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Iowa Department of Natural Resources  
Attn: IR Comments  
Water Quality Monitoring & Assessment Section  
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**RE: Draft 2026 Impaired Waters List and Integrated Report**

Dear Water Quality Monitoring and Assessment Section:

The Iowa Environmental Council (IEC), Drake Environmental Action League, Environmental Law & Policy Center (ELPC), Food & Water Watch, Iowa Alliance for Responsible Agriculture, Iowa Citizens for Community Improvement, Jefferson County Farmers and Neighbors, Nishnabotna Water Defenders, and Trout Unlimited North Bear Chapter offer the following comments on the 2026 draft list of the Section 303(d) impaired waters and integrated report released by the Iowa Department of Natural Resources (IDNR).

We are concerned that the 2026 draft list relies on an improper methodology to assess impairments, excludes credible data from its analysis, does not include all violations of narrative water quality standards, and will not lead to timely development of total maximum daily loads. In combination, these issues will limit public understanding of pollution in the state and delay or avoid restoration of polluted waters.

We encourage IDNR to remedy these problems before submission of the list to U.S. EPA by the federal deadline of April 1, 2026.<sup>1</sup>

**I. BACKGROUND**

The draft 2026 impaired waters list and integrated report reflect the continuing challenge to restore water quality in Iowa. Flat or declining funding from the legislature has limited IDNR's ability to adopt water quality standards, monitor waters across the state, develop cleanup plans,

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<sup>1</sup> 40 C.F.R. § 130.7(d).

and implement actions to address pollution. As a result, Iowans lack opportunities to recreate, face challenges with drinking water systems, and are kept in the dark about the risks that result from water pollution.

**A large proportion of assessed waters remain impaired.** The 2026 303(d) list shows that 50.9% of assessed rivers and streams, as well as 63.8% of lakes and reservoirs, are impaired for one or more designated uses.<sup>2</sup> Only 26% of assessed waters support at least one of their designated uses and **less than 1.6% of assessed waters support all assessed uses.** While IDNR has proposed 83 impairments for delisting, it is unclear if all of those impairments have actually been improved or if the short-term nature of the data considered by IDNR failed to capture all seasonal variation.

**The impairments have a direct effect on Iowans' ability to use the water.** Of Iowa's waters that have been assessed for A1 recreational use, 88% (588 of 668) are impaired. Public lands and waters are owned by the people of Iowa under the care of the state. Iowans are not getting the full benefits of the state's primary recreational waters due to poor water quality. The state has done an inadequate job of protecting public lands and waters for public recreational use. IDNR should prioritize TMDL completion for Iowa's recreational waters and improve Iowa's recreational water quality for the benefit of Iowans.

## II. INTERESTS OF COMMENTERS

The Iowa Environmental Council is an alliance of nearly 100 organizations, at-large board members from business, farming, the sciences and education, and over 500 individual members. IEC works to build a just, healthy environment and sustainable future for all Iowans. Our members care about water quality across the state, and they fish, recreate, and drink water sourced from surface and groundwater sources.

Drake Environmental Action League is a committed group of students involved in increasing awareness and sustainability on Drake's campus, into the community and beyond. Some of what we do: grassroots work for national organizations, sponsoring great speakers, protests, working with administration, environmental conferences, state environmental politics, improving recycling programs and a member group of Iowa Students Towards Environmental Protection.

Environmental Law and Policy Center is a Midwest-based not-for-profit public interest environmental advocacy organization dedicated to improving environmental quality and public health, including protecting the Great Lakes and other Midwest natural resources. For nearly 30 years, ELPC has used litigation, policy advocacy, and strategic communications to improve environmental quality and protect the Midwest's natural resources. ELPC is headquartered in Chicago, Illinois and has additional offices in Ohio, Iowa, Wisconsin, and Washington, D.C.

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<sup>2</sup> IDNR, "2026 305(b) Assessment Summary DRAFT," available at <https://programs.iowadnr.gov/adbnet/Assessments/Summary/2026> (last accessed Mar. 11, 2026).

Food & Water Watch (FWW) is a national, nonprofit membership organization that mobilizes regular people to build political power to move bold and uncompromised solutions to the most pressing food, water, and climate problems of our time. FWW works to protect people's health, communities, and democracy from the growing destructive power of the most powerful economic interests.

Jefferson County Farmers and Neighbors has worked since 2005 to protect Jefferson County – and Iowa – from factory farms. JFAN is a 501(c)(3) community organization of rural and town residents that works to protect Jefferson County and Iowa from factory farms. of rural and town residents and traditional family farmers. Our common concern is to stop the growth of infringing factory farms in Jefferson County and Protect our Quality of Life.

The Iowa Alliance for Responsible Agriculture (IARA) is a diverse coalition of national, state, and local organizations and individuals who are concerned about the harmful impacts of factory farms and are each working to promote traditional and ethical agriculture in Iowa. The Iowa Alliance for Responsible Agriculture seeks to educate Iowans about the destructive impacts of industrial livestock production, advocate for a statewide factory farm moratorium, and promote traditional and humane livestock production.

Since 1975, Iowa Citizens for Community Improvement has organized to build the power of everyday people in Iowa's rural towns and big cities. Iowa CCI members create change through grassroots organizing, educating, and mobilizing on issues that impact our communities the most. Together, we work to put people and planet first by stopping factory farms, ending racist policing and anti-immigrant legislation, and winning bold action on climate change, healthcare, and clean water for everyone.

The Nishnabotna Water Defenders are a group of citizens in Southwest Iowa concerned about one thing: keeping our water clean. The organization focuses on organizing, advocating, and educating with respect to improving water quality, not just locally, but in the state of Iowa. The group is meant to show how important our rivers and streams are to our way of living.

Members of Trout Unlimited Iowa North Bear Chapter work to protect and restore waters in the Iowa, including numerous trout streams in Iowa threatened by water pollution. Trout Unlimited is a nationwide organization that brings together diverse interests to care for and recover rivers and streams so our children can experience the joy of wild and native trout and salmon.

### **III. DNR METHODOLOGY MUST REFLECT SCIENCE AND THE LAW.**

The draft 2026 list and integrated report rely on a methodology that considers a short window of time that may fail to capture seasonal variation. In addition, the scale of monitoring may not capture current water quality conditions or trends.

A. *IDNR must treat the nitrate criterion for drinking water use as acute.*

The nitrate water quality standard is derived from a maximum contaminant level (MCL) adopted under the Safe Drinking Water Act (SDWA). The SDWA standard MCL is an acute criterion, not a chronic human health criterion.

