

IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

September 2021

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Triennial Review Work Plan and Responsiveness Summary 2021-2023

The triennial review work plan describes the priorities and goals for Iowa's water quality standards for the next three-year period (2021-2023) and the process conducted to form them. Public input was gathered through public hearings which meets requirements as described in 40 CFR 131.20.

Background

The Iowa Department of Natural Resources (DNR) held two virtual public meetings in May and July 2021. Comments were submitted through e-mail and then organized by topic and reviewed by the DNR for possible inclusion in future water quality standards efforts. For each comment, the DNR considered: level of interest, resources available by the DNR to address the issue, and the appropriateness for the issue to be handled through Iowa's water quality standards.

Results

Selected Items: These are the highest priorities for the DNR in this triennial review period.

Use Assessment/Use Attainability Analyses (UAAs)

An ongoing and important part of Iowa's water quality standards, UAAs allow for the recommendation of appropriate designations for Iowa's streams, and help ensure water quality is sufficient to support the different ways Iowans use our streams and rivers. Several different DNR program areas rely upon UAAs, but primarily they are conducted so that National Pollutant Discharge Elimination System (NPDES) permits can be renewed (See Iowa Code 455B.176A) and implement improved water quality protections.

Proposed stream designation changes are assembled into groups. A group of UAAs are being drafted for rulemaking in 2022. As the triennial review period progresses, additional field work and data collection will be conducted for the purpose of writing UAAs for future rulemaking. UAAs are a high priority for the DNR and work will continue through this triennial review period. In addition to completing UAAs, the cold and warm water rule-referenced protocols will also be updated, as well as the corresponding "designated_rivers" GIS layer.

Use Assessment/Use Attainability Analyses (UAAs) Protocols

The concept of Use Assessment and Use Attainability Analysis (UAA) is being applied by the DNR as a step-by-step process to gather site-specific field data on stream features and uses. The DNR then assesses available information to determine if the "presumed" recreational and aquatic life uses are appropriate. The DNR will evaluate any newly designated stream that receives a continuous discharge from a facility with a National Pollutant Discharge Elimination System (NPDES) permit. Prior to issuing a NPDES permit for an affected facility, the DNR will complete a UAA for the receiving stream or stream network. Each stream use designation decision is required to go through the state rulemaking process. Benefits: Stream reaches will be better protected for aquatic life and recreational uses due to more accurate designated use assignments.

Water quality improvements will occur locally at locations where treatment plants are implementing new processes to comply with the water quality standards.

Iowa’s Cold Water Use Designation Assessment Protocol was implemented in 2004, and the Warm Water Stream Use Assessment and Attainability Analysis Protocol in 2006. This regulatory action will focus on updating the protocols, specifically modifying the language to make the procedures clearer and more streamlined and accurate.

Antidegradation

The DNR’s current antidegradation policy was implemented in 2010 and reviewed in 2016 during the 2015-2017 Triennial Review. The DNR is looking to review, reorganize, and improve the policy, based on a public input process and cooperation with the EPA.

Chapter 61 Table 1

Chapter 61 “Water Quality Standards” Table 1 contains the criteria for chemical constituents. There are corrections and updates that are required for this table, including cleaning up the formatting, fixing misspellings, correcting units, and adding common names to chemicals.

Surface Water Classification Document

The Surface Water Classification (SWC) document is a rule-referenced document (Chapter 61.3(5)) that lists Iowa’s stream segments and their designated uses. There are corrections and updates that are required in this document, including fixing misspelled words and making sure segments details match between the document, Iowa’s ADBNet, and ArcMap. The first rulemaking will focus on lakes and wetlands and fixing superficial errors (misspelled words, waterbody name changes, etc.).

Triennial Review Work Schedule

Year	Action Item
2021	UAA – Initiate rulemaking SWC – Initiate rulemaking Ch. 61 Table 1 – Initiate rulemaking
2022	UAA – Rulemaking completed Antidegradation – Initiate rulemaking UAA Protocols – Initiate rulemaking SWC – Complete rulemaking Ch. 61 Table 1 – Complete rulemaking
2023	UAA – Collect field data and draft new UAAs Antidegradation – Complete rulemaking UAA Protocols – Complete rulemaking

**PUBLIC PARTICIPATION RESPONSIVENESS SUMMARY
FOR
RULEMAKING ON THE 2021-2023 TRIENNIAL REVIEW**

**IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL SERVICES DIVISION
WATER QUALITY BUREAU**

September 15, 2021

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INTRODUCTION

This is a summary of the Iowa Department of Natural Resources’ (DNR) response to comments received regarding the 2021-2023 Triennial Review.

This triennial review proposes rulemaking on five topics: antidegradation, Chapter 61 Table 1, the Surface Water Classification document, Use Assessment/Use Attainability Analysis (UAAs), and the UAA protocols.

The proposed rulemaking for antidegradation will update Iowa’s Antidegradation Implementation Procedure

(AIP). The policy was implemented in 2010, and the DNR is looking to review, reorganize, and improve the policy. The proposed rulemaking for Chapter 61 Table 1 will clean up and clarify the table of criteria for chemical constituents. This includes cleaning up the formatting, fixing misspellings, correcting units, and adding common names to chemicals. The proposed rulemaking for the Surface Water Classification document will clean up the document by fixing misspelled words and making sure all segment details match between the document, Iowa's ADBNet, and ArcMap. The first SWC rulemaking will focus on lakes and wetlands and fixing superficial errors (misspelled words, waterbody name changes, etc.). The proposed rulemaking for UAAs will put UAAs through rulemaking that are causing a delay for NPDES permits. The proposed rulemaking for the UAA protocols will update the UAA protocols to better reflect the process of gathering data and conducting assessments.

