancy’s watershed work along with that of our partners in numerous other watersheds provides insight into what is working and what still needs to be accomplished. The lessons learned from these established watershed-based projects provide a foundation for scaling up to the state level.

The Nature Conservancy recognizes and applauds the ambitious goal set forth to reduce nitrogen and phosphorus by 45%. However, we feel the draft Plan needs improvement in order to provide a comprehensive framework to achieving this large-scale vision for Iowa’s freshwater resources. To accomplish the objectives set forth in the Plan, change must occur much more quickly and to greater extent than previously achieved. This will require targeting of practices in priority watersheds to realize the greatest impacts, monitoring and measuring our progress, increasing traditional funding and creating new funding sources, improving our delivery of technical assistance and a better understanding the social barriers to adoption of best management practices. Success is going to be heavily dependent on federal farm programs so we need to influence the farm bill as well as the delivery of the resulting federal farm programs in Iowa. The objectives can be achieved but business as usual will not get us there – a long-term coordinated effort between all stakeholders

including farmers, municipalities, businesses and citizens is essential. The Nature Conservancy respectfully submits the following recommendations and comments and would welcome participating in further development of the Plan.

- 1. The Plan should include a list of the priority watersheds and develop clear time-bound outcomes with interim milestones.** The Nature Conservancy acknowledges that a 45% reduction in nutrients cannot happen overnight. Identifying priority watersheds will ensure limited resources are spent in those watersheds that contribute substantially to the problem. The draft strategy also does not clearly identify outcomes or provide milestones for non-point source reductions. Iowa State University completed an extensive scientific assessment of best management practices which provides an excellent platform to identify short and long-term outcomes. Interim milestones allow for effective evaluation of tangible progress. The science assessment evaluated combinations of practices and estimated costs associated with these practice combinations which illuminates the magnitude of the problem and solutions. The Plan, however, only identified these practice combinations as examples, not recommendations. We believe the Plan should recommend the practice combinations specific to each priority watershed that cumulatively contribute to reducing the State's nitrogen and phosphorus contributions to the Gulf by 45%. Providing recommendations for priority watersheds in combination with milestones will substantially strengthen the plan and capture the significant value of the science assessment.
- 2. We encourage an analysis of the multiple benefits of practice combinations.** The Plan does not consider additional benefits beyond nutrient reduction. The best management practices and land use changes identified in the Plan provide additional benefits including flood risk reduction, improved wildlife habitat, drought mitigation, increased recreational and hunting opportunities, increased grazing and haying opportunities, and soil health improvements. A cost-benefit analysis that looks at these additional benefits would provide a more robust assessment of practices. Cover crops provide a good illustration. Cover crops can reduce nitrogen and phosphorus run off by 30% or more but also improve soil health, decrease soil erosion, and increase water infiltration (especially important during drought years). In fact, deep-rooted cover crops may increase subsoil water holding capacity from 1.7 inches to 4.2 inches. These additional benefits may outweigh the cost from reduced corn yields providing an overall positive benefit to the producer.

The plan also encourages market-based approaches such as water quality trading credits. Credit trading has been effective in other parts of the country when there are regulatory caps on nutrient losses. But in Iowa, there may not be enough regulated point sources in a watershed to make credit-trading and other market solutions viable. However, there may be market-based opportunities to address nutrient reductions in watersheds if other societal benefits are also considered – including flood risk reduction, soil health, recreational opportunities and wildlife habitat improvements.
- 3. Watershed level goals should be established in the Plan while specific practices are tailored to individual farms.** The Plan assesses in-field and edge of field best management practices, but there is no mention of 'watershed scale' practices such as retirement and restoration of frequently flooded agricultural land and integrated management frameworks (i.e. watershed management authorities). While the Plan describes the contribution of land use changes to the nutrient problem, there needs to be a discussion of the systematic solutions needed for land use changes to occur. Indeed the science assessment found that the most effective nutrient reduction practices were land use change practices. This requires looking at the watershed level, not just at the farm level. This does not mean implementation has to be

mandatory at the farm level, but it does require analyzing new ways to provide incentives to *groups* of landowners at the right scale (such as at the drainage district scale) to solve the broad-scale water quality problems. This systematic approach can be best achieved with limited funds by implementing practices and land use changes that provide multiple benefits – in other words, adopting an integrated watershed management framework.

4. **We encourage an analysis of the social barriers to widespread adoption of best management practices.** The proposed solutions (pilot projects, improved efficiencies, outreach and collaboration, increased public awareness and recognition and relying on existing funding sources) do not appear to be vastly different than the tools and approaches used over the last 20 years. The Nature Conservancy encourages a thorough analysis of the social barriers and triggers that are affecting the broad scale adoption of best management practices evaluated in the science assessment. If Iowa is going to be successful at reducing nitrogen and phosphorus loads with a voluntary framework, additional tools beyond financial incentives and cost-share programs are needed to compete with high commodity prices.
5. **The Plan should establish baselines and commit to measuring and reporting annual loads such that we can evaluate our progress toward 45% reduction.** Quantitative load estimates are being developed by the DNR's Geologic and Water Survey, USGS and University of Iowa for various monitored locations and can provide a platform for improving reduction goals and monitoring. We encourage the State of Iowa to implement an adaptive management framework, by setting interim goals, documenting the assumptions made with those goals, and evaluating on a regular basis as we move forward with implementation.
6. **We suggest the Plan include a more thorough analysis of implementation costs as well as explicit funding opportunities and approaches.** The Plan gives little mention to the magnitude of the funding disparity to implement at the scale needed to achieve a 45% reduction in nutrient loading. The cost analysis indicates between \$1.2 and \$4 billion is needed for initial implementation of the practices. The Plan specifies that initially Iowa will rely on existing funding sources (or reallocation of existing funding sources) to implement the strategy; however, at the same time the Plan recognizes that these funds are often limited and oversubscribed. Indeed, since 2002, state funding for water quality programs has dropped by 22%. It is not enough to be satisfied with “the pace of implementation being subject to available funding.” The Plan should include strategies for ramping up and at least doubling current funding for voluntary conservation incentives from the legislature over the next 10 years and prioritize how those funds will be spent.

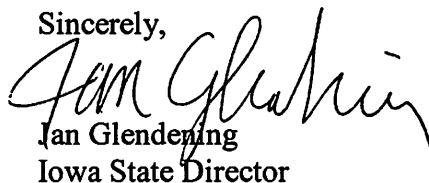
With dwindling public sector resources, we need to look to the private sector to share the financial burdens. Agribusinesses and other businesses within the agronomic supply chain already are contributing to programs that address water quality problems. Coca Cola, Inc. has invested in water quality programs in the Upper Cedar watershed, supporting an 80 acre wetland restoration at the Brownville Wildlife Area near Osage, Iowa which captures water draining from 1,595 acres of cropland. Clean water and continued availability of corn syrup are not mutually exclusive for businesses like Coca Cola, Inc. In the Raccoon and Des Moines watersheds, Agriculture's Clean Water Alliance provides another example of the agricultural retail industry investing in water quality improvement solutions. These examples as well as polling data and the 2010 voter-approved establishment of Iowa's Natural Resources Trust Fund illustrate the people of Iowa care significantly about clean water and are willing to spend additional resources to address the problems. This Plan has an opportunity to shape and guide the creation of new investment opportunities and we encourage the State of Iowa to establish a framework to facilitate and encourage private investment into conservation practices.

Efficiency is identified as one means of maximizing benefits and The Nature Conservancy encourages improving the effective use of limited resources. The state's capacity to deliver programs and to provide technical assistance to farmers is at an all-time low. We are pleased to see the call for an expanded and enhanced public-sector initiative to assist farmers and a call for new and enhanced private-sector roles. Our experience in the Boone River watershed indicates that the private sector can work closely with the public agencies to provide enhanced delivery of programs.