The nitrate MCL protects against short-term exposure to infants, not long-term chronic effects.<sup>3</sup> EPA’s website for MCLs notes that the nitrate MCL is intended to prevent infants from becoming “seriously ill” with possibility of death if untreated.<sup>4</sup> In addition, “Symptoms include shortness of breath and blue-baby syndrome.”<sup>5</sup> These are not chronic, long-term health effects. EPA specifically identified the potentially toxic effects in the Water Quality Standards Handbook: “MCLs of the SDWA, where they exist, control toxic chemicals in finished drinking water.”<sup>6</sup>

From a practical standpoint, when a drinking water source is above the MCL water quality standard, drinking water suppliers face real threats to providing drinking water that meets the SDWA requirements. Drinking water providers have designed systems that reasonably rely on Class C drinking water sources meeting the MCL. The typical drinking water treatment process does not remove the nitrates and nitrites, so nitrates above the MCL are not normally removed through the treatment process.

Des Moines Water Works illustrates this challenge. Even with the largest nitrate removal system in the country, nitrate levels above the MCL in the Des Moines and Raccoon River led to the first ever lawn watering ban in central Iowa.<sup>7</sup> Treatment facilities simply could not keep up with water demand.

The history of Iowa’s nitrate criterion supports treating it as acute. In 2001, IDNR updated its Class C Criteria rule to replace “acute” with “MCL” for nitrate as N.<sup>8</sup> IDNR relied on EPA’s WQS Handbook as a key reference to support its updated standards. EPA distinguished between MCLs and human health criteria in its approval of IDNR’s drinking water criteria.<sup>9</sup> MCLs were used when there was not a chronic human health criterion already established.<sup>10</sup> IDNR explicitly

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<sup>3</sup> See “National Primary Drinking Water Regulations,” U.S. EPA (last accessed March 10, 2026), *available at* <https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations>.

<sup>4</sup> “National Primary Drinking Water Regulations,” U.S. EPA (last accessed March 10, 2026), *available at* <https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations>.

<sup>5</sup> *Id.*

<sup>6</sup> EPA WQS Handbook (1994) at 3-12.

<sup>7</sup> Central Iowa Water Works, “Lawn Watering Banned Immediately” (June 13, 2025), *available at* [https://www.dmww.com/news\\_detail\\_T37\\_R440.php](https://www.dmww.com/news_detail_T37_R440.php)

<sup>8</sup> Iowa DNR, “1999 Triennial Review: Iowa’s Water Quality Standards ISSUE PAPER – Class C Criteria & Its Implementation,” at 11 (2001 IDNR Rulemaking Package at 84).

<sup>9</sup> 2002 Letter at 13.

<sup>10</sup> *Id.*

wrote “MCL” into the 2001 submission (not “chronic”) and thereby incorporated the MCL standard as the water quality standard. That is what EPA approved.

EPA partially disapproved IDNR’s draft 2024 impaired waters list because IDNR treated nitrate as a conventional pollutant, rather than a non-conventional pollutant.<sup>11</sup> EPA noted the toxic effects of nitrate at high concentrations.<sup>12</sup> IDNR criticized the lack of formal “toxic” listing for nitrate as evidence that EPA was misinterpreting the standard.<sup>13</sup> But the lack of formal listing does not undermine the acute nature of nitrate’s effects. EPA has not updated its lists of toxic parameters since 1982.<sup>14</sup> Typical drinking water treatment does not remove nitrate; EPA has identified ion exchange, reverse osmosis, or electrodialysis as treatment options.<sup>15</sup> Only 20 percent of Iowans have a water supplier that has the capability to remove nitrate using one of these methods.<sup>16</sup> Even without being listed as toxic, overlooking the acute consequences of high nitrate creates inconsistency with SDWA requirements that apply on a single-sample basis to public water suppliers.

IDNR instead wants to treat nitrate as a conventional pollutant. IDNR determines nitrate impairments using a 10% binomial exceedance statistical approach that is appropriate for conventional pollutants. But nitrate is not listed as a conventional pollutant.<sup>17</sup> Because nitrate is not listed as a conventional pollutant or toxic pollutant, IDNR must apply the approach that protects the designated use.<sup>18</sup> Applying the approach for conventional pollutants to nitrate does not protect the designated use for Class C waters, which must be protected as raw water sources of potable water supply, because drinking water becomes unsafe any time nitrate concentrations exceed the MCL. Therefore, IDNR must list Class C waters as impaired for nitrate pollution based on acute exposure risk.

The documents that provided a basis for the nitrate criterion do not define the methodology for impaired waters listing; IDNR’s methodology for impairment was not part of the water quality standard package that EPA reviewed and approved. IDNR stated in its water quality standard

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<sup>11</sup> Jeffrey Robichaud, U.S. EPA, “Decision Document: Iowa’s Clean Water Act Section 303(d) List of Water Quality Limited Segments Still Requiring TMDLs” (Nov. 12, 2024) at 13-14 (Exhibit A).

<sup>12</sup> *Id.* at 13; see also “EPA Response to Comments on Partial Disapproval of Iowa’s 2024 Section 303(d) List,” Dec. 30, 2024, at 7 (Exhibit B).

<sup>13</sup> Letter from Kayla Lyon (IDNR) to Jeff Robichaud (EPA), Dec. 19, 2024 (Exhibit C). EPA later met with Iowa Farm Bureau and then rescinded the partial disapproval to further evaluate the data. *See* Exhibit E, Exhibit F.

<sup>14</sup> 40 C.F.R. § 401.15 (Feb. 4, 1981); 40 C.F.R. pt. 423, Appx A (Nov. 19, 1982).

<sup>15</sup> U.S. EPA, “Addressing Nitrate in Drinking Water with the Drinking Water State Revolving Fund,” May 2021, available at [https://www.epa.gov/sites/default/files/2021-06/documents/addressing\\_nitrates\\_with\\_the\\_dwsrf-final.pdf](https://www.epa.gov/sites/default/files/2021-06/documents/addressing_nitrates_with_the_dwsrf-final.pdf) (describing funding for additional nitrate treatment for drinking water sources).

<sup>16</sup> IEC analysis of IDNR Public Water Supply data (available at <https://programs.iowadnr.gov/iowadrinkingwater/Report/PwsFacilities>).

<sup>17</sup> 40 C.F.R. § 401.16.

