

September 26, 2023

Kelli Book
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, IA 50319-0034
afo@dnr.iowa.gov

Dear Ms. Book:

The undersigned organizations offer the following comments on the draft regulatory analysis and proposed rules regulating animal feeding operations.

The undersigned organizations have worked to improve water quality in Iowa for decades. These range from the Iowa Environmental Council (IEC), an alliance of more than 100 organizations, to locally-led grassroots groups that are focused on protecting their health and nearby natural resources. Members of our organizations hike, fish, paddle, swim, and recreate in and around lakes, rivers, and streams throughout the state. Like other Iowans, our members rely on the State of Iowa to provide access to safe, clean drinking water.

We continue to support the consolidation and simplification of existing rules, but we are concerned that the rules the Iowa Department of Natural Resources (DNR) has proposed are not sufficient to protect water quality from continued pollution. DNR has and must use statutory authority to protect water for drinking, recreation, and aquatic life. We focus our comments on:

- definitions that provide clarity and close loopholes;
- siting issues related to karst terrain;
- manure management requirements; and
- construction requirements.

These comments recommend rule language that would improve water quality protections. We also identify changes proposed in the draft rules that we support.

We encourage DNR to adopt all these changes to improve the implementation of the rules and fulfill DNR's statutory obligations.

Sincerely,

Allamakee County Protectors - Education Campaign

Common Good Iowa

Environmental Law & Policy Center

Food & Water Watch

Iowa Citizens for Community Improvement

Iowa Environmental Council

Jefferson County Farmers and Neighbors

Poweshiek CARES

Socially Responsible Agriculture Project

Southern Boone County Neighbors

Des Moines County Farmers and Neighbors for Optimal Health

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I. Regulatory Analysis

On January 10, 2023, Governor Kim Reynolds signed Executive Order 10. The Order required each state agency to “perform a retrospective analysis” of its rules as well as rescind and re-promulgate any rules the agency wants to adopt. The Order also requires a “rigorous cost-benefit analysis of existing administrative rules.” In conducting the cost-benefit analysis, DNR must ensure that it accounts for the benefits provided by the rule it proposes and should consider avoided costs.

Agricultural pollution that leads to poor water quality externalizes costs, imposing a burden on other Iowans. This burden includes a range of costs to the public in terms of health effects, economic impacts, and ecosystem services. We described these costs in detail in comments submitted on June 15, 2023.

As requested by our comments submitted in June, the Regulatory Analysis Form takes into consideration certain benefits provided by protective rules for clean water. The DNR could justify these rule changes and even more protective rules by citing academic literature that estimates the public health care and water treatment costs incurred by current rules and regulations. Not including these figures creates an imbalanced representation of costs and benefits to Iowans that favors producers.

A. Costs of Poor Water Quality

As described in our previous comments, a 2019 article from Temkin et al. in *Environmental Research* found that each year, elevated nitrate in drinking water leads to 2,939 cases of very low birth weight, 1,725 cases of very preterm birth, 41 cases of neural tube defects, and between 2,300 and 12,594 cases of cancer. In Iowa, that could be as many as 313 cases per year. Associated medical costs in Iowa range from \$6.25 to \$37.5 million per year.

Economic Benefits of Nitrogen Reductions in Iowa by Tang et al. in 2018 estimated annual drinking water treatment costs for nitrate. Adjusted for inflation, costs for a small public water system could range from \$40,000 to \$290,000 to drill a new intake well or be as high as \$200,000 to \$365,000 to blend water sources to dilute nitrate to an acceptable level. For a household on a private well, the cost could range from \$250 to \$360 to install a point-of-use treatment system to \$52,400 to \$185,500 to connect to a public water system. Hundreds of public water supplies and thousands of private wells face increasing nitrate concentrations in their source water.

Des Moines Water Works has an ionization treatment system that can cost \$10,000 per day to operate.¹ It serves to reduce nitrate concentrations to the maximum contaminant level of 10 mg/L, rather than eliminating nitrate altogether; thus, these costs do not fully avoid all costs associated

¹ Des Moines Water Works, “NEWS RELEASE: Des Moines Water Works begins operation of Nitrate Removal Facility because of nutrient spikes in raw source water,” (June 9, 2022), available at https://www.dmww.com/news_detail_T37_R328.php.

health effects described in the previous section. From 2012 - 2022, the nitrate removal facility ran for 405 days, totaling nearly \$5 million that was passed on to customers.² Des Moines Water Works has also begun a multi-year, \$30 million project to drill new wells to acquire cleaner source water.³ The utility estimates it will need to raise water rates by 9-10% each year for five years to cover the cost.⁴ The new wells are also to ensure compliance with drinking water standards, rather than to completely eliminate pollution.

The City of Cedar Rapids entered a five-year capital improvement plan in 2020 with estimated water utility improvement expenses of \$83.9 million.⁵ Concurrently, the city launched the Cedar River Source Water Partnership (CRSWP)⁶ to prevent nutrients from contaminating the Cedar River, the city's drinking water source.⁷ With thirteen partners and funding from the USDA Natural Resources Conservation Service, the CRSWP will invest \$16 million in agricultural conservation practices upstream of the city's wells.⁸

These data points reinforce the need for even stronger regulations to curb nitrate pollution from animal feeding operations.