- 7. We recommend the Plan explore opportunities for the State to influence federal policies that are counter to achieving water quality improvement.** The US farm bill legislation provides a significant influence on the farming practices and we encourage the State of Iowa to support coupling conservation compliance to federally supported crop insurance and other federal support.

The Plan is a first to bring together point-source and non-point source reduction into one document and Iowa is leading the Midwest in preparing a statewide strategic plan. The Nature Conservancy recognizes this document as a first step to developing a comprehensive plan. Establishing concrete objectives and goals, prioritizing watersheds, identifying funding sources and strategies to meet these goals are critical. The Plan establishes the Water Resources Coordinating Council (WRCC) as the entity that will operationalize the Plan and we encourage a more transparent and open dialogue with the citizens of Iowa as the WRCC establishes watershed priorities and develops specific objectives. The Nature Conservancy looks forward to working with the State and with stakeholders to address these pressing issues affecting the quality of Iowa's freshwater resources and the Gulf of Mexico.

Sincerely,

A handwritten signature in black ink, appearing to read "Jan Glendenning". The signature is fluid and cursive, written over the printed name and title.

Jan Glendenning
Iowa State Director

Nutrient Reduction Strategy
ANR Program Services
2101 Agronomy Hall
Ames, IA 50011-1010

January 18, 2013

JAN 22 2013

To Whom It May Concern:

I am commenting on the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy. I will begin with a brief description of my personal background.

I was born in Harrison County, grew up in Shelby County, was educated in Story and Johnson Counties, and have lived in central Iowa for most of the past 28 years. I am the descendant of farmers who emigrated to western Iowa in the latter half of the 19th Century and broke the prairie to grow crops and livestock. My grandfathers and my father were farmers. I still have uncles, aunts and cousins who run grain and livestock operations in western Iowa. As a child, I learned from my family about the efforts made during and after the Great Depression to terrace land and limit soil loss. As a university student and adult I have canoed rivers in central and northeast Iowa for recreation. As a parent and an adult scout leader I have taken children to Iowa parks, lakes and on Iowa rivers. I have had numerous opportunities to observe the conditions of Iowa waters, to explain to scouts and other children why lake beaches are closed due to high levels of fecal contamination and what precautions they should take to limit their exposure to infection and exposure to high levels of nitrogen, phosphorus, insecticide and herbicide runoff from farms.

I was an undergraduate university student when clean water standards were established by federal law more than 40 years ago. Since then, Iowa lakes and rivers have become increasingly contaminated by livestock waste, nitrogen and phosphorus runoff from farms, while many point sources of water pollution have been mitigated. In 2008 the EPA adopted the Gulf Hypoxia Action Plan. Each year since then the EPA has prepared annual operating plans identifying specific actions being taken by seven states in the Mississippi watershed, including Iowa, and federal agencies to implement the GHAP. For Iowa these actions included funding and implementation of watershed protection programs, the ISU Wetlands Nutrients and Water Management research initiative and agricultural producer education and outreach programs. In March 2011 the EPA recommended that states incorporate certain elements into statewide nutrient pollution management programs, including:

1. Development of programs to measure nitrogen and phosphorus pollution (N&P loads) contamination in all major Iowa watersheds, identifying major watersheds which collectively account for 80+ percent of the N&P loads delivered to the Mississippi watershed, and identifying priority sub-watersheds for N&P load reduction.
2. Establishing numerical goals for N&P load reduction goals based upon the best available physical, chemical, biological and treatment/control information from local, state and federal monitoring sources.
3. Ensuring effectiveness of point source permits.

4. Develop watershed-scale plans in agricultural areas to reduce N&P loads in partnership with Federal and State Agricultural partners, NGOs, private sector partners, landowners, and other stakeholders.
5. Identify how the State will use state, county and local government tools to assure N&P load reduction from communities not covered by municipal storm sewer systems.
6. 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; verify that load reduction practices are in place; establish baseline N&P loads in each targeted/priority sub-watershed, conduct ongoing sampling and analysis to provide regular seasonal measurement of N&P loads leaving the watershed, and monitor implementation of best management practices.
7. Annually report to the public on state websites the status of specific state programs and actions to reduce N&P loads in each targeted/priority sub-watershed, in an interactive process affording the public an opportunity for comment and feedback, for the purpose of improving implementation and collaboration to achieve N&P load reductions.
8. Develop a work plan and phased schedule for N&P criteria development for Iowa lakes and rivers containing interim milestones including, but not limited to, data collection and analysis, as well as N&P criteria proposal and adoption consistent with the Clean Water Act, for at least one class of Iowa waters within 3 - 5 years, and completion of criteria development in accordance with a "robust, state-specific workplan and phased schedule."

The proposed Iowa Nutrient Reduction Strategy is Iowa's response to the GHAP and EPA's March 2011 recommendations. Thus, the proposed strategy must be measured against the criteria set forth in those documents. Contrary to the claims set forth in the executive summary of the proposed strategy it is not a new beginning in the State's efforts to assess and reduce N&P loads in Iowa waters. Instead it summarizes the history of minimally funded state conservation programs, incorporates the ISU study of point and nonpoint pollution sources, followed by vague and conclusory responses to the March 2011 EPA recommendations.

The proposed strategy says the Iowa Water Resources Coordinating Council (WRCC) will prioritize watersheds on a statewide basis and determine watershed goals "based upon a set of mutually agreed-to indicators" such as "soil and water indicators, crop performance indicators, economic indicators and social/cultural indicators." No timeline is provided or even discussed. There is no analysis of, or even any reference to, the best available physical, chemical, biological and treatment/control information available from local, state and federal monitoring sources.

Regarding point source pollution, and relying upon the ISU study, the proposed strategy notes that modification of existing wastewater treatment facilities has the potential to reduce their nitrogen discharge by 66% and phosphorus discharge by 75% and that, if this effort were fully successful, it would reduce nitrogen loads in Iowa waters by 4% and phosphorus discharge in Iowa waters by 16%. There is no discussion whatsoever of how or when these goals would be

reached. The proposed strategy summarizes existing state regulation of animal feedlots, but contains no account of the numerous breaches of animal waste treatment facilities or resulting pollution of Iowa waters, contains no analysis of the efficacy of existing regulations, nor any process or timetable for evaluating or modifying these regulations. The proposed strategy states that state agencies will work to develop an "environmental credit trading program" in response to nine-year-old federal legislation in effect for the last nine years calling for states to develop a market for water pollution reduction credits. Once again, no discussion of timetable or process.

Regarding non-point pollution sources, the proposed study states a numerical goal of 41% N load reduction and 29% P load reduction. Based upon the prior statement that the maximum potential point source N&P load reduction would reduce overall N&P loads in Iowa waters by 4 and 16% respectively, it appears that the proposed strategy, if fully successful, would result in overall N&P load reductions in Iowa waters of 45%, or less than half of existing N&P loads in Iowa waters. There is no discussion of any basis, medical, scientific or otherwise, for the N&P load reduction goals set for non-point pollution sources, or why non-point pollution source reduction goals should be far lower than point pollution source goals, or why the overall N&P load reduction goals should be less than half the existing N&P loads in Iowa waters. In contrast to the discussion of the cost of point source compliance, there is no analysis or estimates of the financial costs required for agricultural producers or the State required to achieve even the modest goal established for non-point sources.

Regarding so-called minor pollution sources, the proposed strategy notes that Iowa has more than 300,000 private sewage disposal systems. Beyond a summary of existing state and local regulation and funding, no goals, timetables or funding estimates are provided with regard to minor POTWs.