<sup>18</sup> IOWA ADMIN. CODE r. 567-61.3“b” (“Designated use waters are to be protected for all uses of general use segments in addition to the specific uses assigned.”); *see also* IOWA ADMIN. CODE r. 567-61.2(2)“a” (“Existing surface water uses and the level of water quality necessary to protect the existing uses will be maintained and protected.”).

submission to EPA that “the use of the criterion by other Department activities, such as the development of 303d listings, 305b assessment, etc., must consider the basis of the numerical criteria and merge that with their own program guidance and procedures.”<sup>19</sup> Despite that, IDNR stated that in implementing wasteload allocations for permit limits, “Any Class C value would be treated as a chronic-type of criteria.”<sup>20</sup> In practice, however, IDNR has recognized the toxic nature of nitrate – it relied on EPA’s *Technical Support Document for Water Quality-Based Toxics Control* to derive effluent limits.<sup>21</sup>

Finally, even if the numeric criterion were interpreted as chronic, Iowa has a narrative water quality standard that prohibits toxic pollutants in toxic amounts for Class C waters.<sup>22</sup>

All substances toxic or detrimental to humans or detrimental to treatment process shall be limited to nontoxic or nondetrimental concentrations in the surface water.

Because blue baby syndrome is an acute effect, not chronic, nitrate must stay below the 10 mg/L level to meet the narrative standard.

Ultimately, treating nitrate as a conventional pollutant for Class C waters implies to the public that the waters are clean enough for drinking water uses even if there is increased risk that finished drinking water will not meet the MCL. Drinking water is a constant, year-round, and essential use for all Iowans. Lack of a suitable drinking water source creates immediate and serious problems. Drinking water issues across the state, from western Iowa<sup>23</sup> to the waters proposed for addition to the list by the 2024 EPA disapproval, demonstrate the necessity for further action to address pollution in drinking water sources.

*B. Relying on only three years of data to assess all impairments is not rational or practical.*

IDNR relies on three years of data to conduct its impairment assessments.<sup>24</sup> The department has not justified this approach. When a waterway does not show signs of an impairment during one three-year period, it does not mean that the waterway has necessarily improved or the

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<sup>19</sup> IDNR, “Public Participation Responsiveness Summary” (Aug. 30, 2000), at 4 (2001 IDNR Rulemaking Package at 42).

<sup>20</sup> Iowa DNR, “1999 Triennial Review: Iowa’s Water Quality Standards ISSUE PAPER – Class C Criteria & Its Implementation,” at 3 (2001 IDNR Rulemaking Package at 76).

<sup>21</sup> Tom Atkinson (IDNR), “Deriving total nitrogen limits from the WLA in the Cedar River TMDL,” Nov. 20, 2008.

<sup>22</sup> IOWA ADMIN. CODE r. 567-61.3“c”(2); *see also* 40 C.F.R. § 130.7(b)(3) (defining applicable water quality standards for identifying water quality-limited segments to include “numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements”).

<sup>23</sup> Ethan Hewitt, “Boil advisory for city of Clarinda, Southwest Regional Water customers lifted,” KMAland (Sept. 22, 2025), available at [https://www.kmaland.com/news/boil-advisory-for-city-of-clarinda-southwest-regional-water-customers-lifted/article\\_77fd104b-7e1e-4bcd-abd0-e9e8c560e838.html](https://www.kmaland.com/news/boil-advisory-for-city-of-clarinda-southwest-regional-water-customers-lifted/article_77fd104b-7e1e-4bcd-abd0-e9e8c560e838.html) (last visited Oct. 2, 2025) (identifying turbidity and algae leading to drinking water advisory in Clarinda, Iowa).

<sup>24</sup> IDNR, “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” (“2026 Methodology”) (Feb. 17, 2026) at 13.

impairment has been addressed. As we have seen in recent years, short-term weather patterns can seriously impact 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 a three-year period 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 TMDL development and causing confusion for watershed groups that are trying to make improvements and install pollution reduction practices. IDNR should review at least five years of data to account for climatic variation while reflecting current ambient water quality.<sup>25</sup>

*C. The state should adopt a watershed-based monitoring program.*

IDNR relies on data from several sources, including several groups of data collected by IDNR itself.<sup>26</sup> We urge IDNR to develop a standardized monitoring plan using the watershed approach that is scientifically rigorous, allows interpretation of results, and is useful to the public. If the state had 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. Such a plan might resemble Minnesota's watershed lake and stream monitoring program, which fully assesses watersheds on a 10-year cycle.

A more rigorous monitoring system would require more resources. IDNR has requested and received a flat budget for water quality monitoring since fiscal year 2005.<sup>27</sup> This amount has 40% less value than it did in 2005.<sup>28</sup>

#### **IV. IDNR MUST LIST ADDITIONAL WATERS FOR NITRATE.**

Iowa law requires IDNR to consider "credible data" in conducting assessments.<sup>29</sup> To qualify as credible, data must "originate from studies and samples collected by the department, a professional designee of the department, or a qualified volunteer."<sup>30</sup> Professional designees include "governmental agencies other than the department."<sup>31</sup>

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<sup>25</sup> 2026 Methodology at 14 (*citing* EPA. 1997. Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(b) reports) and Electronic Updates. Assessment and Watershed Protection Division, Office of Wetlands, Oceans, and Watersheds, Office of Water, U.S. Environmental Protection Agency, Washington, D.C. EPA841-B-97-002A.).

<sup>26</sup> 2026 Methodology at 12.

<sup>27</sup> Legislative Services Agency, "Summary of FY 2005 Budget and Department Requests" (Dec. 2003) at A-39, available at <https://www.legis.iowa.gov/docs/publications/LADR/402918.pdf>.

<sup>28</sup> U.S. Bureau of Labor Statistics, "CPI Inflation Calculator," available at [https://www.bls.gov/data/inflation\\_calculator.htm](https://www.bls.gov/data/inflation_calculator.htm) (last accessed Mar. 9, 2026).

<sup>29</sup> IOWA CODE § 455B.194.

<sup>30</sup> IOWA CODE § 455B.193.

<sup>31</sup> *Id.*

IDNR relies primarily on its own monthly ambient grab sampling for nitrate data. In response to IDNR’s proposed 2024 draft impaired waters list, EPA found that IDNR had “not assembled and evaluated all readily available data.”<sup>32</sup>

In response to the 2024 draft impaired waters list, U.S. EPA reviewed additional data that IDNR had not considered in its assessment.<sup>33</sup> Among the data sources EPA considered was monitoring by IIHR-Hydrosience and Engineering at the University of Iowa.<sup>34</sup> IIHR operates a network of real-time sensors across the state for a range of water quality parameters and provides the data in an online portal.<sup>35</sup>

IIHR is housed within the University of Iowa, which is authorized by state law and funded, in part, by the legislature.<sup>36</sup> IIHR’s monitoring approach has provided far more detailed data on water quality than monthly grab sampling can supply. The website IIHR maintains includes data from the U.S. Geological Survey, a government entity. IDNR should treat data from the Iowa Water Quality Information System as data from a professional designee.

