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September 24, 2024

Carmily Stone
Iowa Department of Natural Resources
6200 Park Ave
Des Moines, IA 50321

RE: Iowa DNR Regulatory Analysis – Chapters 40 and 42

Dear Ms. Stone:

The Iowa Environmental Council (IEC) offers the following comments on the proposed revisions to 567 Iowa Administrative Code Chapters 40 and 42. These comments represent the views of the Iowa Environmental Council, an alliance of more than 100 organizations, at-large board members from business, farming, the sciences and education, and over 500 individual members. IEC's members hike, fish, paddle, swim, and recreate in and around wetlands, lakes, rivers, and streams throughout the state.

We are concerned that DNR's regulatory analysis and the associated rule changes do not account for the costs in evaluating the costs and benefits, do not increase rule clarity as much as needed and do not provide sufficient information about the risks of drinking contaminated water. We encourage DNR to modify the regulatory analysis and rules as discussed below.

Regulatory Analysis

The Regulatory Analysis notes that "99.5 percent of the population in Iowa served by public water supply systems (3.05 million out of 3.07 million) regularly received water meeting all health-based drinking water standards in the SDWA." While this is an impressive rate, it also means that approximately 20,000 Iowans received water *not* meeting all health-based drinking water standards. If anything, these standards should be strengthened to ensure that *all* Iowans who rely on public water supplies consistently have access to clean drinking water.

As IEC discussed at length in *The True Costs of CAFOs*, contaminated drinking water already creates significant costs for Iowans.¹ With respect to public water supplies, the Union of

¹ Iowa Environmental Council (Nov. 2023), available at https://www.iaenvironment.org/webres/File/The%20Costs%20of%20CAFOs%20-%20White%20Paper%2011_10_23.pdf.

Concerned Scientists has estimated that nitrate removal will cost \$333 million in drinking water removal costs.²

Existing nitrate contamination – including contamination below the maximum contaminant level applicable to public water supplies – already imposes significant health costs to Iowans. The increased cancer, birth defects, and indirect economic losses that result from those problems cost tens of millions of dollars per year. As IEC wrote in *The True Cost of CAFOs*:³

A 2019 analysis published in Environmental Research assessed the potential health impacts of nitrate exposure at a large scale, calculating the disease cases attributable to elevated nitrate in drinking water. The analysis concluded that each year, “2,939 cases of very low birth weight, 1,725 cases of very preterm birth, and 41 cases of neural tube defects could be related to nitrate exposure from drinking water.” In addition, the estimate of nitrate attributable cancer cases per year ranged from 2,300 to 12,594. This risk is not evenly distributed across the country. As applied to Iowa, the estimated annual cancer cases attributed to nitrate range from 2.3 to 10.43 per 100,000 people, or as many as 313 cases statewide each year. . . . 4 if medical costs are applied proportionally, Iowa’s medical costs attributable to nitrate in drinking water range from \$6.25 million to \$37.5 million per year. . . . Iowa’s proportional share [of indirect losses] would be \$35 million to \$167.5 million per year.

Reducing the existing costs and preventing further costs depends on proper regulation of public water supplies. DNR should, if anything, strengthen the requirements of proposed Chapter 40 to protect Iowans’ health.

40.2(2), Definitions in Iowa Code and the CFR.

As a regular user of the Iowa Administrative Code, IEC greatly appreciates that this paragraph identifies the terms defined in other laws and regulations. Knowing which terms are defined and which of several referenced sources contain the definitions will save regulated parties and stakeholders significant time in implementing the rules in the future.

IEC encourages DNR to use this method in all rule chapters where DNR is removing full definitions to reduce duplication pursuant to Executive Order 10.

40.7(8), Required additional health information.

The proposed rule at part 40.7(8)“c” includes informational language to be required in consumer confidence reports about the potential impacts of nitrate on health:

“High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural

² *Id.* at 2 (citing “Rural Iowans Bear Brunt of Water Treatment Costs for Nitrate Pollution from Farms and CAFOs.” Union of Concerned Scientists, 14 Jan. 2021, www.ucsusa.org/about/news/rural-iowans-bear-brunt-water-treatment-costs-nitrate-pollution-farms-and-cafos).

³ *The Costs of CAFOs* at 4 (internal citations omitted).

activity. If you are caring for an infant you should ask advice from your health care provider.”

IEC recently published a summary of the health effects of nitrate contamination in drinking water.⁴ One of the key findings is that elevated levels of nitrate contribute to cases of several types of cancer. IEC’s report found that:

the health risks of nitrate in drinking water go beyond blue baby syndrome. While the drinking water standard addresses the acute toxicity health risk of methemoglobinemia, it does not protect against long-term, low-level drinking water nitrate exposure that a growing body of research has linked to chronic health issues. Research from Iowa and around the world has associated many human health concerns, including birth defects and cancers, with long-term exposure to nitrate at concentrations lower than the 10 mg/L drinking water standard.⁵

The report summarized research finding that nitrate levels well below 10 mg/L contributed to:

- birth defects, including neural tube and central nervous system defects as well as low birth weight and preterm birth;⁶
- Bladder cancer, based in part on Iowa-specific studies;⁷
- Colorectal cancer, based on meta-analysis of other studies (but not found in Iowa studies);⁸
- Potential risks of childhood cancer, kidney cancer, ovarian cancer, and thyroid cancer, based in some cases on studies of Iowans.⁹

The proposed rule includes none of this information in the notification, presumably because DNR only seeks to include the language in 40 C.F.R part 141, subpart O, appendix A, and notification is only triggered by exceedance of the 10 mg/L maximum contaminant level. DNR could provide this information on its website, but does not do so. We encourage DNR to provide additional information to Iowans who are at risk of increased cancer incidence due to drinking water contamination, either through this rulemaking or through the DNR’s website.

⁴ Nitrate in Drinking Water: A Public Health Concern for All Iowans, Iowa Environmental Council (May 2024), available at https://www.iaenvironment.org/webres/File/IEC_Nitrate_in_Drinking_Water_2024FINAL.pdf.

⁵ *Id.* (citing Temkin, Alexis, et al. 2019. Exposure-based assessment and economic valuation of adverse birth outcomes and cancer risk due to nitrate in United States drinking water. *Environmental Research*, Vol. 176:108442. <https://doi.org/10.1016/j.envres.2019.04.009>).

⁶ *Id.* at 7.

⁷ *Id.* at 8.

⁸ *Id.* at 9.

⁹ *Id.* at 10.

Conclusion

We appreciate DNR's efforts to evaluate the need for rules and to make the rules more accessible consistent with Executive Order 10, but that effort cannot undermine the protection of the state's natural resources. We encourage DNR to adopt IEC's recommended changes.

Sincerely,

/s/ Michael R. Schmidt

Michael R. Schmidt
Staff Attorney
Iowa Environmental Council