B. Floodplains and Karst

The response to Question 4 of the Regulatory Analysis includes cost justification for adopting the 100-year floodplain map and making it available online through the AFO Siting Atlas. In the petition filed by IEC and ELPC in 2022, we requested the floodplain map adoption partially on the same basis – to increase efficiency and reduce departmental time spent on reviews. This logic can also justify a requirement for electronic, online MMPs and NMPs with geospatial information. Using geospatial mapping and allowing online reviews of MMPs and NMPs would allow applicants and all citizens of Iowa to review the locations of fields proposed for manure application and distances from waterways. Further, incorrect or incomplete calculations could be flagged automatically before submittal to the department for review. Paper copies and scanned electronic versions of the plans are difficult to review, increase costs for DNR, and create inefficiencies.

² Jason Clayworth, “Des Moines’ \$50M water nitrate fix-it plan,” *Axios Des Moines* (Jan. 25, 2023), available at <https://www.axios.com/local/des-moines/2023/01/25/desmoines-water-nitrate-wells-pollution>.

³ Kate Payne, “Des Moines Water Works Advances Plans To Build New Wells In Light Of River Pollutants,” *Iowa Public Radio* (Apr. 22, 2021), available at <https://www.iowapublicradio.org/ipr-news/2021-04-22/des-moines-water-works-advances-plans-to-build-new-wells-in-light-of-river-pollutants>.

⁴ Amy Kahler & Michael J. McCurnin, “MEMORANDUM: 2024-2028 Five-Year Capital Improvement Plan,” *Des Moines Water Works* (Jun. 6, 2023), available at <https://cms9files.revize.com/desmoineswater/2024-2028%20Five-Year%20CIP%20Memo.pdf>

⁵ “Modernizing Cedar Rapids water plant one of many high-cost needs,” *The Gazette* (Mar. 28, 2019), available at <https://www.thegazette.com/government-politics/modernizing-cedar-rapids-water-plant-one-of-many-high-cost-needs/>.

⁶ “City of Cedar Rapids Earns \$7 Million Funding Agreement for Watershed Work,” *City of Cedar Rapids* (Apr. 28, 2021), available at https://www.cedar-rapids.org/news_detail_T6_R1563.php.

⁷ City of Cedar Rapids, “Our Watershed,” available at https://www.cedar-rapids.org/residents/utilities/our_watershed.php (last visited Sept. 11, 2023).

⁸ *Id.*

Requiring online submission and geospatial data would clearly decrease costs for the agency and the state. Executive Order 10 calls on agencies to adopt less costly methods that would achieve the same purpose of the proposed rule.

Finally, DNR must compare the costs of the proposed karst rules to the petition filed by IEC and ELPC in 2021. DNR’s proposed rule would require new manure storage structures within 5 to 15 feet of karst topography to ensure a 5-foot continuous layer of low-permeability soil or non-soluble bedrock, a 2-foot clay liner, or geosynthetic clay liner. The DNR estimates that the rule would only apply to 15 to 20 projects per year and would add a minimal, one-time cost to project construction. DNR should apply the same cost analysis to structures within 25 feet of karst topography, as was requested in the petition. DNR has not justified the weaker standard it has proposed, despite historical and recent evidence of manure basin failures. The benefit of water quality protection for Iowans and future generations would outweigh the cost to a few more producers.

C. Electronic Manure Management Plans

The Joint Comments filed in June called for DNR to require electronic and geospatial manure management plans (MMPs) rather than paper copies. State law strongly encourages electronic submission to “every extent feasible.”⁹ Adopting an electronic submission process should save DNR substantial staff time in reviewing and analyzing the plans. DNR did not provide any analysis of the cost savings or the benefits of continuing to allow paper submissions. In IEC’s experience reviewing plans through records requests, the plans are completed electronically, submitted on paper, and scanned as PDFs. Thus, allowing the plans to be submitted on paper adds steps for applicants and DNR. Enforcing the plans is more challenging when their contents are not searchable. Potential overlap of fields – one of the key concerns from a water quality standpoint – requires significant time to evaluate. DNR should evaluate the potential costs and savings of electronic MMPs.

II. DNR Must Adopt Rules that Protect Water Quality.

To fulfill its statutory authority and obligation to prevent water quality impairment, DNR must develop rules to reduce pollution from AFOs and avoid the significant costs described in the comments submitted on June 15, 2023. The following comments incorporate prior comments by reference, where appropriate, and primarily address changes since the last comments submitted on June 15, 2023.

A. 65.1. DNR Must Close Definitional Loopholes

The definitions are an important part of any rule. We have identified several important definitions that need clarification.

⁹ Iowa Code § 459.302(2).

1. *DNR Must Close Loophole in Common Ownership (LLC loophole).*

We support the retention of definitions that DNR had previously proposed to delete. The current proposed rule restores definitions that DNR intended to address only by reference to several statutory sections. Retaining the definitions in rule makes the rule much easier to understand.

However, DNR has not proposed changes to the definitions that would close the LLC loophole, in which related entities are treated as separate for purposes of regulatory oversight. Changes to definitions would help address that issue, and we therefore incorporate by reference the comments submitted on June 15, 2023, on that topic. Those comments included several specific examples of related facilities treated as independent entities. A proposed change to the construction permit application requirements in section 65.104, discussed below, does not fully address these concerns.

2. *DNR Must Close the Open Feedlot Effluent Basin Loophole.*

As written, section 65.1 correctly identifies that some effluent basins at open feedlots store effluent that has had the settleable solids removed (“settled open feedlot effluent basins”), while other effluent basins store effluent without settling the solids out first (“open feedlot effluent basins”). However, in Division III of the proposed rules pertaining to open feedlots, regulatory provisions overwhelmingly constrain settled open feedlot effluent basins to the exclusion of open feedlot effluent basins that do not settle solids prior to storage. For instance, rule 65.205 establishes investigation, design, and construction requirements for settled open effluent basins, but there is no equivalent rule guiding any other open feedlot effluent basins.