The proposed rulemaking topics were discussed and finalized at an internal DNR meeting on April 14, 2021, then presented at a public meeting and follow-up public meeting on May 17, 2021 and July 6, 2021. The presentation slides were posted to the DNR's water quality website (<https://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Quality-Standards>) on May 20, 2021.

This responsiveness summary provides a discussion of the issues raised by the comments received and how the comments were incorporated into the development of DNR's final rule for certification. Three comment letters total were received from the Iowa Environmental Council (IEC), the Iowa Corn Growers Association (ICGA), and the Iowa Farm Bureau Federation (IFBF). Specific parts of the comment letters are quoted in each section. Complete letters, including references, are available as attachments 1 (IEC), 2 (ICGA), and 3 (IFBF).

TOPIC: Numeric Nutrient Criteria (NNC)

Comments regarding NNC, both in favor and not in favor, were received from Iowa Environmental Council (IEC), Iowa Corn Grower's Association (ICGA), and Iowa Farm Bureau Federation (IFBF). Sections of the comment letters pertaining to NNC are listed below, followed by the DNR's response. Please note, references from the original comment letters are not included in the quotes for the sake of concisely providing responses, but the complete letters, including references, are available as attachments.

Iowa Environmental Council (IEC)

"The DNR already has a wealth of scientific information regarding lake nutrient criteria. In 2007, the DNR tasked the Nutrient Science Advisors with recommending nutrient water quality criteria for Iowa Waters. The Advisors recommended criteria, but the state failed to adopt them. Following the stalled rulemaking process, IEC twice petitioned for adoption of these rules after the state's effort to adopt the criteria as rules ended, but the EPC denied both petitions. The NRS does not set water quality standards and cannot substitute for adoption of appropriate water quality standards. As IEC has shown, progress on the voluntary measures in the NRS is not at the appropriate pace and scale to meet nutrient reduction targets, and a different approach is necessary to protect Iowa's waters."³

Furthermore, Iowa was selected as a case study by the EPA to test new nutrient models because of the NRS goal to continue assessing and developing suitable nutrient criteria.⁴ The results of the case study provide a scientific basis for Iowa to adopt numeric criteria. IEC recommends the DNR use these data to develop numeric nutrient criteria in the coming years.

Despite DNR's partnership with the EPA and the explicit NRS long-term goal to develop criteria, the DNR remains lax in committing to any true action. In the DNR's Public Participation Responsiveness Summary for Iowa's 2020 Section 303(d) List of Impaired Waters, the only response the DNR provided regarding lake numeric nutrient criteria was to state: "the DNR will review the recommended criteria to decide on further future action on the subject."⁵ When asked multiple times at the stakeholder meeting why NNC were not included in the draft triennial review plan, the DNR merely said it supported the NRS. Iowans need a commitment from the DNR on numeric nutrient water quality criteria to protect waterway and ecosystem health, public health, and economic prosperity."

Iowa Corn Grower's Association (ICGA)

"ICGA appreciates the opportunity to provide input to Iowa's triennial work plan. We understand that there are many important water quality issues, and many will receive attention during the coming years. The priorities listed above should be priorities because of their importance, ability to be practically completed in three years, and to complete existing projects. Since these priorities have not been resolved since the last triennial review, the DNR should not undertake any additional changes to the current water quality standards, such as numeric nutrient criteria that will consume too much time and not result in timely water quality improvements."

Iowa Farm Bureau Federation (IFBF)

“Several comments were made during the video conference requesting the addition of numeric nutrient criteria to the work plan. The addition of numeric nutrient criteria to the 2021-2023 water quality standards workplan is not appropriate for many reasons. Iowa currently has narrative standards and review procedures which identify nutrient impairments and provide a basis for effluent limits in permits. Iowa’s Nutrient Reduction Strategy (NRS) establishes Iowa’s priorities and provides a rationale path toward improved water quality. The triennial review workplan priorities should be consistent with the NRS processes and priorities.

Nutrients are unlike any other “pollutant” regulated by the federal Clean Water Act. Most water quality criteria are based on a toxicity threshold, evidenced by a dose-response relationship, where higher concentrations can be demonstrated to be harmful, and acceptable concentrations can be established at a level below which adverse responses are found using laboratory toxicity tests. In contrast, nutrients are not toxic, are naturally present in aquatic systems, and are necessary for the proper functioning of biological communities. Nutrient concentrations need not be limited unless they cause biological harm. Therefore, narrative standards currently do a better job at addressing nutrient impairments than numeric standards.