Regarding accountability and verification measures, the State proposes to convene technical work groups beginning in 2013 "to define the process for providing a regular nutrient load estimate...based upon the ambient water quality data network." The State proposes to develop new and expanded frameworks to track progress beyond the existing ambient water quality monitoring networks. The State proposes to "encourage" expansion of geographic coverage and frequency of statistical surveys regarding adoption of nutrient reduction practices by agricultural producers. The State will "seek to develop new frameworks...to characterize farmer and landowner adoption of new technologies and practices that reduce nutrient transport to water from nonpoint sources." The WRCC will establish and refine a "public-private reporting system that documents current nutrient management and conservation system application within watersheds." This prompts one to wonder what the WRCC has been doing in the more than four years since it was created with regard to any of these matters. Once again, no discussion of time tables or fiscal analysis; no specifics as to how the WRCC will accomplish these objectives.

Regarding annual reporting goals, the State proposes a new DNR inventory of management practices, and annual reports by WRCC. Once again, no fiscal analysis or specifics as to how the WRCC will accomplish these objectives.

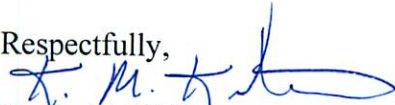
Regarding development of a 3 - 5 year state-wide plan with detailed phases for data collection and analysis, development of N&P criteria, development of N&P load reduction proposals, and implementation consistent with the Clean Water Act, the State promises that the DNR will review ISU research results regarding protection of Iowa lake aquatics communities, and the DNR will evaluate a site-specific nutrient stressor-response approach for stream nutrient goals as part of its existing triennial water quality standards review process. The State throws in a flow chart describing that process. No fiscal analysis or timetable for interim goals or an overall plan is discussed.

In summary, the proposed nutrient reduction strategy is a collection of mostly vague aspirational goals without discussion of, or commitment to, any interim or overall detailed goals or timetables, lacking any technical or fiscal analysis regarding the implementation of any such strategy. Fiscal analysis of legislative bills in Iowa has been required for decades. Yet a document which purports to establish state-level policy on a highly complex issue such as water quality, which affects a public resource vital to our economy and our individual health and welfare, which requires the involvement of governmental agencies at multiple levels, private businesses, and public consumers over an extended period of time, lacks any such analysis.

We now know that the proposed strategy is the product of a process in which the Iowa DNR and Department of Agriculture outsourced the development of this policy to agricultural and commercial trade groups in violation of Iowa law regarding open records and agency action, while qualified public employees with technical expertise were deliberately kept out of the process. As a result of that process the proposed strategy represents the interests of those trade groups and not the interests of the overall public.

In light of the improper delegation of governmental functions to private trade groups, the lack of any meaningful technical or fiscal analysis by qualified and impartial persons or organizations, and the wholesale lack of responsiveness to the GHAP and the criteria set forth by the EPA in its March 2011 memo, I respectfully request that the agency set aside the proposed strategy and establish a task force including representatives of agricultural producers, private industry, local government, environmental organizations, individuals with scientific and technical expertise in wastewater treatment, soil nutrient treatment methods, with the goal of producing, within 12 months, a proposed nutrient reduction strategy for Iowa which is consistent with the Clean Water Act and responsive to the GHAP and EPA recommendations, and with adequate budget and staff to prepare fiscal and technical analyses necessary for the Iowa legislature and the public to evaluate the task force's recommendations in 2014.

Respectfully,



Kevin M. Kirlin

5104 Brookview Drive

West Des Moines, IA 50265

Email: kevin.kirlin@gmail.com

JAN 22 2013

January 18, 2013

To whom it may concern:

I am writing in response to the policy considerations and strategy in the Iowa Nutrient Reduction Strategy. Much has already been said about this plan, but in this late hour of the comment period, I wanted to contribute one final thought.

I was struck by a line on page 19 of the strategy that discusses launching a "marketing or public educational campaign" to "rekindle the conservation ethic in all Iowans." Now, Secretary Northey has requested funds to implement such an awareness campaign, and it appears likely to receive at least some funding.

Hopefully, you will have good luck with your campaign, but I hope as you proceed you'll remember the words of Aldo Leopold, who knew a thing or two about rekindling a conservation ethic. In *The Land Ethic*, he wrote:

"The usual answer to [the conservation dilemma] is 'more conservation education.' No one will debate this, but is it certain that only the *volume* of education needs stepping up? Is something lacking in the *content* as well?"

"It is difficult to give a fair summary of its content in brief form, but, as I understand it, the content is substantially this: obey the law, vote right, join some organizations, and practice what conservation is profitable on your land; the government will do the rest.

"Is not this formula too easy to accomplish anything worth-while? It defines no right or wrong, assigns no obligation, calls for no sacrifice, implies no change in the current philosophy of values. In respect of land-use, it urges only enlightened self-interest. Just how far will such education take us?"

In general, I have seen a troubling lack of acknowledgement that Iowa even has a water quality problem state government is interested in solving. As someone who grew up in this state not trusting the safety of the water in nearby rivers and lakes, I hope the Iowa Department of Agriculture will finally shine the bright light of truth on Iowa's need to make improvements.

It would be wrong—and illogical—to ask farmers to bear the whole burden of solving this problem on their own. It would be wrong to take away farmers' flexibility in deciding how to farm. I hope you will also recognize that there are those of us who believe in cleaner water for Iowa who understand that, but also who won't be fooled that fearing "one-size-fits-all" regulations counts as an excuse to not raise expectations at all.

It's time for you to seriously welcome all stakeholders and get something done. I hope you will.

Sincerely,

Matt Hauge
Grimes, Iowa

January 17, 2013

JAN 22 2013

Nutrient Reduction Strategy
ANR Program Services
2101 Agronomy Hall
Ames, IA 50011-1010

Greetings,

After listening in on a conversation my wife and I were having, our 6-year old son, Liam, wished to write you about how several times this summer when visiting his grandparents at Lake Panorama he was not able to go swimming because of the condition of the water. Please accept his earnest and heartfelt letter as part of your study.

My sincere thanks,

A handwritten signature in black ink, appearing to read "Kevin Zdenek". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kevin Zdenek

Dear everyone

I remember that in the summer
I was going to snowino But there
was a lgeee. So I can't go in the

water. cude you make the water
clean.

• love Liam HG

• to you

January 17, 2013

JAN 27 2013

To Whom it may concern,

Congratulations to the people who have drafted the Nutrient Reduction Strategy for Iowa. I think that anyone who reviews this document thoroughly must appreciate the effort of the people involved. It is based on science and not on pre-conceived ideas. It is the first step forward.

We must use scientific methods to document what the current nutrient loads are at a given time of year and weather cycle. After implementing practices to reduce amounts of nitrogen and phosphorous, the changes achieved must be documented with testing. Taking and testing of water samples is expensive, but is necessary to prove which practices truly impact water quality in a positive way and which practices give the greatest benefit for the resources invested.

Measuring and recording rainfall and weather events at the time of water sampling are also necessary. We must never forget that weather is a huge factor in water quality issues. The variables in rainfall volume and intensity can temporarily overpower the very best practices we employ in the future.

Although I have experienced the need for legal action to improve water quality, I have also witnessed many very successful changes in water quality through voluntary participation. Identifying small watersheds with water quality issues is the first step. Then, following with education for landowners and farmers and offering technical and financial assistance, usually results in voluntary implementation of needed practices.

As a former SWCD commissioner in Allamakee county, I know that financial assistance can often be the limiting factor in implementing soil conservation and water quality improvements. With the limitations of available money, personnel and equipment, we should expect a long journey. We will need patience and persistence to achieve our goals.

Sincerely,



John Schultz



IOWA ASSOCIATION OF
BUSINESS AND INDUSTRY

The Voice of Iowa Business Since 1903.

