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Jeffrey Robichaud
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**RE: 2024 List of Iowa Impaired Waters**

Dear Mr. Robichaud:

The Iowa Environmental Council (IEC) and Environmental Law & Policy Center (ELPC) offer the following comments on the action proposed by the U.S. Environmental Protection Agency (EPA) on Iowa's 2024 list of Section 303(d) impaired waters. IEC is a nonprofit alliance of 100 organizations, at-large board members from business, farming, the sciences and education, and over 500 individual members. ELPC is a non-profit corporation with an office in Des Moines that works to promote clean energy, clean air, and clean water.

IEC and ELPC have raised concerns about nitrate in drinking water for years, including a petition for emergency action to address groundwater contamination in Northeast Iowa and a recently-updated report by IEC on health impacts of nitrate. We appreciate that EPA's action recognizes the persistent problem Iowa faces in addressing continued nitrate pollution.

## I. GENERAL COMMENTS

EPA has requested comment on its proposed addition of seven impairments to Iowa's impaired waters list.

The additions by EPA reflect a numeric standard for nitrate applicable for drinking water uses. **Iowa's impaired waters list is incomplete for other uses because Iowa still lacks numeric nutrient criteria or a microcystin standard.** EPA issued recommendations for microcystin and numeric nutrient water quality standards that would protect recreational users from harmful algae blooms. In fact, the EPA's numeric nutrient criteria recommendations relied heavily on Iowa water quality data. When the Iowa Department of Natural Resources (DNR) released the 2020 and 2022 impaired waters lists, IEC called on the state to adopt microcystin and numeric nutrient criteria. DNR has not indicated that it will adopt those standards, and no timeline or formal

process has been set to begin the process of adopting criteria. DNR left those priorities out of the 2021-2023 Triennial Review.

DNR has an opportunity to include development of numeric nutrient criteria in the 2024-2026 Triennial Review, which the agency should conduct this year to satisfy the three-year requirement in federal regulations.[1] DNR has the information it needs to begin the work of adopting criteria, which are necessary to understand the condition of Iowa's waters and make progress on protecting Iowans from negative health impacts.

## II. ADEQUACY OF MONITORING

The state's monitoring program is not sufficiently rigorous and does not allow for comparison over time. When the impaired waters list is released, DNR staff takes the position that the results cannot be interpreted to give Iowans an understanding of Iowa's water quality. This is due at least partially to using data that is collected from all available sources instead of being collected through a standardized, rigorous monitoring scheme that allows comparison over time.[2] EPA's action in this case reflects, in part, the different sources of water quality monitoring data in Iowa.

If the state provided greater funding to support a common monitoring plan that used a watershed approach to collect data and assess water quality, the impaired waters list would be a much more useful tool for actually understanding the state's water quality and progress toward meeting water quality standards. IEC and ELPC urge the development of a standardized monitoring plan using the watershed approach that is scientifically rigorous, allows interpretation of results, and is useful to the public. Such a plan might resemble Minnesota's watershed lake and stream monitoring program, which fully assesses watersheds on a 10-year cycle.

## III. MONITORING METHODOLOGY

IEC and ELPC support EPA's proposed action for two reasons: the inapplicability of the "10% rule" to nitrate and the monitoring window considered by DNR.

### a. Nitrate Methodology

Iowa DNR has relied on a "10% rule" to determine whether waters with limited data qualify as supporting their designated uses or impaired. The rule uses a mathematical evaluation developed by EPA to assess the likelihood of an exceedance based on small numbers of samples. DNR has used the method in past years to assess water quality for nitrate that applies to drinking water

[1] 33 U.S.C. § 1313(c)(1); 40 C.F.R. § 131.20(a). Iowa DNR's last review of water quality standards was conducted in 2021. *See* Iowa DNR, "Triennial Review Work Plan and Responsiveness Summary 2021-2023" (Sept. 2021), available at https://www.iowadnr.gov/Portals/idnr/uploads/watermonitoring/standards/Iowas%20Triennial%20Review%20Work%20Plan%202021-2023.pdf.