The science is not sufficiently developed to establish numeric nutrient standards that accurately reflect a dose-response relationship for Iowa’s water bodies. Setting artificial numbers is imprudent if achieving that number does not address an impairment of the designated use or if it places an overwhelming burden on communities and businesses. Last year EPA allowed comment on its “Draft Ambient Water Quality Criteria Recommendations for Lakes and Reservoirs of the Conterminous United States: Information Supporting the Development of Numeric Nutrient Criteria,” EPA820P20001. See 85 Fed. Reg. 31,184. The recommended approach of requiring a dose-response relationship for standards setting is an improvement from its prior approach using reference sites and arbitrary line drawing. However, the new approach still leaves many unanswered questions and needed clarifications which were identified in DNR’s and other stakeholders’ public comments. We appreciate DNR staff’s continued effort to ask questions and seek answers of EPA toward improved lake and reservoir guidance.

The water bodies’ response to nutrients needs to be well understood before setting standards. Otherwise, achieving an arbitrary standard will not result in improved water quality and may ultimately harm the ecosystem, which requires nutrients to function. Setting artificially low standards, such as previously proposed by the commenters’ organizations, is antithetical to making progress on Iowa’s water quality challenges. On-the-ground efforts at understanding the localized causal relationships in a watershed, working collaboratively with landowners and improving water quality through adaptive management is a cooperative partnership approach that has seen success in Iowa watersheds. See also, Success Stories about Restoring Water Bodies Impaired by Nonpoint Source Pollution | Polluted Runoff: Nonpoint Source (NPS) Pollution | US EPA.

Other states with a subset of numeric nutrient criteria have either narrowly defined the applicability to a small subset of waters (which likely already meets the standard), adopted indefinite waivers or variances because of the impossibility of actual implementation, or they were adopted in states with desert climates that do not have a predominance of arable soils. For example, in Florida, EPA promulgated numeric nutrient criteria for lakes, springs and flowing waters using a reference method, which was inherently flawed and ultimately invalidated by the courts. Fla. Wildlife Fed’n, Inc. v. Jackson, 853 F. Supp. 2d 1138 (N.D. Fla. 2012).

Subsequently, the state of Florida adopted narrative nutrient standards to replace the federal standards which are still being implemented today. “Water Quality Standards for the State of Florida’s Lake and Flowing Waters; Withdrawal,” 79 Fed. Reg. 57,447 (Sept. 25, 2014).

Wisconsin adopted stringent phosphorus standards in 2010 and continues to grant long-term variances to point sources under its state-wide multi-discharger variance policy. The eligibility requirements for the series of waivers is similar to the process being followed in Iowa’s nutrient reduction strategy for point sources using our narrative standards. Iowa’s progress in meeting the steps in the process are found on DNR’s website and the NRS website. Reviewing the available information, Iowa is showing similar results to Wisconsin in phosphorus reductions without draconian numeric standards that require state-wide variances.

A third example is the state of Montana which adopted nutrient criteria for its wadable streams in 2014. Affordable technology does not exist for the state’s point sources to meet the criteria resulting in the adoption of a mitigation in the form of a twenty-year state-wide variance to the criteria. Consequently, Montana was sued by the Upper Missouri Waterkeepers in 2016 for which appeals are still pending in the 9th Circuit Court of Appeals. Upper Missouri Waterkeeper v. U.S. E.P.A., Case No. 20-35136 (consolidated with Case Nos. 19-35898, 19-35899, 20-35135, 20-35137). The Montana state legislature recently took charge of the issue and rescinded the failed experiment with Senate Bill 358 being signed by the Montana Governor on April 30, 2021. Upper Missouri Waterkeeper petitioned EPA last month requesting federal standards be promulgated. Iowa learned from these experiments and chose a reasonable and rational path forward with the Iowa Nutrient Reduction Strategy to address its long-term water quality challenges. Because the challenges are complex, flexibility is necessary to develop the most effective way to address them watershed by watershed. The strategy commits to continued work on the complex scientific issues of nutrients, but also pragmatically goes to work on choosing priorities for limited resources, using adaptive management principles and partnering with willing participants to solve problems. Because the Iowa Nutrient Reduction Strategy involves coordinated implementation by many agencies, institutions and private parties, it is broader in scope than the triennial review process and will ultimately be more effective in addressing this complex challenge. Numeric nutrient criteria would divert resources, both scientific and financial, from a greater understanding of nutrient impairments and the best solutions to solve these challenges. The triennial review workplan priorities should be consistent with the NRS’s process and priorities.”

DNR Response

The DNR appreciates the comments. The DNR agrees that nutrient loading into the state’s surface waters is an ongoing water quality challenge. The DNR is a partner with numerous state and federal agencies, educational institutions, nongovernmental associations, corporations, and private citizens to address nutrient loading to Iowa’s waterways. The focus of the state’s efforts to address nutrient loading are through the Iowa Nutrient Reduction Strategy (INRS). The INRS is a science and technology-based framework to assess and reduce nutrients to Iowa waters and the Gulf of Mexico. It is designed to direct efforts to reduce nutrients in surface water from both point and nonpoint sources in a scientific, reasonable and cost-effective manner. The INRS emphasizes implementation of technology-based nutrient reductions in the near-term, with continued

assessment and development of suitable nutrient criteria as a long-term goal.

To that end, the DNR continues to collect and analyze lake nutrient data as part of the ambient lake monitoring and the lake restoration programs. The development of quantitative indicators of lake health, including nutrient status, remains a high priority within these programs. Iowa, along with the states of Utah, Connecticut, and Oklahoma, partnered with EPA to provide data for and to test new nutrient models that were developed using national datasets. After expressing interest in participating, Iowa was selected as one of the case studies given the extensive datasets available for Iowa Lakes and the commitment in the NRS for the continued assessment and development of suitable nutrient criteria as a long-term goal.