DNR has not provided a rationale for establishing different regulatory requirements for settled and unsettled open feedlot effluent basins, nor does such a justification exist. Both settled and unsettled open feedlot effluent basins contain hazardous agricultural wastes that, as discussed above and in IEC’s previous comments, pose severe water quality and public health risks. Accordingly, DNR should amend section 65.1 to create an overarching definition for open feedlot effluent basins that includes both settled and unsettled basins.

B. Existing rules 65.3, 65.201. DNR Should Not Delete the Departmental Evaluation Rule.

IEC and ELPC’s 2021 petition for rulemaking requested a revision to existing rules 65.5(3) and 65.103(5), which allow DNR to evaluate environmental impacts of proposed facilities. Under the existing rule, the DNR may deny a construction permit, disapprove a nutrient management plan, prohibit construction, or impose permit conditions to avoid or minimize the adverse impacts. The petition sought to make the DNR evaluation mandatory, rather than optional.

DNR’s regulatory analysis noted that the Attorney General’s Office provided advice that the rule was beyond the statutory authority of the EPC, the Administrative Rules Review Committee (ARRC) of the Iowa Legislature objected to the rule,¹⁰ and DNR has never used the rule. DNR continues to propose deletion of this section. We incorporate the comments we provided on June 15, 2023, on this issue, as supplemented below.

In terms of EPC authority, statute gives the EPC broad authority to undertake rulemaking to protect water quality. Iowa Code expressly allows DNR to consider site-specific environmental impacts in the master matrix.¹¹ As shown in prior comments and rulemaking petitions, the rapid growth in the number of AFOs is negatively affecting water quality. Several specific AFOs have raised water quality concerns, including Supreme Beef, LLC in Clayton County. Evaluating the potential water quality impact and imposing conditions to limit the impact is necessary to fulfill the EPC’s duty to prevent and abate water pollution and to prevent disposal manure from causing water pollution.¹²

The Regulatory Analysis does not address the inconsistency with the objection raised by the ARRC and current law. The ARRC relied on operation of the master matrix to render the departmental evaluation unnecessary. Chapter 65 does not require open feedlots to pass the master matrix, and there is no other mechanism to provide a similar review of open feedlots or unpermitted sites.

C. Complaint Investigations.

Proposed section 65.4 provides for investigation of complaints that are “legally sufficient” and where “investigation is justified.” These standards follow the statutory requirements in section 459.601. The rules and statute define “legally sufficient,” but do not define when an investigation is justified. DNR should define this broadly to ensure that it does not overlook complaints alleging legal violations. We propose the following addition at the end of section 65.4(2):

An investigation is justified if the department could verify facts in the complaint through investigation.

D. 65.5. DNR Should Clarify Transfer of Title Notification.

Proposed section 65.5 addresses transfers and the notifications required. We appreciate the clarification that the notification to DNR must be in writing, not a phone call. However, DNR did not adopt other changes we recommended, including notice to the public and specifying that the

¹⁰ See objection to rules 65.5(3) and 65.103(5) in 567 IOWA ADMIN. CODE ch. 65.

¹¹ IOWA CODE § 459.305(2).

¹² IOWA CODE §§ 455.173, 459.311(3).

master matrix must be completed by the transferee. We therefore reiterate our prior comments to specify the interaction between the title transfer, public notice requirements, and master matrix.¹³

E. 65.7. Proposed Karst Protections Are Inadequate.

On August 11, 2021, IEC and ELPC submitted a petition for rulemaking to the Environmental Protection Commission requesting greater protections for karst terrain and drinking water sources from AFO siting, including the ability for the DNR director to individually evaluate environmental concerns. The Environmental Protection Commission voted on February 15, 2022, to deny the petition and adopt DNR's basis for denial. Part of DNR's basis for denial was a promise to incorporate karst protections in a broader rule review.

The proposed rules still do not protect against the water quality problems raised in the 2021 petition for rulemaking. The petition sought a 25-foot vertical separation requirement for formed manure storage structures in karst terrain.¹⁴ The proposed rules include the following changes for construction of formed manure storage basins on karst:

- A minimum five-foot separation distance
- Additional lining if the separation distance is less than 15 feet (either five feet of non-porous soil or rock, a two-foot layer of clay, or a geosynthetic clay liner)
- Geosynthetic clay liners must meet NRCS Standard 521
- Soil corings to establish vertical separation distance

The changes to karst protections are a step in the right direction but are not sufficient. Our prior comments provided evidence supporting this increased separation distance, including evidence of past storage structure failures and analysis from the Minnesota side of Iowa's primary karst formation.¹⁵ We also highlighted the risks of clay liners leaking in karst terrain.

We are also concerned that reliance on the sinkhole map could ignore sinkholes discovered but not on the sinkhole map. We suggest adding the following to 65.7(1):

The karst terrain determination shall incorporate site-specific investigation and regional knowledge of sinkholes that have occurred that are not identified on the Siting Atlas.

Based on the history of structural failure in karst, we reiterate our recommendation that DNR adopt a 25-foot vertical separation distance requirement. If DNR is unwilling to increase the separation distance for formed structures to a degree that will prevent water quality from being degraded, we

¹³ See June 15, 2023, Comments at 19-20.

¹⁴ Petition at 4.