IIHR calibrates its sensors each year to ensure accuracy. Recent data from IIHR demonstrates that the data it collects aligns well with IDNR samples. Figure 1 shows the degree of correlation between IDNR sampling and the closest IIHR sample taken at the same time. **The correlation (R<sup>2</sup>) in 2024 was greater than 0.96.**

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<sup>32</sup> U.S. EPA, “Decision Document: Iowa’s Clean Water Act Section 303(d) List of Water Quality Limited Segments Still Requiring TMDLs” (Nov. 12, 2024) at 11 (Exhibit A).

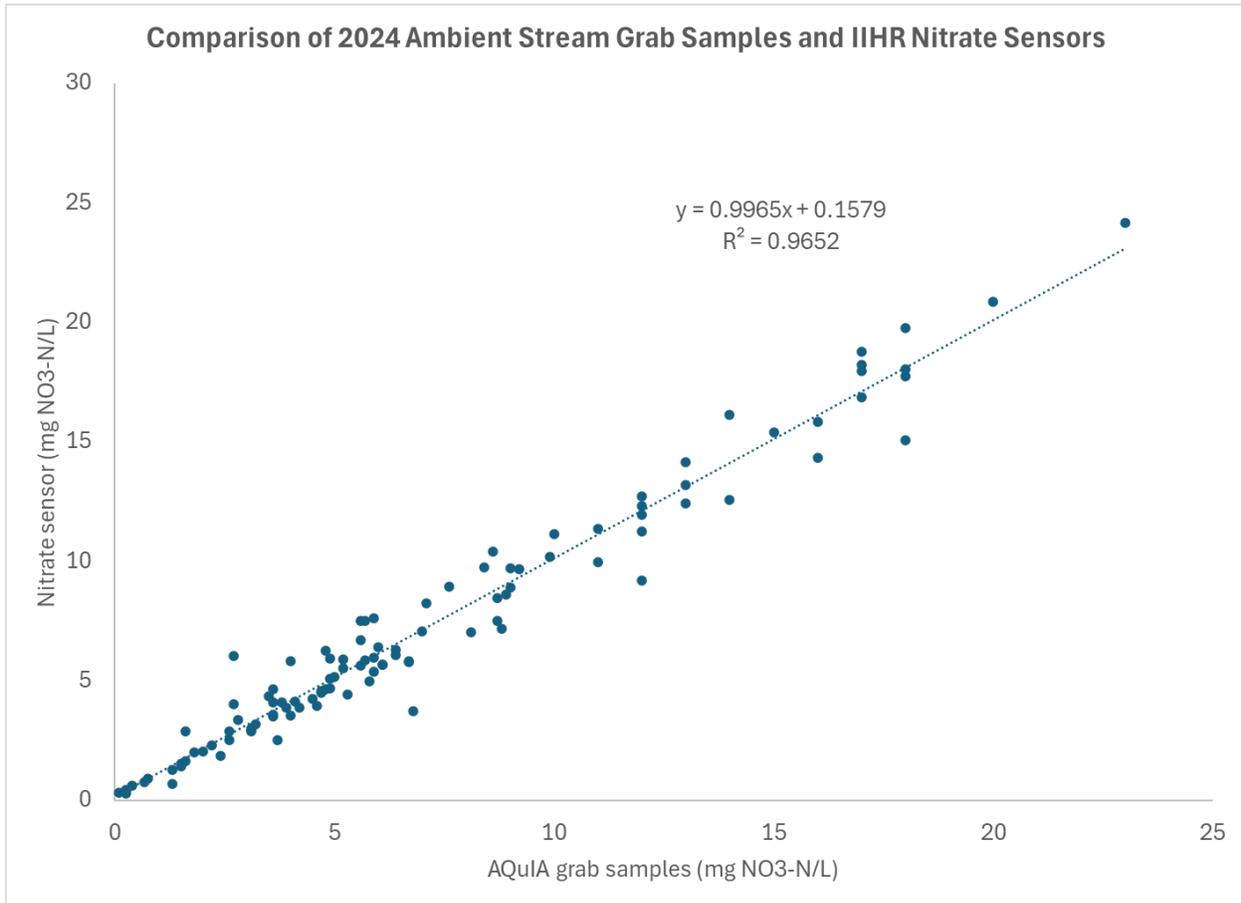
<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> IIHR, Iowa Water Quality Information System, available at <https://iwqis.iowawis.org/app/> (last accessed Mar. 9, 2026).

<sup>36</sup> IOWA CODE ch. 262, 263.

**Figure 1. IDNR/IIHR Sample Correlation in 2024.**



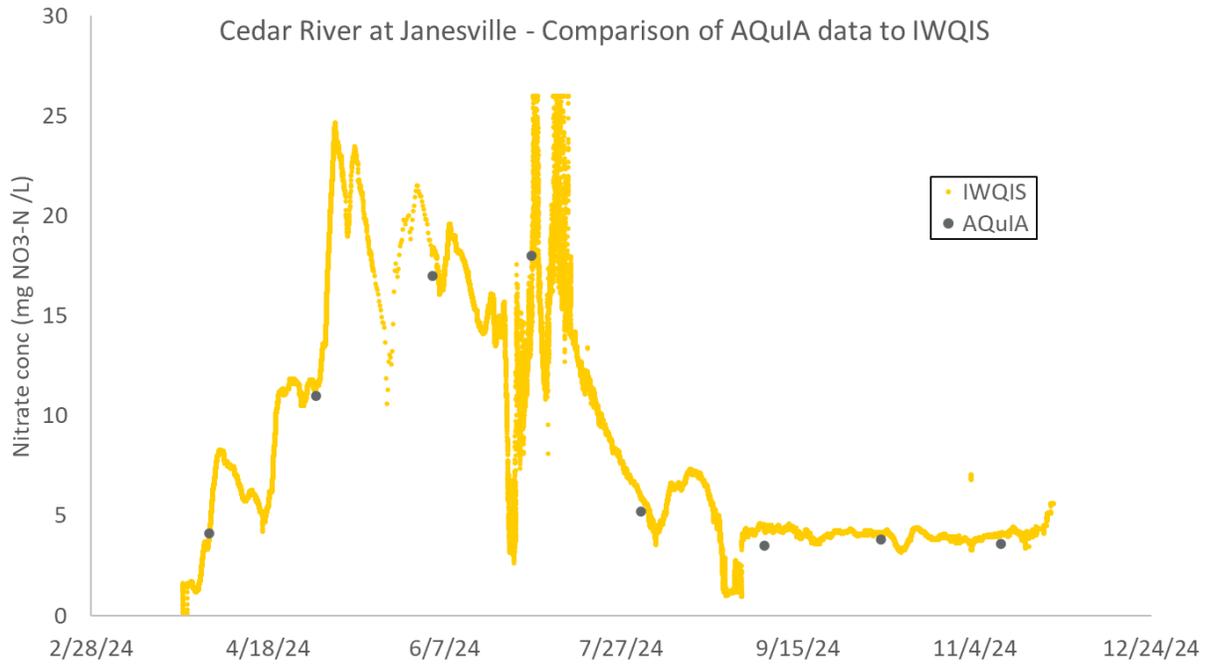
*Source: IIHR-Hydroscience and Engineering.*