EPA released the “Ambient Water Quality Criteria to Address Nutrient Pollution in Lakes and Reservoirs” in August of 2021. The DNR is reviewing the recommended criteria to decide on further future action on the subject.

Therefore, in response to these comments, no changes are proposed.

TOPIC: Use Assessment/Use Attainability Analysis (UAAs)

Comments in favor of completing UAAs were received from Iowa Corn Grower's Association (ICGA) and Iowa Farm Bureau Federation (IFBF). Sections of the comment letters pertaining to UAAs are listed below, followed by the DNR's response. Complete letters are available as attachments.

Iowa Corn Grower's Association

"In addition, use assessment and use attainability analyses need to be completed to ensure public and private resources are being used appropriately to maintain streams' designated uses. Designated uses that are too strict for their actual uses can drain limited resources. This ongoing project needs to be completed during the next work plan, reducing the need for the rebuttable presumption."

Iowa Farm Bureau Federation

"Completing UAAs on all the remaining stream segments, which are designated under Iowa Admin. Code 567-61.3(1)(b), should continue to be the state's priority for this triennial review cycle. Assigning appropriate designated uses requires considerable effort to avoid unreasonable, arbitrary, and capricious decision-making for water quality standards, the Integrated Report, and permit limits. Iowa Code § 455B.176A(6) requires DNR to complete UAAs prior to making changes to effluent limitations. DNR indicates that hundreds of UAAs remain to be completed to meet this statutory requirement. Additionally, to achieve accurate designated uses for Iowa's rivers and streams, thousands more UAAs must be completed for the remaining waters impacted by the flawed rebuttable presumption.

A view of a map of the USGS stream data referenced in the subrule 567-61.3(1) demonstrates the obvious flaws in designating these streams as being capable of supporting full body contact recreation (A-1) and game fish (B-1). The 1993 USGS hydrography data set identifies both intermittent and ephemeral streams as perennial. It also likely identifies many ephemeral streams as intermittent. This flawed data resulted in streams being designated as A-1, B-1 streams that should have been designated as general use streams. Because the data upon which the designated use rule is based inaccurately identifies perennial streams, it is even more important that the state complete UAAs during this triennial review to avoid unreasonable, arbitrary, and capricious effluent standards in DNR's permits."

DNR Response

The DNR appreciates the comments. Use Assessments/Use Attainability Analyses (UAAs) are an ongoing key portion of the Water Quality Standards subsection of Water Quality Monitoring and Assessment Section. In 2006 a rebuttable designation of Primary Contact (A1), Warm Water – Type 1 [B(WW-1)] criteria were applied to all perennial streams in Iowa that were not already previously designated. The UAA process was created to allow the ability to apply the most applicable designation to a stream after an assessment has been conducted to verify site conditions. The National Pollutant Discharge Elimination System (NPDES) Section rules require a UAA be completed before a permit can be renewed.

Two staff perform the field work and draft the UAAs. Results of the UAAs are entered into a rule-referenced document entitled the Surface Water Classification Document. Any change to the Surface Water Classification document must go through rulemaking. In addition, any streams that should be designated as general use, but are on the perennial coverage, must go through rulemaking as well. General use streams that are not on the perennial coverage do not need to go through rulemaking.

Proposed stream designation changes are assembled into groups for rulemaking. The next rulemaking will be the sixth group of UAAs completed. As the Triennial Review period progresses, additional UAAs will be completed, pending active field seasons.

Regarding the recommendation that UAAs on all water bodies in Iowa be completed, the DNR has assessed several streams that were not driven by NPDES permitting needs. Whenever staff is in an area completing a UAA for NPDES, and if there is a nearby impaired waterway, the DNR is attempting to assess those streams. However, at this time, NPDES point source dischargers are the key drivers for new assessments. Considering the number of facilities still needing UAAs, it is not top priority to visit streams other than those unless there is a specified reason to do so.

Therefore, in response to these comments, no changes are proposed.

TOPIC: Antidegradation

One comment was received from the Iowa Farm Bureau Federation (IFBF) in support of the antidegradation update. Sections of the comment letters pertaining to antidegradation are listed below, followed by the DNR's response. Complete letters are available as attachments.

Iowa Farm Bureau Federation (IFBF)

"Iowa's antidegradation rule and detailed antidegradation policy was adopted over a decade ago. XXXII Iowa Admin. Bull. 1819 (January 13, 2010). DNR staff, engineers, consultants, permittees, and the public have had time to work with the policy and learn its strengths, weaknesses, and the areas where improvement is needed. Iowa Code § 17A.7(2) requires every agency to "conduct an ongoing and comprehensive review of all of the agency's rules" "over each five-year period." The antidegradation rule is past the five-year mark for this required statutory review. The department has committed to an open process with opportunities for stakeholder input in this review and we anticipate participating in this process. We expect the process of reviewing and revising the antidegradation policy will take a good amount of DNR staff time to complete."

DNR Response

The DNR appreciates the comment. The DNR's antidegradation policy was first implemented in 2010. The DNR is looking to review, reorganize, and improve the policy, based on a public input process and cooperation with the EPA.