¹⁵ See June 15, 2023, Comments at 21-28; 2022 Comments at 9-10.

recommend that formed manure storage basins in karst terrain be required to install an impermeable membrane to prevent leakage. With regard to water quality protections at open feedlots in karst terrain or floodplains, we reiterate our concern that limiting regulatory requirements to settled effluent basins at operations requiring construction permits leaves many AFOs unregulated. Under Iowa Code section 459A.205(4), the requirement to obtain a construction permit hinges on the requirement to obtain a NPDES permit. As discussed in Section O, *infra*, many AFOs that do in fact discharge to waters of the state improperly avoid NPDES permitting. Thus, an AFO's interpretation as to whether it is required to obtain a construction or NPDES permit is not an appropriate trigger for whether to apply increased protective measures. Instead, DNR should simply mandate impermeable liners for any open feedlot effluent basin located in karst terrain or a floodplain.

F. 65.7(3). Liners and Soil Corings

We appreciate the specification in section 65.7(3) that geosynthetic clay liners (GCLs) must meet NRCS Conservation Practice Standard 521. The NRCS calls for GCLs to be covered with 12 inches of soil.¹⁶ The proposed rule requires the liners to be “directly beneath” the formed structure. This could be interpreted to mean that concrete is poured directly on the GCL, which is inconsistent with the standard. We suggest clarifying that the liner must be beneath the entire manure storage structure but that 12 inches of soil should cover the liner, consistent with NRCS Standard 521.

Additionally, we note that permeability limits for structures that store AFO waste vary arbitrarily throughout the regulations. For instance, a more stringent permeability standard is established for stockpiling in non-karst terrain than for formed manure storage structures in karst terrain.¹⁷ Notably, a regulatory standard that establishes a permeability standard of 1×10^{-6} cm/sec allows substantial amounts of AFO waste to seep into the surrounding environment over the course of a year.¹⁸ We therefore recommend that DNR institute a heightened permeability standard of 1×10^{-7} cm/sec for liners in sensitive areas, and use this heightened standard to assess equivalency when determining whether a material proposed for use in a manure storage structure or effluent basin is “similar” enough to satisfy the materials requirements for those structures noted in 65.1.

The requirements for karst terrain presume that the applicant knows whether a structure is actually above karst terrain. That depends entirely on the sufficiency and accuracy of soil corings that measure the depth to karst. In 2022 and 2023, we commented on how to ensure that the karst

¹⁶ NRCS Conservation Practice Standard 521 (Aug. 2023) at 4.

¹⁷ Compare 1×10^{-7} cm/sec standard in 65.100(7)(a)(1)(2) with 1×10^{-6} cm/sec standard in 65.7(3)(b). See also 65.206(4) approving a liner that reduces percolation to one-sixteenth inch per day.

¹⁸ See Public Comments on Proposed Modification of NPDES Permit #IDG01000, Expert Report of David J. Erickson PG CPG, <https://www.epa.gov/system/files/documents/2023-09/R10-NPDES-Idaho-CAFO-GP-IDG010000-Draft-Permit-Mod-Public-Comments-2023.pdf> at 45 (compiled by EPA on Sept. 21, 2023) (charting the millions of gallons of pollution that permeate through liners with permeability ratings of 1×10^{-6} cm/sec).

assessment is reasonably accurate.¹⁹ Specifically, we recommended requiring more than two corings, ensuring the corings represent a cross-section of the area under the manure storage structure, and taking them to a greater depth. Maintaining adequate separation fulfills the prohibition in statute against unformed manure structures within 25 feet of karst terrain.²⁰

DNR did not incorporate those suggestions. We incorporate our 2023 comments here, because sufficient corings are fundamental to ensuring compliance with statutory restrictions on construction in karst terrain.

G. 65.9. DNR Must Adopt the Floodplain Map as Proposed.

The proposed rules include adoption of a floodplain map by incorporating it into the AFO Siting Atlas on the DNR website.²¹ This fulfills a legislative directive dating to 2002.²² As explained in the 2022 Petition for Rule Making, climate change is expected to exacerbate the intensity and frequency of storms in Iowa, including rainfalls. Ensuring that DNR maintains and updates the floodplain map regularly will be important to ensure adequate protection for water quality in the future.

H. 65.100. Minimum Manure Control Requirements.

Several sections of the proposed rule allow variances from the rule requirements. In some instances, the rule would allow variances from basic protections for water quality and public health. We are concerned that the variance process does not allow for public input, despite the potential for public impacts from the requirements. For example, section 65.100(3) allows a variance from 65.100(1), which provides for the minimum manure control for confinement feeding operations. The requirements subject to variance are things like “manure shall be removed....to prevent overflow of discharge of manure” (65.100(1)“b”) and assurance of adequate manure capacity (65.100(1)“c”). The provision allowing a variance contains no real criteria to judge whether the alternative being sought will provide sufficient manure control.

The same issue arises in paragraph 65.101(2)“e” and subrule 65.200(4). In total, DNR has granted dozens of variances in the last decade without public input or public process, other than publishing the final decision on the variance requests.²³ We recommend DNR provide public process for variances to allow comment on variances, as follows:

¹⁹ See June 2023 Comments at 25-27; 2022 comments at 10-11.

²⁰ IOWA CODE § 459.308(3).

²¹ Proposed rule at § 65.9.

²² 2002 IOWA LAWS ch. 1137, sec. 32.

²³ “Search Waivers of Administrative Rules,” Iowa Legislature, available at <https://www.legis.iowa.gov/law/administrativeRules/researchtracking/searchWaivers?action=search> (last visited Sept. 25, 2023).