[2] Iowa DNR. "Methodology for Iowa's 2024 Water Quality Assessment, Listing, and Reporting Pursuant to Sections 305(b), 303(d), and 314 of the Federal Clean Water Act" ("Methodology"). 29 Sept. 2023. Pg. 13-16.

sources.[3] In its 2024 assessment methodology, DNR expanded its use of the 10% rule to use a modified approach for waters with seven to nine samples.[4]

EPA supported the use of this rule for conventional pollutants such as biochemical oxygen demand. However, in its review of DNR's 2024 methods, EPA called for DNR not to apply the approach to nitrate in its public comments to the state.[5] EPA reasoned that nitrate is not a conventional pollutant and has known toxicity; allowing exceedances does not align with the designated use.[6]

IEC and ELPC agree with EPA that allowing nitrate to exceed the drinking water standard as proposed by DNR is inconsistent with the water body fully supporting the designated use. Water treatment providers need to ensure that nitrate is below the standard at all times, not just 90 percent of the time. As EPA noted in its proposed decision document, the drinking water standard was calculated "to protect infants, and all other groups, against the nononcogenic effects presented by nitrate and nitrite in drinking water."[7]

IEC summarized the risks of high nitrate concentrations for human health in *Nitrate in Drinking Water: A Public Health Concern for All Iowans*, updated in 2024.[8] The report notes that the drinking water standard protects against acute health risks – those that occur with short-term exposure. Allowing any fraction of exceedance above the standard would increase the risk of methemoglobinemia.

**b. Monitoring Window**

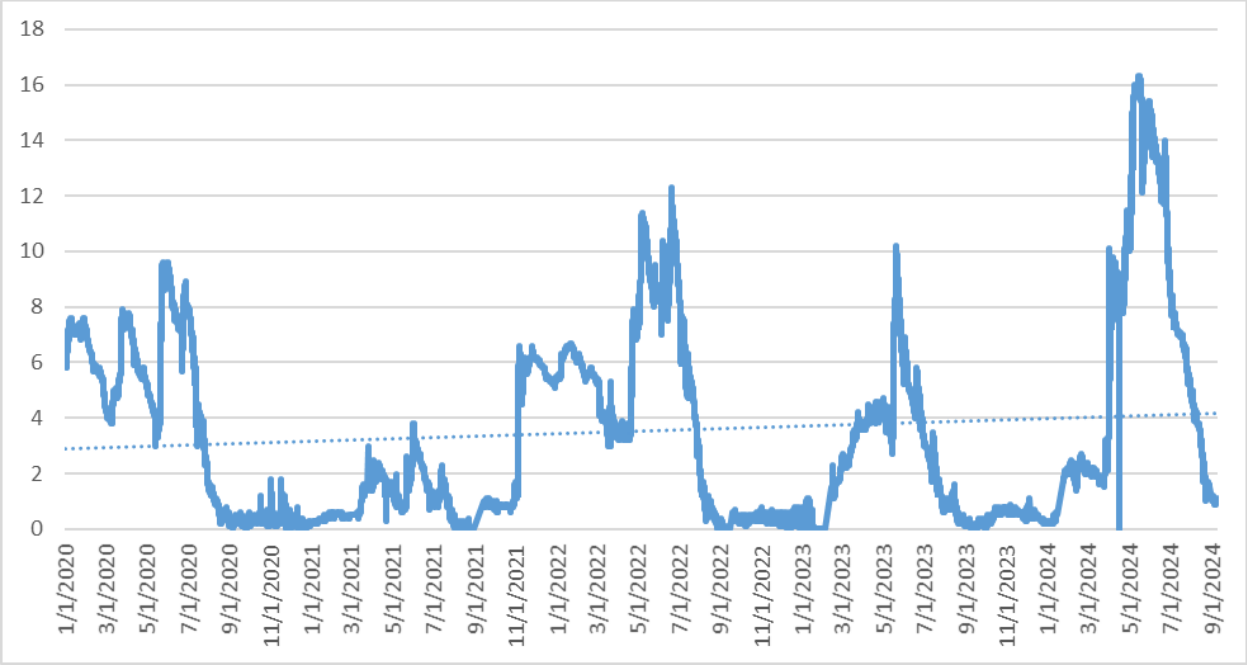
DNR's approach to use one cycle to impair and a three-year window of monitoring data to delist for all impairments is not rational or practical. DNR's reliance on a three-year period to list and delist waters for impairment is not reasonable or practical for the purposes of addressing impairments.[9] When a waterway does not show signs of an impairment during one cycle, it does not mean that the waterway has actually improved or the impairment has been addressed. As we have seen in recent years, drought has seriously impacted the flows of Iowa's streams and rivers. Reduced flows can mask an impairment due to temporary reductions of pollutants entering waterways. However, the impairment may quickly reappear when flows return to normal. Using one cycle to remove waters from the list could create a situation where a waterway is removed and added to the list, back and forth, in subsequent cycles, leaving it in limbo for development of