While a monthly sample provides some degree of insight into water quality conditions, it can miss significant variation. IDNR has relied for years on linear interpolation between samples to assess nitrate concentrations and loads.<sup>37</sup> For the 2026 draft list, IDNR relies on a binomial calculation to estimate the frequency of exceeding the water quality criterion when limited sampling data are available.<sup>38</sup> Figure 2 demonstrates the importance of more frequent water quality sampling to capture variability between monthly samples.

<sup>37</sup> Iowa State University, IDNR, and Iowa Department of Agriculture and Land Stewardship, "Iowa Nutrient Reduction Strategy 2018-19 Annual Progress Report" (June 2020) at 35-36, available at <https://shop.iastate.edu/extension/farm-environment/natural-resources-and-environment/water-quality/inrc17.html>.

<sup>38</sup> 2026 Methodology at 20.

**Figure 2. Relationship of IIHR (IWQIS) and IDNR (AQuIA) Nitrate Samples in Cedar River at Janesville.**

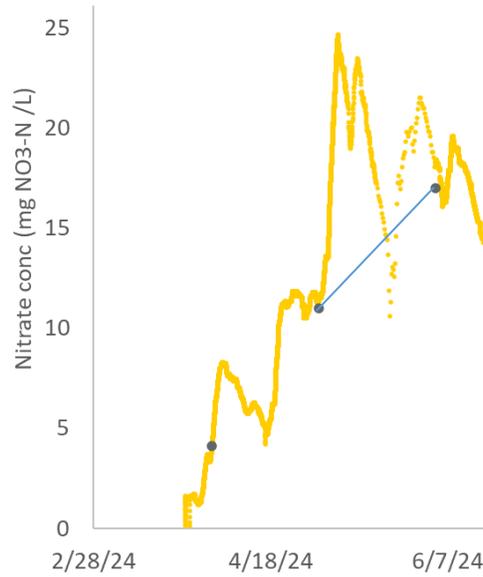


*Source: IIHR-Hydroscience and Engineering.*

As shown in Figure 2, concentrations of nitrate in IDNR samples closely align with the 15-minute increment monitoring conducted by IIHR. However, the IDNR sampling never captured the peaks of samples above 20 mg/L nitrate revealed by IIHR monitoring.

More significantly, the IIHR data demonstrate the problem with linear interpolation between monthly samples. As shown in Figure 3, the nitrate was regularly higher than a linear interpolation would suggest between the second and third DNR samples.

**Figure 3. Linear Interpolation vs. Monitoring Data.**



Source: IIHR-Hydroscience and Engineering.

Drinking water operators cannot rely on monthly samples for determining how to manage their facilities. They need more frequent monitoring to produce accurate data, make informed decisions, and ensure compliance with the SDWA.

Capturing the peaks between monthly samples is especially important when nitrate rises at unexpected times. On January 6, 2026, Des Moines Water Works had to turn on its nitrate removal facility due to high nitrate concentrations in its source waters (the Des Moines and Raccoon Rivers).<sup>39</sup> It was the first time in more than ten years that the facility operated in January.<sup>40</sup>

Data from IIHR suggest that additional waters should be listed as impaired due to high concentrations of nitrate. For example, as shown in Figure 4 the Des Moines River in the area of Ottumwa (identified by IDNR as segment 1011) had daily average nitrate-nitrogen concentrations above 10 mg/L for 50 days in 2024. The daily average concentration peaked at 13.93 mg/L. The City of Ottumwa drinking water treatment facility draws intake water from this river segment and does not have a nitrate removal system. Instead, it relies on mixing the river water with lower-nitrate water to maintain compliance with the 10 mg/L nitrate MCL.

<sup>39</sup> Rachel Cramer, “Uncommonly high nitrate levels this month lead Des Moines water treatment plant to run removal system,” Iowa Public Radio (Jan. 12, 2026), available at <https://www.iowapublicradio.org/environment/2026-01-12/nitrates-central-iowa-water-works-water-quality>.

<sup>40</sup> *Id.*

**Figure 4. Nitrate-Nitrogen at IIHR Site WQS0115 (Des Moines River segment 1011).**



*Source: IIHR-Hydroscience and Engineering.*

Long peaks of high nitrate can create risk of exceeding the 10 mg/L nitrate-nitrogen MCL. In 2024, the Des Moines River at Ottumwa exceeded 10 mg/L nitrate-nitrogen for 48 days in a 55-day period.

In other cases, IIHR data show that rivers may exceed the 10 mg/L nitrate-nitrogen MCL regularly for shorter durations. IIHR has a monitoring station on the Skunk River (WQS0010), downstream of the Class C segment of the Skunk River (segment 892, formerly segment IA 03-SKU-0030\_1). The IIHR monitoring data show the daily average nitrate-nitrogen in the Skunk River rose above 10 mg/L on 14 separate occasions in the 2022-24 timeframe, for a total of 93 days, but it is not on the draft impaired waters list.

IDNR needs to evaluate all available data using a method that better reflects the short-term risks of nitrate-nitrogen exceeding 10 mg/L. It is unlikely that DNR's binomial calculations accurately reflect the frequency of exceedances measured by the IIHR monitoring. We recommend IDNR work with IIHR to incorporate the additional monitoring data in assessing water quality.

**V. THE DRAFT 2026 IMPAIRED WATERS LIST FAILS TO INCLUDE WATERS VIOLATING NARRATIVE CRITERIA BECAUSE DNR HAS NOT ADOPTED EPA-RECOMMENDED WATER QUALITY CRITERIA.**

Iowa has not yet adopted water quality criteria for numerous pollutants recommended by EPA.<sup>41</sup> The delay in adopting new criteria limits Iowans' ability to understand the risks to designated uses. IDNR should apply EPA's scientific conclusions to the state's narrative criteria without further delay.