In considering whether to grant a variance, the department will take public comment for 30 days before making its decision. The department will publish notice of the opportunity for comment on its website.

This change provides significant transparency into variance requests, not just those that are granted. The opportunity for comment could help resolve issues like the presence of sinkholes (variance 18wcv057), alternative construction in karst (variance 17wcv087), and separation from private wells (many variances).²⁴

I. 65.101. Land Application Requirements Must Prevent Pollution.

The proposed rules should incorporate proper nitrogen application rates as a requirement, as DNR now proposes to do. We are disappointed that DNR has proposed to delete existing language specifying other best practices for manure application.

We reiterate and incorporate our prior comments recommending that tile drainage be tested whenever liquid manure is land-applied to tile-drained land.²⁵

If DNR does not believe it has legal authority to adopt a particular recommendation as an enforceable standard, it should retain the provisions as recommendations. Including the recommendations in rule would demonstrate prudent and generally accepted management practices. While they may not be enforceable, they provide important information to manure applicators about how to minimize risks to water quality.

J. 65.104. Pre-Construction Submittal Requirements.

The proposed construction permit application requirements in section 65.104(1) include the parties with the controlling interest in the operation, including a new requirement that for partnerships and corporations, the application must include “a list of all members and their percentage of ownership in the partnership or corporation.”

DNR needs to ensure that the list provided as part of the permit application is accurate. We recommend DNR require not just a list of ownership, but provide the underlying legal document (operating agreement) for any corporation that defines the ownership interests. This operating agreement provides verification of claims by an applicant. Alternatively, DNR could specify that false information on applications is a violation of Iowa Code section 714.8.²⁶

²⁴ *Id.*

²⁵ June 15, 2023 Comments at 28-29.

²⁶ Iowa Code section 714.8 defines fraudulent practices to include entries on public records that a person knows to be false. DNR relies on this section for other applications it issues.

We also recommend that the name of the corporation that owns the livestock (integrator) be included in order to ascertain if there is common management. We provided specific language recommendations in our June 2023 comments that we incorporate by reference here.²⁷

K. 65.105. Construction permit application review process, site inspections and complaint investigations.

The proposed rules specify that “A county board of supervisors may adopt a construction evaluation resolution” for a confinement structure, and that such resolutions remain in effect. The rule proposes an enrollment period of January 1 through January 31. It is not clear whether resolutions previously passed by a county board need to be passed again after rule adoption. We recommend clarifying whether a county board needs to re-adopt such a resolution.

L. 65.108. DNR Inappropriately Reduced Monitoring Requirements.

In the 2021 rulemaking petition, IEC and ELPC proposed to increase groundwater monitoring requirements at confinements and open lots with earthen manure structures to reduce the risk of unremediated groundwater contamination. We recommended a similar approach in our 2022 and June 2023 comments.²⁸ This request was consistent with Iowa Code, which expressly allows DNR to require water quality monitoring for unformed manure structures.²⁹ DNR has rejected that approach.

We reiterate the need for monitoring in light of the potential for leaks at aging manure storage facilities. Recent events have shown that this risk is real – an earthen clay-lined manure storage basin constructed in Greene County in 1990 recently leaked into a nearby creek, contaminating more than 500,000 gallons of water.³⁰ Without monitoring at the storage basin, it took DNR days to identify the source of the water pollution.³¹ As AFO structures age, the risk of similar incidents increases.

M. 65.111 and 65.208. DNR Must Require Online Submission of MMPs and NMPs.

MMPs and NMPs are foundational tools to limit manure over-application and prevent manure from causing water pollution. Iowa statute requires DNR to provide for methods of processing

²⁷ See June 15, 2023 Comments at 29-30.

²⁸ See *id.* at 31-32.

²⁹ IOWA CODE § 459.303(6).

³⁰ Jared Strong, “DNR: Aging manure basin leaked into ground, tiling and creek,” Iowa Capital Dispatch, Sept. 8, 2023, available at <https://iowacapitaldispatch.com/2023/09/08/dnr-aging-manure-basin-leaked-into-ground-tiling-and-creek/>.

³¹ *Id.*

electronic applications and payments, and “every extent feasible provide for the processing of permits and manure management plans required under this subchapter using electronic systems.”³² Although DNR does allow electronic processing of MMPs, its approach allows applicants to submit electronic documents that are scanned documents – functionally similar to a paper submission for purposes of review.

Continuing to allow paper submissions reduces transparency, decreases efficiency, increases the likelihood of errors and inappropriate approvals, and increases costs for DNR. DNR must evaluate the costs and benefits of continuing to allow paper copies to be submitted and revise the rules to require online documentation, including geospatial mapping.

Having only paper copies or scanned maps means that DNR has no efficient way to determine whether fields are shared among MMPs and NMPs. When IEC requested MMPs and NMPs through an Open Records Act request in 2020, seeking fields that overlap with fields proposed by Supreme Beef, DNR staff responded that “there is no electronic query method in place to determine fields shared among multiple MMPs/NMPs.”³³

DNR’s method to identify potential overlap with a new NMP is to review the plans from every nearby facility one at a time based on paper plat maps.³⁴ DNR is either taking substantial staff time to do this for every new plan or failing to do so at the risk of Iowa’s water quality. Requiring electronic geospatial information as part of the MMP/NMP submission would vastly accelerate and improve the accuracy of the review process.