January 17, 2013

JAN 22 2013

The Honorable Bill Northey
Iowa Secretary of Agriculture

The Honorable Charles Gipp
Director, Iowa Department of Natural Resources

Wallace State Office Building
Des Moines, IA 50319

Dear Secretary Northey and Director Gipp:

The 1,400 members of the Iowa Association of Business and Industry (ABI) care deeply about the environment as business and community leaders who have chosen Iowa as the place to call home. As traditional “point sources” ABI members have been watching with interest the developments surrounding the Nutrient Reduction Strategy (the strategy) that has been crafted by the two state departments you lead. ABI appreciates the efforts made by the Iowa Department of Natural Resources (DNR) and the Iowa Department of Agriculture and Land Stewardship (IDALS) to come together to develop one strategy to address the impacts that point and nonpoint sources have on the nutrient loads to Iowa waterways. ABI believes that accessible and safe water is a benefit to all Iowans and makes Iowa a more attractive place to live and do business.

On December 3rd, ABI President Mike Ralston wrote to you requesting an extension of the public comment period for the nutrient strategy as our members believed it was too aggressive at 45 days and overlapped the observance of three separate holidays. We appreciate the final determination to extend the deadline in order to allow for a more adequate review of the strategy documents. As with any effort of this magnitude, we understand that you have to start somewhere. After careful analysis of the strategy it seems clear to ABI that more work is needed to refine the contents and clarify certain aspects that will impact point sources significantly. I will do my best to outline ABI’s initial comments on the plan and trust that the DNR and IDALS will seek further input and collaboration with industry members as the process continues in the lead up to implementation.

Recognition of the “Point of Diminishing Returns” Concept

In economics, the point of diminishing returns is, according to Merriam-Webster’s Dictionary, “a rate of yield that beyond a certain point fails to increase in proportion to additional investments of labor or capital.” The strategy put forth calls for point sources to incur an involuntary cost of

\$1.533 billion dollars in capital infrastructure and technologies with an annual operating cost of \$114 million dollars. Iowa's employers and their employees along with every taxpayer served by municipal facilities are going to be asked to invest a great deal of resources in order to achieve their proportion (4% - Nitrogen, 16% - Phosphorous) of the 45% nutrient reduction goal outlined in the strategy. There must be an acknowledgement by DNR and IDALS that point sources are quickly approaching a scenario where additional "improvements" to treatment facilities will simply not be justified under any economic or environmental formula.

Place Emphasis on Regulatory Certainty for Point Sources

ABI members can appreciate the strategy's effort to create as much regulatory certainty as possible with such an expansive goal. Any assurances that DNR and IDALS are able to afford point sources during the implementation of the strategy will benefit the people and places where nutrient reductions are aimed. While the point source side focuses on ten year windows of regulatory certainty and twenty year windows of technology design life, the final strategy must consider "off ramps" for point sources when those windows close unexpectedly. Current legal, economic and political winds are tragically unpredictable and considerations need to be made about how any future developments may impact the feasibility calculations the DNR will utilize when issuing National Pollutant Discharge Elimination System (NPDES) permits.

To that end, NPDES permit expiration should be the only qualifying event for implementation of the nutrient strategy. Currently, NPDES permits may be amended prior to the five year renewal cycle for various reasons. When point sources are planning for production expansions that will increase nutrient loads, the imposition of nutrient limits is appropriate from a design and planning perspective. However, permits are routinely opened for a variety of minor issues, including changes in chemical additives or other minor production changes. Addressing the nutrient reduction strategy through NPDES permits should wait until the permit expires so that promised regulatory certainty and planning can be realized.

Further Revisions to Draft Nutrient Permit Requirements Language

ABI received a draft document from the DNR that was not available during the initial release of the strategy. The document was draft permit language that will be used to implement the nutrient reduction strategy in NPDES permits and was intended to provide some additional clarifications to questions surrounding the proposed nutrient reduction feasibility review process. This draft permit language describes how the permit holder will be required to study treatment technologies that would achieve significant reductions in the amounts of total nitrogen and total phosphorus discharged with a goal of achieving annual average mass limits equivalent to concentrations of 10 mg/L total nitrogen (TN) and 1 mg/L total phosphorus (TP) for plants treating typical domestic strength sewage. This language should be modified to also address plants treating wastewater with total nitrogen and/or total phosphorus concentrations greater than typical domestic strength sewage. In this case, the evaluation should include projected reductions in nutrient loads achievable with the application of economically and technically feasible treatment technology. A target percent reduction in nutrient loads could be included.

Similarly, the permit requirement language should be modified to allow for a "no action" outcome for facilities that find that their effluent is already at or below the proposed TN and TP limits. For facilities withdrawing surface water, ABI asks that discharges such as once-through

cooling water be exempted from the limits, and that other discharges would be subject to the limit on a net-addition basis to account for existing concentrations in surface water.

Also, a discussion of timing would help affected facilities to understand the time frame that might be acceptable to DNR. We appreciate the flexibility provided for facilities to work with DNR to develop an implementation schedule, but guidelines on the timing would help facilities with planning. For example, if new construction is required, a facility could expect that new limits would not take effect until the NPDES permit renewal cycle that follows the first permit implementing the nutrient strategy. While ABI recognizes the unprecedented nature of this strategy, a measured approach needs to be underscored so as not to create a competitive disadvantage for Iowa industry.

Opportunity to Review Revised Nutrient Strategy

There will likely be significant changes to the draft strategy based on public comment. Therefore, ABI requests the opportunity to review and further comment on the revised draft strategy prior to final publication and implementation.

For example, ABI requests that the departments justify the inclusion of the industrial facilities not originally named in the strategy upon its initial release in November 2012. As of January 8, 2013, the online documents hosted by Iowa State University still had yet to reflect the inclusion of these facilities. The strategy doesn't clearly provide point sources the rationale used by DNR to include these facilities. Explaining this in the strategy would help clarify what formula or definition is being used to evaluate point sources.

Further guidance is also needed regarding what steps will be required of facilities following the initial discovery of nutrient concentrations above the threshold limits of 10 mg/L TN and 1 mg/L TP. ABI would appreciate clarification on who is responsible and qualified to perform nutrient level testing of point source discharge waters. It is unclear if DNR anticipates allowing facilities to perform testing using their own resources or if an independent contractor or third party will be required to perform the tests during the various stages of the strategy, should the nutrient threshold be surpassed at an individual facility.

Questions have also surfaced around the possibility of a retesting period following the initial discovery that a facility's effluent is above the established TP and/or TN threshold. There appears to be no indication of how DNR plans to approach situations where the nutrient threshold is breached by a narrow margin and might be found later to have been an anomaly based on follow-up testing. That is, the process that is put in place following the initial detection of the nutrient threshold should be one of verification followed by mitigation. Allowing point sources a reasonable period of time to swiftly correct marginally higher levels of nutrient load before retesting would be a positive development. ABI believes that there will be instances where the point source can more efficiently achieve compliance with the strategy if afforded an opportunity to adapt their internal treatment processes to meet the threshold before a verification testing would occur.

Another area of concern that should be addressed in a revised strategy document is whether point sources not listed in the strategy could be impacted as "indirect dischargers" if the point source is connected to a Publicly Owned Treatment Works (POTW) facility. According to the strategy, it

is expected that most major municipal wastewater treatment facilities (>1 MGD AWW Flow) can economically meet technology-based TN limits of 10 mg/L and TP limits of 1 mg/L on an annual average basis with biological nutrient removal (BNR) technology. Industrial facilities that discharge to these POTWs may be affected by the strategy as indirect dischargers even though they are not on the point source list included with the strategy. Further clarification should be provided by DNR regarding whether it will take any action toward these indirect dischargers, or if it will be up to the POTW to determine whether changes to pretreatment limits will be required of facilities that discharge to their treatment plant.