In performing the antidegradation evaluation, the DNR will meet with the different sections that work with the antidegradation procedure to learn about their experiences with it. The DNR will also talk with the EPA, wastewater treatment facilities, industries and municipalities, and other interested stakeholders to gain feedback on how the process is working. The DNR will evaluate processes and procedures, impacts, and opportunities to improve the process.

Therefore, in response to this comment, no changes are proposed.

TOPIC: Other Comments

Other comments not directly related to the Triennial Review topics were received from the Iowa Environmental Council (IEC) and the Iowa Corn Grower's Association (ICGA). Sections of the comment letters are listed below, followed by the DNR's response. Please note, references from the original comment letters are not included in the quotes for the sake of concisely providing responses, but the complete letters, including references, are available as attachments.

1. Nutrient Pollution Harms Water Quality and Human Health

Iowa Environmental Council (IEC)

"The EPA has consistently stated for decades that the nutrient pollution degrading water quality across the United States is a critical national problem. Furthermore, the EPA has long held that numeric nutrient criteria are necessary to address nutrient pollution problems and that it will promulgate such criteria if states, such as Iowa, fail to act.² Reports from the EPA and several other sources continue to demonstrate that nutrient pollution results in the increasing prevalence of harmful algal blooms, reduced spawning grounds and nursery habitats, fish kills, and oxygen-starved hypoxic or dead zones. Beyond posing serious risks to the health of Iowa's lakes, nutrient pollution endangers the public health of Iowans. Impaired surface and groundwater sources threaten our drinking water as well as water for recreational purposes. Nutrient pollution also leads to great economic costs from increased water treatment, reduced property values, and loss of revenue for recreational businesses. The harmful effects of nutrient pollution will continue to remain a particularly acute problem for Iowa lakes without numeric nutrient criteria."

DNR Response

See above response to NNC comments.

2. Iowa Nutrient Reduction Strategy/Nutrient Reduction Exchange

Iowa Corn Grower's Association (ICGA)

"The triennial review process provides an opportunity to provide input on water quality priorities as the DNR modifies or adopts water quality standards. These priorities are significant issues that can be practically carried out in a timely manner and may be based on existing projects. For the next three years, we would like the DNR to prioritize implementation of the Iowa Nutrient Reduction Strategy, specifically supporting wastewater treatment plants working with upstream watershed farmers and other partners.

The Nutrient Reduction Exchange has been in place for multiple years, and a handful of communities have Memorandums of Understanding in place with the DNR to enable them to work upstream for practical nutrient reductions for the whole watershed. We would like DNR to prioritize and accelerate this work."

DNR Response

See above response to NNC comments.

Attachment 1 - IEC's June 30, 2021 Comment Letter



505 Fifth Ave Suite 850
Des Moines IA 50309
515.244.1194
iaenvironment.org

June 30, 2021

Roger Bruner
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, IA 50319-0034

Re: Triennial Review Comments

The Iowa Environmental Council submits the following comments on the Iowa Department of Natural Resources' (DNR) Triennial Review Process and Work Plan.

Summary

IEC's priority for the Triennial Review Work Plan is to develop numeric water quality criteria for nitrogen and phosphorus pollution for Iowa lakes. Nutrient pollution continues to have significant environmental, health and economic consequences. Reducing nitrogen and phosphorus pollution is necessary to reduce toxic blue-green algae blooms in Iowa's lakes, protect drinking water supplies, maintain property values, and protect aquatic ecosystems. Implementing nitrogen and phosphorus criteria will have immediate and future benefits for Iowa. Water quality standards help keep our swimming beaches open and drinking water safe, protect the environment by keeping nutrient pollution out of water, and help sustain public rights, and the rights of future generations, to enjoy the outdoors by fishing, boating, and hunting in our clean and safe waterways.

Stakeholders have repeatedly raised the issue of nutrient pollution and the need for numeric nutrient water quality criteria in previous triennial reviews. Although the Environmental Protection Commission (EPC) declined to adopt the specific recommendations by the Nutrient Science Advisors committee for numeric lake nutrient criteria, numeric nutrient criteria remain a long-term goal of the Nutrient Reduction Strategy (NRS) as a way to reach the target 45% reduction of annual nitrogen and phosphorus loads.¹ The Strategy has yet to provide details on how to achieve this goal. The state has thus far failed to move forward on developing numeric nutrient criteria, despite multiple formal and informal requests from IEC and other environmental groups to set such rules. The DNR's Triennial Review process should include

¹ Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, Iowa State University College of Agriculture and Life Sciences, *Iowa Nutrient Reduction Strategy* (rev. 2017), §1 at 27.

numeric nutrient water quality criteria and commit Iowa to developing such standards for Iowa's waterways in the 2021-2023 plan cycle.

Nutrient Pollution Harms Water Quality and Human Health

The EPA has consistently stated for decades that the nutrient pollution degrading water quality across the United States is a critical national problem. Furthermore, the EPA has long held that numeric nutrient criteria are necessary to address nutrient pollution problems and that it will promulgate such criteria if states, such as Iowa, fail to act.² Reports from the EPA and several other sources continue to demonstrate that nutrient pollution results in the increasing prevalence of harmful algal blooms, reduced spawning grounds and nursery habitats, fish kills, and oxygen-starved hypoxic or dead zones. Beyond posing serious risks to the health of Iowa's lakes, nutrient pollution endangers the public health of Iowans. Impaired surface and groundwater sources threaten our drinking water as well as water for recreational purposes. Nutrient pollution also leads to great economic costs from increased water treatment, reduced property values, and loss of revenue for recreational businesses. The harmful effects of nutrient pollution will continue to remain a particularly acute problem for Iowa lakes without numeric nutrient criteria.