We reiterate our recommendation to update the MMP submission requirements with the following changes to proposed rule 65.111(3)(a):

a. The owner of a confinement feeding operation who is required to submit a MMP under this rule shall submit an updated MMP on an annual basis to the department. The updated MMP ~~may~~ must be submitted by ~~hard copy or by~~ online, electronic submittal through a DNR web application. The updated plan must reflect all amendments made during the period of time since the previous MMP submission.

(1) ~~If the plan is submitted by hard copy, the submittal process shall be as follows:~~ The owner of the AFO shall ~~also~~ submit the updated MMP on an annual basis to the board of supervisors of each county where the confinement feeding operation is located and to the board of supervisors of each county where manure from the confinement feeding operation is land-applied. If the owner of the AFO has not previously submitted a MMP to the board of supervisors of each county where the confinement feeding

³² IOWA CODE § 459.302(2).

³³ Email from DNR Records (dnr.records@dnr.iowa.gov) to Michael Schmidt (Dec. 17, 2020).

³⁴ *Id.*

operation is located and each county where manure is land-applied, the owner must submit a complete MMP to each required county. The county auditor or other county official or employee designated by the county board of supervisors may accept the updated plan on behalf of the board. The updated plan shall include documentation that the county board of supervisors or other designated county official or employee received the MMP update.

~~(2) If the plan is submitted electronically, the~~ submittal process shall be as follows: The owner of the AFO shall submit the updated MMP to the department through the department's electronic web application. Once the submittal has been completed, the department shall provide electronic access of the updated MMP to the public through the online AFO Siting Atlas and database~~board of supervisors of each county where the confinement feeding operation is located and each county where manure is land-applied.~~

Electronic forms, along with supporting software, would significantly decrease the DNR staff time necessary to review MMPs and NMPs. It would increase transparency and accountability. It would also save costs for public records requests. DNR must make use of the online submissions by populating a database with the information and creating a geospatial layer.

DNR should also specify the electronic geospatial component of manure application locations in proposed rule 65.111(5):

a. The MMP shall identify each farm field where the manure will be applied, the number of acres that will be available for the application of manure from the confinement feeding operation, and the basis under which the land is available. The locations shall be submitted to DNR in an electronic geospatial format. DNR shall add the geospatial data to the online AFO Siting Atlas and AFO database for public access.

If DNR has preferred file formats, it could specify those formats in the rule.

N. 65.111 and 65.209(8). MMP and NMPs Must Fully Address Risks of Water Quality Pollution.

Our prior comments highlighted the water quality problems resulting from inadequate regulations controlling manure. DNR has proposed to adopt only one of those changes: requiring reporting of sold manure. We appreciate the proposed change to section 65.111(7) to ensure that sales of manure do not entirely bypass the reporting requirements. DNR's refusal to adopt other changes ensures that manure will continue to degrade water quality.

The information provided in MMPs and NMPs determines whether DNR can assess compliance with basic requirements to protect water quality. Inaccurate or insufficient information will lead to water quality problems.

1. *65.111(12), Phosphorus Index Calculations*

Phosphorus can be the limiting nutrient for manure application rates. The proposed rules would allow ephemeral gully calculations consistent with NRCS Technical Note 25, in conjunction with supporting documents or photographs. The Iowa electronic Field Office Technical Guide (referenced in Technical Note 25) contains calculation methods for gully erosion.³⁵ The calculations can be supplemented by photographs,³⁶ but the calculations cannot be completed based on photographs alone. The rules do not make clear that photographs can only be adequate if they consistently show no ephemeral gullies exist. The rule should specify that if photographs show ephemeral gullies exist, the erosion calculations consistent with NRCS Technical Note 25 must be provided.

2. *65.111(13), Manure Application Rate Calculations*

The manure application practices determine whether excess nitrogen and phosphorus remain unused by the crop. DNR has proposed rule changes to address the current science for manure application rates by requiring application rates at the maximum return to nitrogen (MRTN).

Applying at MRTN is consistent with state law and policy. State law calls for plans to assume application rates that achieve “optimum crop yields.”³⁷ Although livestock producers seem to equate “optimum” with something akin to “maximum,” the MRTN calculation is consistent with an optimum output from an economic standpoint – that is the very purpose of the calculation. It is by no means optimum from an environmental standpoint, because it can still result in substantial nitrate losses. It is, however, a major improvement from existing practice, in which overapplication of manure leads to significant nutrient losses and externalized costs for other Iowans.

The Nutrient Reduction Strategy science assessment, led by Iowa State University, relied on MRTN for every single scenario evaluated³⁸ because it provided immediate cost savings while

³⁵ “Iowa | Field Office Technical Guide,” Natural Resource Conservation Service, available at <https://efotg.sc.egov.usda.gov/#/state/IA/documents/section=1&folder=3496> (last visited September 15, 2023).

³⁶ *Id.* at 2 (the final step in a calculation is to “add photographs of ephemeral gullies to the case file as appropriate and available”).

³⁷ IOWA CODE §§ 459.312(10)“a”(1); 459A.208(7)“a”(1).

³⁸ “Iowa Nutrient Reduction Strategy – A science and technology-based framework to assess and reduce nutrients to Iowa waters and the Gulf of Mexico” (hereinafter “NRS”). Updated December 2017. Section 2.2 at 42-43.

reducing excess nitrate.³⁹ The NRS calculated that if all fertilizer were applied at MRTN, it would save \$32 million per year.⁴⁰ Manure accounted for approximately 25 percent of nitrogen and phosphorus crop needs in 2017,⁴¹ so applying at MRTN would result in cost savings of approximately \$8 million per year.