Only Require Monitoring Upon NPDES Permit Renewal

To date, there are 148 point source facilities listed in the strategy. The State of Iowa currently has many more NPDES permit holders. It would be important for ABI members to have a better understanding of DNR's intended approach to the NPDES permit holders and other point sources that are not specifically named in the current strategy. ABI would like to know if there will be nutrient data collection requirements for all NPDES permit holders that could result in additional industrial facilities being required to implement the nutrient strategy.

The draft strategy listed 28 industries with biological treatment for process waste as those industries that would be required to implement the strategy. After the draft strategy was released, DNR added 18 industries to the list that are "major" under NPDES rules. However, it is unlikely that these additional industries have operations that result in significant nutrient loads. One interpretation of the draft would mean that the strategy requires each permitted facility to conduct a feasibility study during their permit renewal process. In the event significant nutrient loads are discovered during the feasibility study, the nutrient strategy requirements would then become applicable. Therefore, ABI again requests that DNR only require nutrient monitoring for these additional facilities at the time of their NPDES renewal following expiration.

Exploration of "Nutrient Marketplace" Warranted

ABI members were encouraged to learn some time ago that a process was underway and a partnership had been established by IDALS and DNR to produce a nutrient reduction strategy. ABI has long held the belief that any serious effort to remove nitrogen and phosphorous from Iowa waterways would require both point and nonpoint sources to be involved as proportional contributors to present day nutrient loads. While ABI will continue to review this strategy and its further development and implementation we must also recognize the potential opportunity that lies before this state. The strategy briefly mentions on page 17 "credit trading" under the section discussing the effectiveness of point source permitting. ABI members would welcome a deeper discussion about what a market based approach would look like.

To be clear, ABI is not endorsing the "credit trading" idea but we are intrigued by the prospect and willing to discuss how industrial point sources could contribute to that effort. Other states have unsuccessfully attempted similar approaches and without further development and input from the business community we would be concerned the Iowa strategy would suffer the same fate.

Topics for further consideration may include:

ABI Nutrient Reduction Strategy Comments

- Creating a system that allows public utilities to reduce their environmental compliance costs by contracting with agriculture to reduce nutrient loading.
- NPDES permit holder being allowed to minimize compliance costs through offsets and pollution reduction pooling among permit holders (point source to point source trading).
- Encouragement and promotion of trading and offset agreements without creating centralized “banks” or trading bureaus.
- Establishment of a mechanism for ABI and other point sources to monitor and comment on the nonpoint source nutrient reduction progress. Because nonpoint sources will not be bound by permits or regulatory requirements to reduce nutrient loads and because funding for nonpoint source nutrient reductions can vary significantly, ABI is concerned that nonpoint source reductions might not occur as outlined in the strategy.
- Transparency in the activities of the Water Resources Coordinating Council and Watershed Planning Advisory Council that will provide the State with ongoing information and expertise on cost effective nutrient reduction solutions.

Again, thank you for your consideration of these initial comments on the nutrient reduction strategy. Although ABI had a designated representative involved in the strategy development, ABI members at large were not allowed to review the strategy until it was released publicly on November 19, 2012. We will continue to analyze the strategy and look forward to additional opportunities to provide input on the various sections of the plan that must undergo revision and further development. ABI stands ready to continue to contribute to the discussion of how point and nonpoint sources may successfully achieve the goal of nutrient reduction in Iowa.

Respectfully,

A handwritten signature in black ink that reads "Kevin J. Condon". The signature is written in a cursive style with a large, stylized "K" and "C".

Kevin Condon

Director, Government Relations



Natural Resources Conservation Service
210 Walnut Street, Room 693
Des Moines, IA 50309-2180

January 17, 2013

JAN 22 2013

Nutrient Reduction Strategy
ANR Program Services
2101 Agronomy Hall
Ames, Iowa 50011-1010

Thank you for the opportunity to review and respond to the Iowa Nutrient Reduction Strategy and the Iowa Nonpoint Source Nutrient Reduction Science Assessment.

We want to take this opportunity to once again thank Secretary Northey for his leadership in addressing nonpoint source pollution and setting nutrient load reduction goals. We recognize the tremendous effort and extensive amount of time behind these reports. Natural Resource Conservation Service (NRCS) appreciates the leadership the Iowa Department of Agriculture and Land Stewardship (IDALS) is providing and the technical expertise provided by Iowa State University and the collaborating agencies. Thank you for including NRCS in the science assessment.

The Iowa Nutrient Reduction Strategy and the Iowa Nonpoint Source Nutrient Reduction Science Assessment are important documents and represent a significant step forward in our state's efforts to address water quality. NRCS is especially interested in Section 2, the Nonpoint Source Nutrient Reduction Science Assessment, and the parts of Section 1 dealing with nonpoint source water pollution. The comments below deal with these sections.

Section 2: Nonpoint Source Nutrient Reduction Science Assessment.

The science assessment demonstrates that the 45% reduction goal of N and P is achievable and describes several possible pathways to that goal. These are significant accomplishments.

The document assesses the potential of specific conservation practices to achieve numerical water quality nutrient reduction goals. This is another very significant accomplishment. This document highlights there is no magic bullet -- no single technology -- which will solve this problem. Rather, it demonstrates that a suite of practices is needed. This is consistent with NRCS's conservation planning concepts and our conservation systems approach to avoid, control, and trap nutrients. This report provides a valuable analysis of measured water quality impacts of these technologies -- especially the delivery of nitrates -- which will assist in conservation planning.

We do have some concerns about the science assessment, many of which are recognized by the assessment team in their report, but still need to be highlighted.



The science report is based on published, peer reviewed data for Iowa and adjacent states, a justifiable approach. However, since there may be a long-term research bias for corn and soybean production in Iowa and conservation practices tied to these two crops, the report reflects that bias by having limited information on potentially viable alternative cropping systems and conservation practices. For instance there may be viable alternative crops and rotations which require less added nitrogen or can more efficiently trap nutrients throughout the soil profile or for more months of the year. Part of the strategy should reflect non-traditional opportunities for agricultural production which inherently have less water pollution potential. The strategy should chart a path to investigate both their potential to significantly reduce nonpoint pollution and their economic viability.

Additionally, limiting the analysis to data from just Iowa and adjacent states may have been unduly restrictive for some conservation practices. Data from Indiana, Ohio, and Michigan for cover crops, drainage water management, no-tillage, etc., may have provided additional, quality information that is appropriate when local data is limited.

For some conservation practices, which are management intensive (e.g. cover crops, no-tillage, and drainage water management), the data did not distinguish among the nutrient management, crop production, and economic impacts when the systems were poorly managed versus well managed. Cover crops are one clear example. If not properly managed, the cover crop may not function as effectively to scavenge nutrients or may end up competing with the cash crop for water and nutrients.

Thus while the report highlights the potential for cover crops to achieve nutrient reductions in water, it indicates that the cost is very high due, in part, to the potential reduction in corn production. As evidenced during the recent "Cover Crops: Practical Strategies for Your Farm" conference hosted by the Soil and Water Conservation Society producers with many years of experience in cover crops have learned to manage risks to production. We encourage you to re-examine the cover crop data to determine, if possible, which management strategies work best for environmental, production, and economic performance. Given the small number of studies, we recognize this may not be possible. But ask that you consider selecting cover crop viability as a research priority.

We believe there are tremendous opportunities for innovative ideas to improve cover crop performance including new cover crop species, improved cultivars, multiple specie mixes, planting method and equipment, seed cost, timing of planting and termination, and termination methods.