*A. IDNR should list waters as impaired for recreation due to microcystin violating the narrative water quality standard.*

EPA issued recommendations in 2019 for microcystin to protect recreational users from harmful algal blooms.<sup>42</sup> EPA evaluated studies of the health effects resulting from exposure to microcystin to determine its recommended criterion.<sup>43</sup> Microcystin is produced by cyanobacteria, which are also known as blue-green algae. Microcystin can cause rashes, hives, abdominal pain, headache, sore throat, vomiting and nausea, dry cough, diarrhea, blistering around the mouth, pneumonia, and, at high levels, liver damage.<sup>44</sup> Microcystin has also caused liver toxicity in lab testing.<sup>45</sup> Exposure to microcystin in drinking water can cause liver damage in humans and animals, which can be fatal.<sup>46</sup>

EPA's recommendation document reviews the outcomes of numerous studies, including short-term exposure to water containing microcystin, and concludes that the safe threshold is 8 µg/L.<sup>47</sup> This threshold is calculated to prevent liver and kidney toxicity.<sup>48</sup> EPA identified case studies in which exposure to microcystin was believed to result in severe liver impacts.<sup>49</sup> In fact, the EPA's criteria recommendations relied heavily on Iowa water quality data. EPA identified an instance

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<sup>41</sup> See IEC et al., "Comments on IDNR's 2025 Triennial Review of Water Quality Standards" (Oct. 15, 2025), available at <https://www.iaenvironment.org/webres/File/Joint%20Environmental%20Comments%20on%202025%20Triennial%20Review.pdf>.

<sup>42</sup> *Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin*, U.S. EPA (May 2019);

<sup>43</sup> See *id.*

<sup>44</sup> See *id.* at 64-68; Iowa Department of Public Health, "Microcystin," available at <https://hhs.iowa.gov/health-prevention/providers-professionals/center-acute-disease-epidemiology/epi-manual/environmental-disease/microcystin> (last accessed Oct. 10, 2025); "Health Effects from Cyanotoxins," U.S. EPA (July 10, 2025), available at <https://www.epa.gov/habs/what-are-effects-habs>.

<sup>45</sup> *Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin*, U.S. EPA (May 2019) at 59.

<sup>46</sup> Iowa Department of Public Health. *Harmful Algal Blooms*, at <https://idph.iowa.gov/ehs/algal-blooms>.

<sup>47</sup> *Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin*, U.S. EPA (May 2019) at 59-61, 64-68 (describing studies).

<sup>48</sup> *Id.* at 49 (identifying kidney and liver damage as endpoints of the conceptual model for criteria development).

<sup>49</sup> *Id.* at 66 (describing case studies, including liver failure in a small child).

where recreation in water with concentrations almost exactly at the threshold used in Iowa resulted in harmful health effects.<sup>50</sup>

When IDNR released the 2020, 2022, and 2024 impaired waters lists, IEC called on the state to adopt microcystin and numeric nutrient criteria. IDNR 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. IDNR left those priorities out of the 2021-2023 Triennial Review and has not published one since..

**In the absence of numeric criteria, IDNR must assess microcystin using the narrative water quality standard.** Given the serious health outcomes from exposure to microcystin, its presence demonstrates that waters high in microcystin do not meet the narrative water quality standard for aquatic recreation.

Iowa has adopted several narrative criteria that apply to toxic microcystin, which result from excess nutrients from agriculture or wastewater:<sup>51</sup>

- b. Such waters shall be free from floating debris, oil, grease, scum and other floating materials attributable to wastewater discharges or agricultural practices in amounts sufficient to create a nuisance.
- c. Such waters shall be free from materials attributable to wastewater discharges or agricultural practices producing objectionable color, odor or other aesthetically objectionable conditions.
- d. Such waters shall be free from substances attributable to wastewater discharges or agricultural practices in concentrations or combinations which are acutely toxic to human, animal, or plant life.

In the 2022-24 timeframe, IDNR issued 48 beach advisories for microcystin at 16 lakes (see Table 1). Four of those lakes (Brushy Creek Lake Beach, McIntosh Woods Beach, Crandall's Beach, and Marble Beach) are not listed as impaired for aquatic recreation due to algae or turbidity (which can be caused by algae). Two of the lakes had at least four swimming advisories but are not proposed for listing in this cycle. The other two beaches had one swimming advisory without being listed.

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<sup>50</sup> Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin, U.S. EPA (May 2019) at 67 (identifying reported symptoms of abdominal cramps, diarrhea, nausea vomiting, fever, headache, rash, eye irritation, ear ache, neurologic symptoms, tingling, confusion, and respiratory symptoms).

<sup>51</sup> IOWA ADMIN. CODE r. 567-61.3(2).

**Table 1. Lakes with Microcystin Advisories.**

Beach Name (Lake if different)	2022	2023	2024	Total	Nutrient-related Listing
Brushy Creek Lake Beach		10		<b>10</b>	–
McIntosh Woods Beach (Clear Lake)	2		2	<b>4</b>	–
Crandall's Beach (Spirit Lake)	1			<b>1</b>	–
Marble Beach (Spirit Lake)	1			<b>1</b>	–
Lake Darling Beach	2	8	8	<b>18</b>	Turbidity narrative (Class 4)
Green Valley Lake Beach	2	1		<b>3</b>	Algae narrative (Class 4)
Geode Lake Beach	2			<b>2</b>	Turbidity narrative (Class 5)
Big Creek Lake Beach			1	<b>1</b>	Algae narrative (Class 5)
George Wyth Beach	1			<b>1</b>	Algae narrative (Class 5)
Lake Ahquabi Beach			1	<b>1</b>	Turbidity narrative (Class 5)
Lake Anita Beach			1	<b>1</b>	Algae narrative (Class 4)
Lower Pine Lake Beach		1		<b>1</b>	Algae narrative (Class 4)
North Twin Lake East Beach		1		<b>1</b>	Algae narrative (Class 4)
North Twin Lake West Beach	1			<b>1</b>	Algae narrative (Class 4)
Rock Creek Lake Beach			1	<b>1</b>	Algae narrative (Class 4)
Union Grove Lake Beach			1	<b>1</b>	Algae narrative (Class 4)
<b>Total</b>	<b>12</b>	<b>21</b>	<b>15</b>	<b>48</b>	

Based on violation of the narrative criteria, we recommend IDNR add the four lakes (Brushy Creek Lake Beach, McIntosh Woods Beach, Crandall’s Beach, and Marble Beach) that have had microcystin advisories at their swimming beaches to the impaired waters list.