[3] *See* Iowa DNR, "Methodology for Iowa's 2022 Water Quality Assessment, Listing, and Reporting Pursuant to Sections 305(b) and 303(d) of the Federal Clean Water Act," Feb. 9, 2022, at 49.
[4] Iowa DNR, "Methodology for Iowa's 2024 Water Quality Assessment, Listing, and Reporting Pursuant to Sections 305(b), 303(d), and 314 of the Federal Clean Water Act," Sept. 29, 2023, at 11.
[5] U.S. EPA Region 7, "Partial Approval/Partial Disapproval of Iowa's 2024 Section 303(d) List," Nov. 12, 2024, at 9.
[6] *Id*. at 13.
[7] *Id*. (citing National Primary Drinking Water Regulations Final Rule, 1991).
[8] IEC (May 2024), available at https://www.iaenvironment.org/webres/File/IEC_Nitrate_in_Drinking_Water_2024FINAL.pdf.
[9] *Id* at 14 (describing use of three year periods for binomial parameters).

a TMDL and causing confusion for watershed groups that are trying to make improvements and install pollution reduction practices.

Analysis of longer-term nitrate data show that there has not been a significant improvement in nitrate loading in the Cedar River.[10] Estimated annual concentrations of nitrate-N increased from 5.1 mg/L in 1990 to 6.6 mg/L in 2020.[11] DNR cannot reasonably conclude that the Cedar River no longer has a nitrate problem. As shown in Figure 1, the Des Moines River has similarly had temporary declines during the 2020-2022 period that DNR considered, despite significantly exceeding the standard in 2024 and showing a small upward trend during this period.

**Figure 1**. Nitrate Concentrations in the Des Moines River at 2nd Ave, 2020-2024 (with linear trendline).[12]




DNR should consider moving to a 5- or 10-year window for assessing waters for impairments. The longer window would conform to the window used to assess progress on the Nutrient Reduction Strategy.

## IV. CONCLUSION

IEC and ELPC support EPA's proposed additions to the 2024 impaired waters list. While Iowa's drinking water utilities have a strong track record of meeting drinking water standards, the state faces serious problems with nitrate contamination in drinking water sources and needs stronger action to ensure that all Iowans will have safe drinking water in the future.

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[10] "Water Quality Gauge, Cedar River, Palo, IA," Iowa Water Quality Information System, IIHR, University of Iowa (last accessed Nov. 7, 2022), available at: https://iwqis.iowawis.org/app/.

[11] Stephen J. Kalkhoff, "Hydrologic and Water-Quality Conditions in the Cedar River Alluvial Aquifer, Linn County, Iowa, 1990-2019," U.S. Geological Survey (2021) at 48.

[12] U.S. Geological Survey, available at https://waterdata.usgs.gov/monitoring-location/05482000/.

Thank you for the opportunity to comment on the draft 2024 impaired waters list. Please let us know if you have questions about these comments.

Sincerely,

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