Iowa Has the Duty to Act on Numeric Nutrient Criteria for Lakes

The DNR already has a wealth of scientific information regarding lake nutrient criteria. In 2007, the DNR tasked the Nutrient Science Advisors with recommending nutrient water quality criteria for Iowa Waters. The Advisors recommended criteria, but the state failed to adopt them. Following the stalled rulemaking process, IEC twice petitioned for adoption of these rules after the state's effort to adopt the criteria as rules ended, but the EPC denied both petitions. The NRS does not set water quality standards and cannot substitute for adoption of appropriate water quality standards. As IEC has shown, progress on the voluntary measures in the NRS is not at the appropriate pace and scale to meet nutrient reduction targets, and a different approach is necessary to protect Iowa's waters.³

Furthermore, Iowa was selected as a case study by the EPA to test new nutrient models because of the NRS goal to continue assessing and developing suitable nutrient criteria.⁴ The results of the case study provide a scientific basis for Iowa to adopt numeric criteria. IEC recommends the DNR use these data to develop numeric nutrient criteria in the coming years.

Despite DNR's partnership with the EPA and the explicit NRS long-term goal to develop criteria, the DNR remains lax in committing to any true action. In the DNR's Public Participation Responsiveness Summary for Iowa's 2020 Section 303(d) List of Impaired Waters, the only response the DNR provided regarding lake numeric nutrient criteria was to state: "the DNR will review the recommended criteria to decide on further future action on the subject."⁵ When asked multiple times at the stakeholder meeting why NNC were not included in the draft triennial

² EPA National Strategy for the Development of Regional Nutrient Criteria, 63 Fed. Reg. 34648, at iv-v (1998).

³ See "The Slow Reality of the NRS," Iowa Environmental Council (2019).

⁴ 63 FR 34648 at iv-v

⁵ *Iowa 2020 Section 303(d) list: Responsiveness Summary*, at p. 13 (2021).

review plan, the DNR merely said it supported the NRS. Iowans need a commitment from the DNR on numeric nutrient water quality criteria to protect waterway and ecosystem health, public health, and economic prosperity.

Conclusion

Nitrogen and phosphorus numeric criteria have been and remain a top priority for the Iowa Environmental Council and its members to improve water quality in Iowa's lakes. IEC has engaged with DNR's rulemaking process, in the Nutrient Reduction Strategy, and in past Triennial Reviews to address nutrient pollution. DNR must make a true commitment to developing and implementing water quality standards to address the largest water quality problem in the state. The extent to which Iowa lakes and communities could be harmed if the DNR waits another three years could be immense. Iowa's waters need immediate attention.

Sincerely,

/s/ Ingrid Gronstal

Ingrid Gronstal
Water Program Director
Iowa Environmental Council

/s/ Addison Loes

Addison Loes
Law Clerk
Iowa Environmental Council

/s/ Josh Mandelbaum

Josh Mandelbaum
Senior Attorney
Environmental Law & Policy Center

Attachment 2 - ICGA's June 8, 2021 Comment Letter



June 8, 2021

Roger Bruner
Iowa Department of Natural Resources
502 East Ninth Street
Des Moines, IA 50319

RE: Triennial review of water quality standards

Dear Mr. Bruner:

On behalf of the Iowa Corn Growers Association (ICGA), I would like to provide input on improving Iowa's water quality as part of the Department of Natural Resources' triennial review of water quality standards. ICGA represents over 7000 members and provides them a voice at state and national levels. We recognize the importance of being good stewards of our land and water and work hard to protect the environment in a responsible manner.

The triennial review process provides an opportunity to provide input on water quality priorities as the DNR modifies or adopts water quality standards. These priorities are significant issues that can be practically carried out in a timely manner and may be based on existing projects. For the next three years, we would like the DNR to prioritize implementation of the Iowa Nutrient Reduction Strategy, specifically supporting wastewater treatment plants working with upstream watershed farmers and other partners.

The Nutrient Reduction Exchange has been in place for multiple years, and a handful of communities have Memorandums of Understanding in place with the DNR to enable them to work upstream for practical nutrient reductions for the whole watershed. We would like DNR to prioritize and accelerate this work.

In addition, use assessment and use attainability analyses need to be completed to ensure public and private resources are being used appropriately to maintain streams' designated uses. Designated uses that are too strict for their actual uses can drain limited resources. This ongoing project needs to be completed during the next work plan, reducing the need for the rebuttable presumption.

ICGA appreciates the opportunity to provide input to Iowa's triennial work plan. We understand that there are many important water quality issues, and many will receive attention during the coming years. The priorities listed above should be priorities because of their importance, ability to be practically completed in three years, and to complete existing projects. Since these priorities have not been resolved since the last triennial review, the DNR should not undertake any additional changes to the current water quality standards, such as numeric nutrient criteria that will consume too much time and not result in timely water quality improvements.

Sincerely,

A handwritten signature in black ink, appearing to read "Carl Jardon".