*B. IDNR should list waters as impaired for drinking water uses due to microcystin violating the narrative water quality standard.*

Iowa has a narrative standard to protect drinking water from “All substances toxic or detrimental to humans or detrimental to treatment process” such that those substances are “limited to nontoxic or nondetrimental concentrations in the surface water.”<sup>52</sup> Microcystin can violate this standard by creating risks to human health.

Excess nutrient pollution that results in cyanobacteria blooms and their associated toxins (i.e., microcystin) poses a significant public health threat in waters designated for drinking water use. Dangerous cyanobacterial toxins can pass through standard treatment practices for drinking water.<sup>53</sup> EPA issued a recommended microcystin health advisory for young children of 0.3 µg/L,<sup>54</sup> which is less than five percent of the recommended criterion for recreational exposure. Thus, to

<sup>52</sup> IOWA ADMIN. CODE r. 567-61.3(3)“c”(2).

<sup>53</sup> *Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin*, U.S. EPA (May 2019) at 108 (describing studies).

<sup>54</sup> *Drinking Water Health Advisory for the Cyanobacterial Microcystin Toxins*, U.S. EPA (June 2015) at 2.

meet the drinking water standard, water treatment facilities would need to remove more than 95 percent of microcystin even when a water meets the recreational standard.

The growing problem of harmful algal blooms extends beyond Iowa's lakes. For example, in 2020 and 2021, Des Moines Water Works detected microcystin produced by cyanobacteria in the Raccoon River.<sup>55</sup> The City of North Liberty posted a warning sign at a creek near a public park after residents observed green scum on the surface, which was confirmed to be toxic algae.<sup>56</sup>

IDNR has taken the position that the recreational standard is not the appropriate standard to protect drinking water, arguing that the recreational standard was based on incidental ingestion of raw water and drinking water suppliers may filter out toxins. IDNR specifically noted that water treatment providers may adjust operations to remove cyanotoxins. IDNR's position seems to assume that all treatment providers have constant knowledge of cyanotoxin concentrations and have the means in place to adjust treatment operations.

However, EPA has found that achieving the drinking water health advisory level of 0.3 µg/L may require greater treatment efforts than operators would typically use for pathogens and depends on a variety of factors.<sup>57</sup> Generally, treatment for microcystin is a complex process:

Any variation in treatment methods aimed at reducing toxins concentrations need to be tailored to the type(s) of cyanobacteria present and the site-specific water quality (e.g. pH, temperature, turbidity, presence of natural organic material (NOM), etc.), the treatment processes already in place, and the utility's multiple treatment goals (e.g., turbidity and total organic carbon (TOC) removal, disinfection requirements, control of disinfection by-products (DBP) formation, etc.). Utilities need to have an understanding of the type and concentration of cyanotoxins present in the source water and should conduct site-specific evaluations such as jar testings and piloting in order to determine the most effective treatment strategy.<sup>58</sup>

Standard treatment is problematic because it cannot effectively remove microcystin that has been released from cyanobacterial cells into the surrounding water:

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<sup>55</sup> Des Moines Water Works, "NEWS RELEASE: Des Moines Water Works Lifts Water Restrictions; Microcystin Potential Continues Need for Wise Water Use Practices," (July 2021), available at [https://www.dmww.com/news\\_detail\\_T37\\_R238.php](https://www.dmww.com/news_detail_T37_R238.php) (last accessed Oct. 10, 2025).

<sup>56</sup> City of North Liberty. Press release. *Blue-green algae identified in Beaver Kreek; migrating to Muddy Creek* (July 28, 2017), available at <http://northlibertyiowa.org/2017/07/28/blue-green-algae-identified-in-beaver-kreek-migrating-to-muddy-creek/>.

<sup>57</sup> *Recommendations for Public Water Systems to Manage Cyanotoxins in Drinking Water*, U.S. EPA (2015) at 17-22, available at <https://www.epa.gov/sites/production/files/2017-06/documents/cyanotoxin-management-drinking-water.pdf> (concluding that "CT values required for oxidizing microcystin-LR (and by assumption, total microcystins) may be higher than those required for inactivation of Giardia cysts, depending on pH, temperature and initial concentration of microcystins.").

<sup>58</sup> *Drinking Water Health Advisory for the Cyanobacterial Microcystin Toxins*, U.S. EPA (June 2015) at 42.

Conventional treatment is generally considered to have limited effectiveness for the removal of the extracellular microcystins. Therefore, additional processes such as adsorption, chemical oxidation, biodegradation or reverse osmosis, and nanofiltration are required to remove extracellular microcystins.<sup>59</sup>

The fact that microcystin has been detected in finished drinking water of cities like Toledo does not appear to support IDNR's assumption that treatment will consistently remove the toxin.

IDNR more recently stated that it "is continuing to evaluate the recommended criteria to decide on further future action on the subject."<sup>60</sup> Despite EPA making recommendations more than five years ago, and an implementation document in 2023, IDNR has not taken public steps to adopt a microcystin standard. To date, it has listed a limited number of lakes for microcystin, but no rivers.

IDNR's AQuIA database contains zero samples in streams for microcystin for the 2022-24 time range,<sup>61</sup> nor does it contain the microcystin samples collected by Des Moines Water Works referenced above. IDNR should request and evaluate data for microcystin in Class C waters, based on samples from treatment providers or other data sources. IDNR should then list any waters that have microcystin exceeding the 0.3 µg/L health advisory level recommended by EPA.

*C. IDNR should list additional waters as impaired if they fail to meet the narrative standard for human health.*

Iowa has the second-highest cancer rate in the country and is one of two states where the rate is increasing. Polling conducted by Food & Water Action in 2026 revealed that Iowans are more concerned about rising cancer rates than they are about cost of living increases.<sup>62</sup> We are concerned that environmental factors, including water quality, play a role in those alarming statistics. Iowans are very concerned about water quality and industrial pollution contributing to chronic health effects such as cancer, as identified in a survey conducted through cancer listening sessions held by IEC, the Harkin Institute at Drake University, and the Iowa Farmers Union, and across Iowa in 2025.<sup>63</sup> Nearly half the participants in Food & Water Action's polling said their own household had been affected by water quality issues over the past five years. As a state, we should not sacrifice Iowans' health for the benefit of industrial polluters.

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<sup>59</sup> *Id.* at 43.

<sup>60</sup> IDNR, "Iowa 2024 Section 303(d) list: Responsiveness Summary" (May 3, 2024) at 18.

<sup>61</sup> IDNR, AQuIA Database, available at <https://programs.iowadnr.gov/aquia/search/Results/4NY%3d> (last accessed Mar. 9, 2026).