The change in application rates has the potential to reverse what Iowa State University has modeled to be an 11 percent increase in nitrate loading statewide resulting from increased nitrate application rates on corn-soybean rotation fields.⁴² We support the proposed change to reduce application rates to MRTN.

MRTN has provided a basis for limiting manure application in other corn producing states.⁴³ We recommend the following addition to section 65.111(13)(c):

c. Nitrogen-based application rates for corn shall be based on current recommendations from an Iowa-based state university for the maximum return to nitrogen. Nitrogen-based applications rates for other crops shall be based on the optimum crop yields as determined in subrule 65.111(4) and crop nitrogen usage rate factor values in Table 4 or other credible sources. The calculation must use a cost factor of at least 0.10. The calculations of manure applied from the facility must account for fertilizer from all other manure and non-manure sources. Liquid manure applied to land that is currently planted to soybeans or to land where the current crop has been harvested and that will be planted to soybeans the next crop season shall not exceed 100 pounds of available nitrogen per acre. Further, the 100 pounds per acre application limitation in the previous sentence does not apply on or after June 1 of each year; in that event subrule 65.111(4) and Table 4 would apply as provided in the first sentence of this paragraph.

3. 65.111(10), *Master Matrix Obligations*

In prior comments we expressed concern that the master matrix scoring system can rely on operational practices, but there is no mechanism to ensure those practices continue. We reiterate

³⁹ See IOWA CODE § 455B.177 (adopting NRS as state policy); NRS, *supra* note 2, §2.1 at 9.

⁴⁰ NRS, *supra* note 2, §2.2 at 27.

⁴¹ “Too Much Manure? Can Iowa use all its manure for fertilizer?” Iowa State University Extension (2017), Publication AE 3608, available at <https://store.extension.iastate.edu/product/Too-Much-Manure-Can-Iowa-use-all-its-manure-for-fertilizer>.

⁴² “Iowa Nutrient Reduction Strategy – Water Quality,” Iowa State University, available at <https://www.arcgis.com/apps/dashboards/29460d40c6a74379a90b42f3e770db07> (last visited June 8, 2023).

⁴³ See Minnesota General Permit MNG440000 (2021), item 13.3 (citing “Manure Nitrogen Rates For Corn Production,” which relies on MRTN).

our prior comments, which called for MMPs to include a requirement to fulfill commitments made in the master matrix.⁴⁴

4. *65.111(15). Use of Manure as a Soil Conditioner Requires Definition and Limitation.*

The proposed rules exempt dry manure being sold “as a commercial fertilizer or soil conditioner” from having to meet the requirements for MMPs. DNR has proposed to expand this in section 65.209(8)“f” to include manure sold as a soil conditioners by open feedlot operations.

Chapters 200 and 200A do not specify what type of “processing” is required to qualify for treatment as soil conditioners. DNR needs to define the applicability of this process to address the widespread and dangerous use of soil conditioners derived from byproducts of AFOs.⁴⁵

Supreme Beef has attempted to use this loophole to avoid regulation of its scraped solids. Supreme Beef has had repeated problems providing an NMP that meets requirements, and apparently sought an alternative regulatory path by claiming that it was selling the solids fraction of its manure. This provides a clear example of an open feedlot operation attempting to circumvent the NMP requirements to avoid having to detail the application of the vast majority of the manure nutrients. The proposed rules expand this loophole to undercut the purpose of NMP requirements in statute.

Exempting soil conditioners without defining what qualifies as a soil conditioner creates loopholes for manure application requirements. The proposed rules also fail to address or restrict manure from open feedlots sold for use as a soil conditioner. DNR must amend the rules to prevent AFOs from evading manure management regulations by reclassifying the manure as a soil conditioner.

O. 65.202. DNR Must Ensure NPDES Permit Compliance for CAFOs.

We appreciate a change to section 65.202(2) that clarifies a modification of an AFO can trigger NPDES coverage; as we explained in prior comments, a change to the facility that results in a discharge can trigger the permit coverage requirement. We also appreciate changes from the existing rules that more fully incorporate federal requirements into state law, which is necessary for a delegated state program to ensure compliance.

However, we remain concerned that many AFOs in Iowa discharge manure to surface water without qualifying for a permitting exemption under the Clean Water Act. Our prior comments

⁴⁴ See June 15, 2023, Comments at 40-41.

⁴⁵ Donnelle Eller, “Unbearably foul-smelling Iowa pit prompted complaints for weeks; state didn't act until worker died,” Des Moines Register (Oct. 5, 2021), available at <https://www.desmoinesregister.com/story/money/agriculture/2021/10/05/algona-iowa-pit-fumes-no-violations-before-worker-death-pork-production-peptones/5826240001/>.

provided evidence that liquid manure application to row-cropped land with pattern drain tile will lead to discharges of pollutants to surface water. We reiterate and incorporate those comments and recommendations here.⁴⁶

P. 65.209(7). DNR Should Ensure Adequate Public Notice of NMPs.

Proposed rule section 65.209(7) retains existing procedures for public notice of NMPs. Statute requires DNR to maintain a website with information “relevant to making public comments,” and DNR may post the NMP on its website.⁴⁷ DNR maintains a web page with information about NMPs, but it contains little information to aid the public in making comments about an NMP.⁴⁸ The page directs the public to the department’s regional field offices to request NMPs and does not list NMPs open for comment.⁴⁹

In declining to adopt our prior recommendations, DNR is not facilitating transparent public notices. DNR must receive proof of notice from an applicant, which DNR could post on its Open Feedlots webpage or include in emailed newsletters. These low-cost steps would facilitate public input and transparency in the review process.