Carl Jardon
President
Iowa Corn Growers Association

Attachment 3 - IFB's June 2, 2021 Comment Letter



June 2, 2021

Roger Bruner
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, IA 50319

RE: 2021-23 Triennial Review of Iowa's Water Quality Standards

Dear Mr. Bruner,

Thank for the opportunity to provide input into the state of Iowa's current triennial review process. Iowa Farm Bureau Federation's membership includes both crop and livestock farmers from across the state who are personally invested in protecting and improving our state's water quality. On May 17, 2021, the Iowa Department of Natural Resources (DNR) held a video conference where staff, after receiving internal input, presented a draft workplan, sought feedback from stakeholders, and heard additional comments. As it was the first time learning about the DNR's draft work priorities for the next three years, we are providing comment on the triennial review in a follow-up letter.

In the realm of administrative rules, three years is a short period of time to develop rule changes, solicit stakeholder comment, and comply with the administrative rules process. Items identified in the workplan should be priorities for completion, ripe for consideration and achievable within the triennial review period. DNR staff works to advance other topics and water quality standards issues on an ongoing basis which may not be appropriate for prioritization for the short-term triennial review workplan. The identified priorities include corrections to surface water classifications, use attainability analyses (UAAs), reviewing and updating the antidegradation policy, and correcting table 1 of the chapter 61 rules. We support the department's list as priorities achievable during the 2021-2023 triennial review work plan.

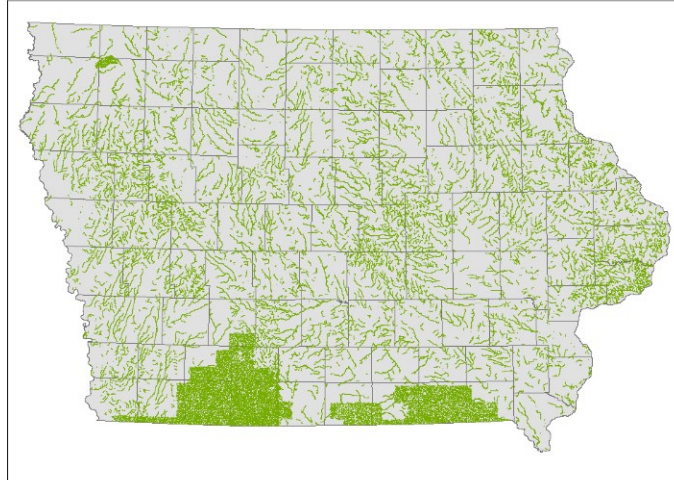
Use Attainability Analyses

Completing UAAs on all the remaining stream segments, which are designated under Iowa Admin. Code 567-61.3(1)(b), should continue to be the state's priority for this triennial review cycle. Assigning appropriate designated uses requires considerable effort to avoid unreasonable, arbitrary, and capricious decision-making for water quality standards, the Integrated Report, and permit limits. Iowa Code § 455B.176A(6) requires DNR to complete UAAs prior to making changes to effluent limitations. DNR indicates that hundreds of UAAs remain to be completed to meet this statutory requirement. Additionally, to achieve accurate designated uses for Iowa's rivers and streams, thousands more UAAs must be completed for the remaining waters impacted by the flawed rebuttable presumption.

A view of a map of the USGS stream data referenced in the subrule 567-61.3(1) demonstrates the obvious flaws in designating these streams as being capable of supporting full body contact recreation (A-1) and game fish (B-1). The 1993 USGS hydrography data set identifies both intermittent and ephemeral streams as perennial. It also likely identifies many ephemeral streams as intermittent. This flawed data resulted in streams being designated as A-1, B-1 streams that should have been designated as general use streams. Because the data upon which the designated use rule is based inaccurately identifies perennial streams, it

is even more important that the state complete UAAs during this triennial review to avoid unreasonable, arbitrary, and capricious effluent standards in DNR's permits.

Perennial Streams as Defined by the National Hydrography Dataset



Antidegradation Policy

Iowa's antidegradation rule and detailed antidegradation policy was adopted over a decade ago. XXXII Iowa Admin. Bull. 1819 (January 13, 2010). DNR staff, engineers, consultants, permittees, and the public have had time to work with the policy and learn its strengths, weaknesses, and the areas where improvement is needed. Iowa Code § 17A.7(2) requires every agency to "conduct an ongoing and comprehensive review of all of the agency's rules" "over each five-year period." The antidegradation rule is past the five-year mark for this required statutory review. The department has committed to an open process with opportunities for stakeholder input in this review and we anticipate participating in this process. We expect the process of reviewing and revising the antidegradation policy will take a good amount of DNR staff time to complete.

Numeric Nutrient Criteria

Several comments were made during the video conference requesting the addition of numeric nutrient criteria to the work plan. The addition of numeric nutrient criteria to the 2021-2023 water quality standards workplan is not appropriate for many reasons. Iowa currently has narrative standards and review procedures which identify nutrient impairments and provide a basis for effluent limits in permits. Iowa's Nutrient Reduction Strategy (NRS) establishes Iowa's priorities and provides a rationale path toward improved water quality. The triennial review workplan priorities should be consistent with the NRS processes and priorities.