The data used to analyze no-till production appears to have used predominantly short-term or rotational no-till research. Short-term and long-term, continuous no-till systems are very different both in terms of the impacts on nutrient management and on crop production. Only in long-term no-till can we expect to see changes in soil quality which are beneficial for crop production. We would also expect to see even more improved environmental performance in a continuous no-till system. Short-term and long-term no-till should be evaluated separately.

In general, we believe you should consider the long-term, aggregate impacts of conservation practices such as erosion control, cover crops, high-residue crops in rotation, and reduced tillage or no-till on both our soil's crop production potential and their capacity to hold and cycle nutrients. The studies used do not appear to account for improvements in soil performance due to increased organic matter, microbial activity, and soil structure when the conservation practices are maintained over the long-term. Alternatively, they do not account for the environmental and economic impact of agricultural systems which degrade the soil over time. Changes in soil quality and the subsequent long-term impact on production and water quality should be considered when evaluating conservation systems.

The report does not distinguish the relative value of in-field versus edge-of-field practices. The report confirms that nutrient management, cover crops, extended rotations, perennial crops, and pastures are effective nutrient reduction practices. In-field technologies, such as these, address water quality issues systemically and robustly. For nitrates, in-field conservation technologies protect both tile line water and groundwater. Edge-of-field technologies such as filter strips, nutrient-treatment wetlands, and bioreactors, while effective at treating tile line and other surface/near surface water, have limited impact on groundwater. We believe that in-field conservation practices should be a priority.

The data in the assessment indicating very little water quality advantage from moving N application from the fall to the spring contradicts conventional wisdom. Given what we know about the risk of nitrate loss, especially in the late winter and early spring, we are concerned about the validity of this conclusion and ask that it be re-examined.

The report accounts for stream bank and channel erosion and legacy sediments as phosphorus sources (perhaps as much as 50% of the P load). However, the report fails to discuss the technologies, costs, and benefits of stabilizing these systems. This needs to be addressed.

Some key and promising practices such as denitrifying bioreactors and constructed wetlands are new and their N trapping capacity is based on limited data. Actual effectiveness, long-term viability, maintenance issues, and potential of unintended consequences are not adequately known. While we support the implementation of these conservation practices, we suggest continued work to design optimal systems and develop maintenance criteria and infrastructure. Secondary impacts also need to be examined and mitigation needs for those impacts need to be accounted.

Executive Summary and Section 1: Policy Considerations and Strategy.

We recognize and concur with the emphasis on voluntary conservation efforts to achieve nutrient reduction goals. We encourage the full engagement of the agricultural community in activities to achieve these goals. There are some specific issues in the strategy we would highlight.

The strategy item - Strengthen Outreach, Education, Collaboration: Expanded Agribusiness Consulting (p.18-19) is a key goal that needs additional detail. The Iowa Certified Crop Advisor

(CCA) Association and the Agribusiness Association of Iowa could provide leadership. Clear guidance, promotional materials, planning tools and data management tools could be developed to assist the CCAs. A business model to separate agronomic consultation from fertilizer sales could be developed and promoted. Some businesses are already providing leadership to address nutrient reduction. See the Agriculture's Clean Water Alliance *Code of Practice for Nitrogen Fertilization* for a sample model.

Determine Watershed Goals (p. 15). Also Accountability and Verification Measures: Regarding nonpoint source (p. 21). The strategy to develop indicators and tracking mechanisms is important. Of note is the commitment to go from HUC 8 to selective HUC 12 monitoring. Importantly, the strategy adds other valuable indicators (e.g. crop performance, economic, social/cultural, conservation practices, fertilizer application) to the water quality indicators to be monitored. Collecting enough of this information is a Herculean task well worth the effort. How this will be done and paid for needs to be developed.

Institutional Capacity. The Iowa Water Resources Coordinating Council (WRCC) is listed as providing "coordination, oversight and implementation of this strategy" (p. 12). This Council was not engaged in writing the strategy. It is not clear what their role will be; neither is the role of the Iowa Watershed Planning Advisory Council (WPAC).

NRCS was previously involved in the development of the Iowa DNR strategy outlined in the report *Planning for Water Quality: July 2012 Iowa's Nonpoint Source Management Plan* which also addresses nonpoint source pollution. It is unclear how the *Iowa Nutrient Reduction Strategy* and the IDNR plan are to be coordinated and thus how NRCS can best provide support to achieve Iowa's water quality goals.

A lot of work went into the science assessment and the development of a strategy. The document is an excellent tool to assess technologies to address nonpoint source pollution and to set priorities. It also identifies additional needed research and innovation. The goal to reduce total nitrogen and total phosphorus by 45% and the strategy to achieve it are commendable and create a tremendous challenge for the agricultural community. As a part of that community we look forward to working with Secretary Northey, IDALS, the Soil and Water Conservation Districts, IDNR, ISU, agribusiness, producers, and others to create a more detailed plan of work to implement a strategy to address nonpoint source pollution.

Sincerely,



Jay T. Mar
State Conservationist

Varel G. Bailey
55213 770th Street
Anita, Iowa 50020

NOV 22 2013

December 28, 2012

Iowa Nutrient Reduction Strategy

I commend the Iowa Department of Agriculture and Land Stewardship, the Iowa Department of Natural Resources and Iowa State University for all the work to develop the 2012 Iowa Nutrient Reduction Strategy.

It is important because it is timely, provides a positive approach, applies scientific principles and is all inclusive of the parties involved. It is the best strategy option to avoid government regulation of farming practices with the ultimate result; a bureaucracy based license-to-farm. It is very important to call this the 2012 version of the strategy because it must be continuously improved to show new research and new management system development to stay ahead of the pro-government regulation groups. As a farmer who has developed his own conservation plans and manure management plans and applied them for forty-six years I can state as fact that the "cookbook based" government conservation plans do **not** fit many fields when the goals are to improve the soil, reduce erosion and runoff and continuously increase production. The mandatory government "one-size-fits all prescription to farm" would be a long term disaster for Iowa agricultural production.

There is a reason to make the public aware that the 2012 Iowa Nutrient Reduction Strategy is a working document: we do not currently have the scientific knowledge to significantly alter the hypoxia in the Gulf of Mexico. If all the best management practices (BMP's) and the Natural Resource Conservation Service (NRCS) technical manual practices were universally applied, it would result in little change in the gulf. The reason is that the soil with all its unknown variables and biologically complex reactions is at the core of the nutrient translocation issue. Early recognition is needed that a major increase in soils research and the development of new crop production management systems are necessary steps to have a measurable impact on gulf hypoxia. Two presentations at the 2010 Iowa Water Conference revealed the depth of the problems. Dr. George Czapar, University of Illinois, showed the State of Illinois' research on determining the appropriate regulatory standard for phosphorus in river water. After considerable time and funds they used the Oak Ridge, TN, river biological simulator. The results are the biological activity of river water is almost static until phosphorus is totally absent; then it drops to zero. Studies of Illinois crop production nutrient balances show that Illinois farmers are removing more phosphorus in the crops they raise than they are applying in fertilizer. The research analysis show the EPA phosphorus water standard is arbitrary and restricting the use of phosphorus fertilizer will cause no affect on hypoxia. The nitrogen presentation was by Prof. Deanna Osmund, North Carolina State University. She worked with all the farmers in a single watershed containing a significant number of confinement hog production units. Her challenge was to get all the farms to use BMP's as a watershed wide nutrient management program. The project included monitoring farms management and water quality throughout the watershed.

The result, after implementation of BMP's throughout the sector, after five years, was there was no significant change of nitrate in the water leaving the watershed. Universal implementation of current BMP's will not affect hypoxia.