Public review of NMPs serves an important purpose. In *Sierra Club Iowa Chapter v. Iowa DNR*, the court identified a number of “oddities” about the DNR approval process for the facility.⁵⁰ The court ultimately held that the NMP included illogical interpretations and application of the law to the facts of the case.⁵¹ These issues only came to light due to public review and comment on the NMP for the facility. Refusing to facilitate public review of NMPs increases the risk of NMPs being inappropriately approved.

Recent cases also raise questions about whether DNR has been providing adequate public notice for NMPs that change substantially in response to public comments or DNR feedback. IEC has raised questions about DNR’s procedures since at least 2021, when DNR issued approved a nutrient management plan that (1) differed significantly from a prior plan that had been placed on public notice and (2) was dated after the date of DNR’s approval.⁵² DNR has continued to approve

⁴⁶ See June 15, 2023, Comments at 41-43.

⁴⁷ IOWA CODE § 459A.208(5)(c).

⁴⁸ “Open Feedlots, Iowa DNR,” Iowa DNR, available at <https://www.iowadnr.gov/Environmental-Protection/Animal-Feeding-Operations/Open-Feedlots#16333358-nutrient-management-plans> (last accessed June 7, 2023).

⁴⁹ *Id.*

⁵⁰ Polk Dist. Ct. No. CVCV062713 (filed Apr. 28, 2023), at 18-19.

⁵¹ *Id.* at 22, 25-28.

⁵² See Letter from Michael Schmidt to Kelli Book, RE: Supreme Beef, LLC Nutrient Management Plan, Mar. 8, 2021, at 2 (noting that DNR approved the NMP on October 5, 2021, and the NMP was submitted on Oct. 7, 2021).

NMPs with changes from the version placed on public notice.⁵³ Iowa Code does not provide DNR with authority to change NMPs in response to public comments or allow applicants to change NMPs based on DNR's feedback without initiating a new public process; DNR's role is to approve or disapprove the NMP.⁵⁴ This role is similar to that of the Iowa Utilities Board in a recently-decided case at the Iowa Supreme Court.⁵⁵ The Supreme Court agreed with appellees that the Board could approve or disapprove plans submitted to it for approval, but could not change them.⁵⁶ In addition to inconsistency with DNR's statutory role, DNR's approach of approving plans that have not been subject to public notice undermines the public notice process and results in approval of plans that do not meet legal requirements.⁵⁷

II. Conclusion

The proposed rules make progress in resolving issues raised in petitions for rulemaking filed in 2021 and 2022 addressing karst, drinking water, and floodplains. As written, the proposed rules do not fully address concerns regarding karst or drinking water. DNR can also address the ongoing water quality problems that result from inappropriate production, storage, and application of manure that have increasingly plagued Iowa's lakes, rivers, streams, and groundwater. The proposed rules will provide some benefits to water quality, but continue to prioritize AFO production over water quality that would benefit Iowans statewide.

Executive Order 10 requires DNR to address the costs and benefits of proposed rules. DNR's regulatory analysis makes reference to some costs and benefits for the public, but does not quantify them and provides an incomplete picture of the costs of water pollution to Iowans around the state. DNR has the legal authority and duty to reduce the risks to human health and must adopt rules to protect all Iowans.

Manure is a major source of pollution to Iowa's streams, rivers, lakes, and groundwater. Ensuring that MMPs and NMPs contain accurate information, propose proper manure application rates, and have proper approval criteria will lead to immediate and long-term water quality improvements. Requiring electronic submission of manure plans will save agency resources, increase transparency, and facilitate compliance and enforcement efforts. These changes also have statutory support and DNR should adopt these changes to implement Iowa's Nutrient Reduction Strategy. DNR should evaluate the costs and benefits of not requiring electronic MMPs and NMPs.

⁵³ See, e.g., Fawn Hollow Nutrient Management Plan (approved Aug. 2023).

⁵⁴ Iowa Code § 459A.208.

⁵⁵ *Environmental Law & Policy Center, et al., v. Iowa Utilities Board*, Iowa Sup. Ct. case no. 22-0385 (Apr. 28, 2023).

⁵⁶ *Id.* at 12.

⁵⁷ See *Sierra Club v. Iowa Department of Natural Resources*, Ruling on Motion to Strike and Petition for Judicial Review, Polk Co. Dist Ct. No. CVCV062713 (Apr. 28, 2023) (reversing DNR approval of Supreme Beef's NMP).

DNR must also ensure construction of future manure storage structures will not contribute to water quality problems through leaks or other releases to surface water or groundwater. Clearer and stronger triggers for construction permits will ensure appropriate DNR oversight. Stronger construction standards will reduce the risk of future failures. Increased monitoring will catch problems before they become more serious. Reducing water quality pollution from storage structures will require adoption of the changes proposed above.

Finally, DNR should adopt a range of changes to other pieces of the rule chapter to close loopholes and ensure the public can properly engage in review of nutrient management plans. Ensuring that facilities cannot evade regulation by creating affiliated corporations and partnerships will level the playing field for other facilities and ensure adequate oversight by DNR. Public engagement on NMPs will improve the plans, as shown by the Supreme Beef comment process and subsequent lawsuit.

We encourage DNR to adopt the changes proposed in our comments to provide protections for drinking water, groundwater, surface water, and floodplains, for the benefit of Iowans across the state who rely on our public resources.