Nutrients are unlike any other "pollutant" regulated by the federal Clean Water Act. Most water quality criteria are based on a toxicity threshold, evidenced by a dose-response relationship, where higher concentrations can be demonstrated to be harmful, and acceptable concentrations can be established at a level below which adverse responses are found using laboratory toxicity tests. In contrast, nutrients are not toxic, are naturally present in aquatic systems, and are necessary for the proper functioning of biological communities. Nutrient concentrations need not be limited unless they cause biological harm.

Therefore, narrative standards currently do a better job at addressing nutrient impairments than numeric standards.

The science is not sufficiently developed to establish numeric nutrient standards that accurately reflect a dose-response relationship for Iowa's water bodies. Setting artificial numbers is imprudent if achieving that number does not address an impairment of the designated use or if it places an overwhelming burden on communities and businesses. Last year EPA allowed comment on its "Draft Ambient Water Quality Criteria Recommendations for Lakes and Reservoirs of the Conterminous United States: Information Supporting the Development of Numeric Nutrient Criteria," EPA820P20001. *See* 85 Fed. Reg. 31,184. The recommended approach of requiring a dose-response relationship for standards setting is an improvement from its prior approach using reference sites and arbitrary line drawing. However, the new approach still leaves many unanswered questions and needed clarifications which were identified in DNR's and other stakeholders' public comments. We appreciate DNR staff's continued effort to ask questions and seek answers of EPA toward improved lake and reservoir guidance.

The water bodies' response to nutrients needs to be well understood before setting standards. Otherwise, achieving an arbitrary standard will not result in improved water quality and may ultimately harm the ecosystem, which requires nutrients to function. Setting artificially low standards, such as previously proposed by the commenters' organizations, is antithetical to making progress on Iowa's water quality challenges. On-the-ground efforts at understanding the localized causal relationships in a watershed, working collaboratively with landowners and improving water quality through adaptive management is a cooperative partnership approach that has seen [success in Iowa watersheds](#). *See also*, [Success Stories about Restoring Water Bodies Impaired by Nonpoint Source Pollution | Polluted Runoff: Nonpoint Source \(NPS\) Pollution | US EPA](#).

Other states with a subset of numeric nutrient criteria have either narrowly defined the applicability to a small subset of waters (which likely already meets the standard), adopted indefinite waivers or variances because of the impossibility of actual implementation, or they were adopted in states with desert climates that do not have a predominance of arable soils. For example, in Florida, EPA promulgated numeric nutrient criteria for lakes, springs and flowing waters using a reference method, which was inherently flawed and ultimately invalidated by the courts. *Fla. Wildlife Fed'n, Inc. v. Jackson*, 853 F. Supp. 2d 1138 (N.D. Fla. 2012). Subsequently, the state of Florida adopted narrative nutrient standards to replace the federal standards which are still being implemented today. "Water Quality Standards for the State of Florida's Lake and Flowing Waters; Withdrawal," 79 Fed. Reg. 57,447 (Sept. 25, 2014).

[Wisconsin](#) adopted stringent phosphorus standards in 2010 and continues to grant long-term variances to point sources under its state-wide multi-discharger variance policy. The eligibility requirements for the series of waivers is similar to the process being followed in Iowa's nutrient reduction strategy for point sources using our narrative standards. Iowa's progress in meeting the steps in the process are found on [DNR's website](#) and the [NRS website](#). Reviewing the available information, [Iowa](#) is showing similar results to [Wisconsin](#) in phosphorus reductions without draconian numeric standards that require state-wide variances.

A third example is the state of [Montana](#) which adopted nutrient criteria for its wadable streams in 2014. Affordable technology does not exist for the state's point sources to meet the criteria resulting in the adoption of a mitigation in the form of a twenty-year state-wide variance to the criteria. Consequently, Montana was sued by the Upper Missouri Waterkeepers in 2016 for which appeals are still pending in the 9th Circuit Court of Appeals. *Upper Missouri Waterkeeper v. U.S. E.P.A.*, Case No. 20-35136

(consolidated with Case Nos. 19-35898, 19-35899, 20-35135, 20-35137). The Montana state legislature recently took charge of the issue and rescinded the failed experiment with [Senate Bill 358](#) being signed by the Montana Governor on April 30, 2021. Upper Missouri Waterkeeper petitioned EPA last month requesting federal standards be promulgated.

Iowa learned from these experiments and chose a reasonable and rational path forward with the Iowa Nutrient Reduction Strategy to address its long-term water quality challenges. Because the challenges are complex, flexibility is necessary to develop the most effective way to address them watershed by watershed. The strategy commits to continued work on the complex scientific issues of nutrients, but also pragmatically goes to work on choosing priorities for limited resources, using adaptive management principles and partnering with willing participants to solve problems. Because the [Iowa Nutrient Reduction Strategy](#) involves coordinated implementation by many agencies, institutions and private parties, it is broader in scope than the triennial review process and will ultimately be more effective in addressing this complex challenge. Numeric nutrient criteria would divert resources, both scientific and financial, from a greater understanding of nutrient impairments and the best solutions to solve these challenges. The triennial review workplan priorities should be consistent with the NRS's process and priorities.

In conclusion, we generally support the draft 2021-2023 workplan topics as presented to prioritize DNR staff work during this triennial review process. Because the priorities identified by the department are resource intensive, we do not recommend prioritizing other items to enable completion of these priorities before the next triennial review.

Sincerely,

Christina Gruenhagen
Government Relations Counsel