The Deputy Director of the EPA attended the presentations and when asked during the Q&A to explain the EPA strategy to solve the hypoxia problem based on the presentations, his answer paraphrased was; "Just because we don't know how to do it doesn't mean we shouldn't do something".

Even though this letter documents our current inability to reduce the gulf hypoxia, I am optimistic that we can do it—on two conditions.

First, we apply aggressive research efforts to discover the mechanisms that drive the capture and release of nutrients by the soil, then, create controllers for those triggering mechanisms.

Second, we find a way for environmental groups, government agencies, research institutions, agricultural organizations and farmers on the land to work together to create new nutrient management systems that utilize all the current technology. That will be much more effective than continuously calling for more government regulation. Mandating ineffective controls will be counter-productive in solving the problem and will siphon off resources necessary for a genuine solution.

In the long run, the research cost to discover and control the soil triggering mechanisms will result in a huge economic benefit—the value of all the nutrients that are not going down the rivers.

The 2012 Iowa Nutrient Reduction Strategy is great in taking a progressive first step. The real work has just begun.

Wendell Bailey



Iowa Association of Water Agencies

January 17, 2014

Dean Lemke
Iowa Department of Agriculture and Land Stewardship
Wallace Building
502 E. 9th Street
Des Moines, Iowa 50319

John Lawrence
Iowa State University
132 Curtiss
Ames, IA 50011

Adam Schnieders
Iowa Department of Natural Resources
Wallace Building
502 E. 9th Street
Des Moines, Iowa 50319

RE: Iowa Nutrient Reduction Strategy

Gentlemen:

This is to provide the Iowa Association of Water Agencies (IAWA) comments regarding the Iowa Nutrient Reduction Strategy (Strategy). IAWA's membership is comprised of municipal and rural drinking water utilities that serve a population of 10,000 or more. Collectively, our member utilities provide drinking water to approximately 1.2 million Iowans.

IAWA and its member utilities recognize both the need for and the benefits that will be realized with the reduction of nutrient loadings to Iowa waters. The targeted 45% reductions of nitrogen (N) and phosphorous (P), if achieved, will not only reduce nutrient loadings to the Gulf of Mexico but will also greatly enhance the quality of the state's water resources and their beneficial uses for all Iowans. Consequently, IAWA generally supports the Iowa Nutrient Reduction Strategy. Although supportive, IAWA does have some reservations and comments regarding the proposed Iowa Nutrient Reduction Strategy and its implementation.

IAWA commends and is generally supportive of the Strategy based on the following considerations:

- IAWA recognizes the need for and benefits to be realized from the implementation of the Iowa Nutrient Reduction Strategy. IAWA considers the Strategy to be a "small, first-step in the right direction" of enhancing and protecting Iowa's water resources.

Iowa Association of Water Agencies
2201 George Flagg Parkway, Des Moines, Iowa 50321
515-283-8706 kinman@dmww.com

Iowa Association of Water Agencies

- The Strategy and accompanying documents provide a good overview of the nature and scope of the current nutrient loading challenges in Iowa as well as the challenges we will face in the efforts to achieve meaningful reductions from both point and non-point sources.
- IAWA commends the stated commitment to develop an integrated plan that is based on sound science and attempts to incorporate factors such as best available technologies and cost-benefit analyses.

IAWA would also offer the following observations and concerns as well as suggestions that we believe will strengthen and facilitate a better understanding of the need and benefits of the Iowa Nutrient Reduction Strategy:

- IAWA notes that the Strategy document has just a few limited references to the local water quality benefits that will be realized with the reduction of nutrient loadings. We believe that the Strategy document should include additional discussion regarding enhanced water quality and its benefits for drinking water sources, recreational and aquatic habitats. The Strategy should stress that these “local” benefits will also provide an enhanced quality of life and economic benefits to all Iowans. IAWA offers to provide a representative to serve on the Science Advisory Panel or other stakeholder group organized for future discussions, establishing goals and setting timelines.
- Based on the contribution of nutrients, the Iowa Nutrient Reduction Strategy would appear to require point sources (large municipal and industrial NPDES holders) to provide a disproportionate percentage of the stated nutrient reduction goals. The targeted reductions goals are fairly explicit and will be extremely expensive to achieve. These costs will be borne directly by the municipal utility rate payers and the affected industries. We believe the Strategy should more fully recognize the burden that will be borne by industrial and municipal point sources.
- Similarly, the Iowa Nutrient Reduction Strategy is somewhat vague regarding the extent of the nutrient loading reductions needed to be achieved by non-point sources and the proposed plan of action in the event that the proposed voluntary actions fail to achieve the targeted reductions.
- Per the Strategy document, the current respective contribution by point and non-point sources of nutrient loadings to Iowa waters is as follows:

Iowa Association of Water Agencies

	Nitrogen	Phosphorous
Estimated Total Tons per Year – All Sources	275,000 Tons/Yr	13,563 Tons/Yr
Point Sources (Municipal and Industrial)	8%	20%
Non-Point (Agricultural)	92%	80%

The document also indicates that full implementation of the Strategy will achieve the following approximate reductions of the nutrient loadings from point sources:

Point Sources	Current% Contribution	Targeted Reduction	Projected Overall Reduction
Nitrogen	8%	66.7%	5.4%
Phosphorous	20%	75.0%	15%

The above exercise illustrates that targeted reduction goals for point sources would only provide a small percentage of the overall 45% reduction goals for both nitrogen and phosphorous. In fact, elimination of **all** nutrient loadings from point sources would only provide for an overall reduction of 8% for nitrogen and 20% for phosphorous. The math and economics of the nutrient loadings dictate that the preponderance of the needed reductions to fill “the gap” will have to come from non-point sources. Unfortunately, the Strategy document does not fully address the mechanisms or timelines for achieving the reductions needed from non-point sources.

We hope that these comments and suggestions will be helpful.

Thank you for your consideration.

Sincerely,



John North
Executive Director, on Behalf of the Board of Directors
Iowa Association of Water Agencies

Cc: IAWA Board of Directors and Member Utilities

Mr. Chuck Gipp, Director,
Iowa Department of Natural Resources

Mr. Bill Northey, Secretary of Agriculture
Iowa Department of Agriculture and Land Stewardship

Lawrence, John D [VPEO]

From: Schnieders, Adam [DNR] <Adam.Schnieders@dnr.iowa.gov>
Sent: Tuesday, January 22, 2013 5:09 PM
To: jdlaw@iastate.edu
Cc: Amelia Schoeneman
Subject: RE: Iowa Nutrient Reduction Strategy comments

John,

I did receive these on Friday before the deadline. I think there was some confusion where the comments were to be submitted. I have the paper set that I can share tomorrow as well.

Adam

From: Amelia Schoeneman [<mailto:amelia@environmentiowa.org>]
Sent: Tuesday, January 22, 2013 4:41 PM
To: jdlaw@iastate.edu
Cc: Schnieders, Adam [DNR]
Subject: Iowa Nutrient Reduction Strategy comments

Hi Lawrence,

I just spoke with Adam and the DNR (copied) and am sending you the public comments we collected on the Iowa Nutrient Reduction Strategy. Adam can confirm they were submitted before the deadline but wanted to make sure they got to you as well. Thanks!

Best,
Amelia

Amelia Schoeneman
State Associate
Environment Iowa
3209 Ingersoll Ave., Ste. 210
Des Moines, IA 50312
515.243.5835(o)/309.269.0561(c)

Scott McCallum
2601 45th St
Des Moines, IA 50310-3151

Jan 15, 2013

Subject: Stop Corporate Agribusiness Pollution

Dear decision maker,

I am writing in response to the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy.