<sup>62</sup> Global Strategy Group, "New poll reveals strong cross-party support for clean water protections, industrial agriculture regulations" (Feb. 2026), available at [https://www.foodandwateraction.org/wp-content/uploads/2026/02/FWA-Iowa-Polling-Memo\\_2.26.pdf](https://www.foodandwateraction.org/wp-content/uploads/2026/02/FWA-Iowa-Polling-Memo_2.26.pdf).

<sup>63</sup> IEC compiled results of surveys at listening sessions around the state asking about levels of concern for environmental risk factors for cancer. The results will be incorporated into a forthcoming report.

EPA adopts human health criteria for a range of industrial, agricultural, and other pollutants after a lengthy scientific review process. The scientific review ensures that the recommendations are tied to human health outcomes that have been well established by scientific studies. EPA’s supporting documentation provides adequate basis to justify adoption of its standards unless IDNR has state-specific information to justify a different approach.

It is shocking that IDNR has not yet adopted the majority of EPA human health criteria, which EPA sets to protect against chronic health problems like cancer. As shown in Table 2, the updated EPA criteria address dozens of pollutants by setting new or more stringent criteria. The criteria apply to fish tissue or a combination of fish tissue and ambient water concentrations. EPA’s updates reflect newer science that IDNR has not incorporated into the state’s standards.

**Table 2. Human Health Criteria Comparison.**

<b>EPA Criteria</b>	<b>Water + organism</b>	<b>Organism only</b>
<b>New</b>	54	56
<b>More stringent</b>	26	24
<b>Less stringent</b>	14	14
<b>Same</b>	0	0
<b>Total</b>	94	94

EPA’s online listing of human health criteria includes 125 pollutants.<sup>64</sup> Iowa’s rule listing water quality criteria protecting human health contains fewer than half of these, not all of which are the same as the criteria set by EPA, as shown in Appendix A of our comments on the 2025 Triennial Review.<sup>65</sup> In some cases, IDNR has criteria for variants of the chemicals, or for families of chemicals but not individual ones. Still, based on analysis by IDNR, the state needs to make substantial updates to the human health criteria.

The discrepancies between EPA’s human health criteria and Iowa criteria result from IDNR not updating the state’s human health criteria since the 2002 update to EPA’s recommended human health criteria. Even before EPA’s update in 2015, Iowa lacked criteria for numerous pollutants for which EPA set criteria.<sup>66</sup> The state water quality standards are more than two decades old and a decade overdue for updates.

<sup>64</sup> “National Recommended Water Quality Criteria - Human Health Criteria Table,” U.S. EPA (Dec. 19, 2024), available at <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table> (last visited Oct. 7, 2025).

<sup>65</sup> See IOWA ADMIN. CODE r. 567-61.3(3) at Table 1; see IEC et al., “Comments on IDNR’s 2025 Triennial Review of Water Quality Standards” (Oct. 15, 2025), available at <https://www.iaenvironment.org/webres/File/Joint%20Environmental%20Comments%20on%202025%20Triennial%20Review.pdf>.

<sup>66</sup> “Analysis of the Numeric Water Quality Criteria Adopted by the Ten States That Border Directly on the Mississippi River: Iowa,” Environmental Law Institute (Nov. 2009) at 25, available at <https://www.eli.org/sites/default/files/eli-pubs/d18-21-ia.pdf> (identifying that Iowa had not adopted fish and water

In the absence of numeric criteria, IDNR must implement the narrative standard to protect human health: “Waters which are designated as Class HH shall contain no substances in concentrations which will make fish or shellfish inedible due to undesirable tastes or cause a hazard to humans after consumption.”<sup>67</sup>

IDNR should evaluate fish tissue in waters across the state to determine whether they exceed the criteria recommended by EPA. If they do, IDNR should evaluate whether the waters should be listed based on the narrative standard for human health.

## **VI. DNR SHOULD PRIORITIZE TMDL DEVELOPMENT AND IMPLEMENTATION OF HIGH-VALUE WATERS.**

In addition to impaired waters requiring a TMDL, the integrated report IDNR submits to EPA must include the status of other waters. The continuing impairment of Outstanding Iowa Waters (OIWs) continues to limit recreational and other water uses across the state.

Iowa’s Outstanding Waters are natural treasures that the state has identified as high quality waters of state significance. Many of these waters face threats to their quality that may restrict recreation, limiting Iowans’ options considering the breadth of impairments across the state.

Commensurate with the specialty antidegradation tier, IDNR should prioritize OIWs for development of TMDLs to protect their special status as waters of significance. IDNR’s TMDL Prioritization Methodology does not include a parameter for status as an OIW.<sup>68</sup> OIWs are classified based on water quality standards, so IDNR should urgently address any violation of a water quality standard. Outstanding National Resource Waters, designated as Tier 3 under the state’s antidegradation procedure, should also receive special status for TMDL development in the future if such a water is designated.

In addition, many of the state’s premier recreational lakes continue to be impaired due to indicator bacteria. Many of the lakes that have TMDLs have been impaired for over a decade, and some have even had a TMDL for over a decade. The state must commit more attention and resources to creating lasting improvements in water quality that restore these lakes to compliance with water quality standards. We urge IDNR to complete TMDLs for all state park beaches that lack them and to dedicate adequate resources to implementing water quality improvement plans, with the ultimate goal of demonstrating measurable improvement and achieving delisting only after sustained progress across multiple assessment cycles.

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criteria for 60 of 113 pollutants, and had not adopted water supply criteria for 53 of 84 toxic pollutants with primary drinking water standards).

<sup>67</sup> IOWA ADMIN. CODE r. 567-61.3“d”.

<sup>68</sup> 2026 Methodology at 53.

## VII. CONCLUSION

Thank you for the opportunity to comment on the draft 2026 impaired waters list. If you have questions or we can clarify these comments further, please feel free to call.

Sincerely,

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/s/ Diane Rosenberg  
Diane Rosenberg  
Iowa Alliance for Responsible Agriculture

/s/ Jay Leach  
Jay Leach  
President  
Iowa Trout Unlimited North Bear Chapter

Exhibits:

- A. EPA Partial Disapproval of Iowa's 2024 Section 303(d) List
- B. EPA Response to Comments on Partial Disapproval of Iowa's 2024 Section 303(d) List
- C. IDNR Comment in Response to EPA's Partial Disapproval of Iowa's 2024 Section 303(d) List
- D. EPA Rescission of Partial Disapproval of Iowa's 2024 Section 303(d) List

- E. IEC, ELPC, & FWW Letter in Response to EPA's Rescission of Partial Disapproval
- F. Agenda for Multi-State Farm Bureau Listening Session with EPA Region 7