I strongly oppose the Nutrient Reduction Strategy put forth for the state of Iowa by your administration. Your proposed plan does little to address the problems facing the state and the country. Your plan even admits this fact. I strongly urge you to reject this plan and start over. You should approach the issue of reducing nutrients from our streams and rivers as a real problem that the state of Iowa can overcome.

Nonpoint source pollution accounts for 92% of total Nitrogen and 80% of total phosphorus in our waterways. Your plan does absolutely nothing to address this. Your plan attempts to reduce the problem by only dealing with point source polluters. While point source pollution reduction needs to be included in the overall nutrient reduction strategy, it is impossible to solve Iowa's problem by refusing to deal with the vast majority of polluters (farms).

The entire plan approaches the problem of nutrient reduction with a defeatist attitude. You seem to think nothing can be done and so you refuse to do anything. Over and over again you speak of how expensive it is to implement any meaningful reduction strategies. You say that you are willing to tax everyone in the state to cleanup the smallest producers of pollution (water treatment plants). Yet, you are unwilling to consider anything to deal with the largest polluters in our state (farms). I would face severe penalties if I was to dump pollution into a river or lake, but farmers can engage in this activity and you turn a blind eye.

Your proposal is in stark contrast to the "Cost-effective Water Quality Protection in the Midwest" study published by the Heartland Regional Water Coordination Initiative and the "Agricultural BMP Handbook for Minnesota" published by the state of Minnesota. Not only are these other studies more logically presented with a far better layout that makes them easier to read, they approach the problems as having solutions. Your plan repeatedly blames "the weather" for increase in nutrient runoff from farms. While the weather is constantly changing, there are ways to mitigate the effects of the changing weather.

As an avid kayaker and user of Iowa's waterways, it saddens me when I see Big Creek covered with blue-green algae, or when the Middle Raccoon River smells like manure, or when I travel down any river in Iowa and

see corn and soybeans planted at the very edge of the river. Iowa needs to address these problems with the urgency they deserve. Iowa's waterways are a valuable resource that need to be protected for all Iowans, not just used as a dumping ground for farmers. Until the state wants to address these problems, my fiancée and I will continue to look at moving to a state that values its waterways.

Sincerely,
Scott McCallum

Kate Derksen
145 Campus Ave
Unit 4
Ames, IA 50014-7468

Jan 2, 2013

Subject: Stop Corporate Agribusiness Pollution

Dear decision maker,

I am writing in response to the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy.

As an Iowan, it is unacceptable that our lakes, rivers and streams are too polluted--470 of the state's rivers are classified as "impaired." We need a cleanup plan that will make meaningful improvements in our state's water quality.

But the Iowa Nutrient Reduction Strategy fails to place any limits on Iowa's biggest source of pollution, industrial agriculture.

The strategy needs to have an accountability mechanism to mandate agriculture to stop polluting. I strongly support the development of limits for runoff pollution from agriculture like numeric criteria for phosphorous and nitrogen in our waterways.

Only through such limits can we create the accountability necessary to clean up our waterways.

Sincerely,
Kate Derksen

Jeff Hall
1401 Florida Ave
Ames, IA 50014-3720

Jan 2, 2013

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Sincerely,
Jeff Hall

Jason Stigen
2012 Bridge Ave
Davenport, IA 52803-2466

Jan 2, 2013

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Sincerely,
Jason Stigen

Chris Keis
709 Meadowlane Ct
Mt Vernon, IA 52314

Jan 2, 2013

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Sincerely,
Chris Keis

J. Lynch
8771 Primrose Ln
Des Moines, IA 50325-5423

Jan 2, 2013

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Sincerely,
J. Lynch

Phil Walsh
120 51st St
Des Moines, IA 50312-2104
(515) 255-2552

Jan 2, 2013

Subject: Stop Corporate Agribusiness Pollution

Dear decision maker,

I am writing in response to the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy.

Stop kow-towing to the Iowa Farm Bureau, and start standing up with Iowans who want clean waterways.

Sincerely,
Phil Walsh

Phil Walsh
120 51st St
Des Moines, IA 50312-2104
(515) 255-2552

Jan 2, 2013

Subject: Stop Corporate Agribusiness Pollution

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Sincerely,
Phil Walsh

Lanny Carlson
1204 28th St
Ames, IA 50010-4430

Jan 2, 2013

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Sincerely,
Lanny Carlson

Victor L. Miller
2746 Aurora Ave
Des Moines, IA 50310-5951
(515) 274-2265

Jan 2, 2013

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Sincerely,
Victor L. Miller

Dale Patrick
4125 Beaver Crest Dr
Des Moines, IA 50310-3414

Jan 2, 2013

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Sincerely,
Dale Patrick

Jean Allgood
3122 Alpine Ct
Iowa City, IA 52245-5400
(319) 338-8090

Jan 2, 2013

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Dear decision maker,

I am writing in response to the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy.

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Sincerely,
Jean Allgood

Lisa Williams
123 Eastview Dr NW
Cedar Rapids, IA 52405-4026
(319) 396-5702

Jan 2, 2013

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Sincerely,
Lisa Williams

Kerry Gibson
1504 Wheeler Dr
Ames, IA 50010-4346
(515) 232-4336

Jan 2, 2013

Subject: Stop Corporate Agribusiness Pollution

Dear decision maker,

I am writing in response to the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy.

I used to fish in my home state, but I haven't for the past five years because my state's lakes, rivers and streams have become too dangerous to spend time on or in the water. My canoe hangs unused under my deck.

As an Iowan, it is unacceptable that our lakes, rivers and streams are too polluted--470 of the state's rivers are classified as "impaired." We need a cleanup plan that will make meaningful improvements in our state's water quality.

But the Iowa Nutrient Reduction Strategy fails to place any limits on Iowa's biggest source of pollution, industrial agriculture. The citizens of Iowa shouldn't have to pay a huge price for the pollution these operations cause in terms of lost recreational opportunities and lost tourism revenue. Pollution control should be a cost of doing business in our state.

The strategy needs to have an accountability mechanism to mandate agriculture to stop polluting. I strongly support the development of limits for runoff pollution from agriculture like numeric criteria for phosphorous and nitrogen in our waterways.

Only through such limits can we create the accountability necessary to clean up our waterways.

Sincerely,
Kerry Gibson

John Kintzinger
445 Highway 1 W Apt 23
Iowa City, IA 52246-4214
(319) 354-3126

Jan 2, 2013

Subject: Stop Corporate Agribusiness Pollution

Dear decision maker,

I am writing in response to the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy.

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Sincerely,
John Kintzinger

Geoff Perkins
4029 8th St
Des Moines, IA 50313-3407
(515) 720-6991

Jan 2, 2013

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Sincerely,
Geoff Perkins

Dieter Dellmann
1026 Gaskill Dr
Ames, IA 50014-7819

Jan 2, 2013

Subject: Stop Corporate Agribusiness Pollution

Dear decision maker,

I am writing in response to the policy considerations and strategy outlined in the Iowa Nutrient Reduction Strategy.

Dear decision maker Governor Branstad,
i am writing with regard to the pollution of our rivers and streams here in our State and the latest clean-up proposals. It would be wonderful if our farmers voluntarily kept our waters clean (and some of them are doing it and doing it well.) The fact, however, that they are as dirty as ever, tells me that it is time to require all our farmers to respect regulations which will solve this once and for all. Surely rules can be written and implemented which allow adaptation to different geographic and soil conditions. Our waterways are not state sewers where farmers outsource their pollution problems and expect the taxpayer to bear the burden of the clean-up. Since you want this state to be a healthy one, clean water is one of the most important factors and deserves your determined and ongoing support.
Sincerely
Renate and Dieter Dellmann

Sincerely,
Dieter Dellmann

J. Lynch
8771 Primrose Ln
Des Moines, IA 50325-5423

Jan 2, 2013

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