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VIA EMAIL to DNRAAdministrativeRulesComments@wisconsin.gov

October 4, 2017

Mike Gilbertson
Department of Natural Resources
101 S. Webster Street
Madison, Wisconsin 53707

Re: Department of Natural Resources proposed changes to NR 151

Dear Mr. Gilbertson:

Thank you for the opportunity to comment on the Wisconsin Department of Natural Resources' ("DNR") draft rules, which provide targeted performance standards for Silurian dolomite areas of Wisconsin, Wisconsin Administrative Code ch. NR 151 (NR 151). We agree that the existing regulatory standards for agriculture are insufficient to protect drinking water and public health.

Our comments reflect the serious public health threat that too many Wisconsin residents have to deal with as a result of manure-contaminated groundwater. Research in northeast Wisconsin demonstrates that around 25-30% of wells in Kewaunee County are contaminated. The frequency of contamination events—which aren't always accompanied by bad-smelling, brown water that might otherwise warn families of risk—is so high that many people simply do not trust their private well water anymore. This leaves many residents without reliable access to clean drinking water. We ask DNR staff to keep this uncomfortable reality in mind when finalizing the targeted performance standards for these vulnerable areas. MEA and our partners are committed to tracking NR 151 updates to ensure that the final performance standards are not weakened by the end of the rulemaking process. This will take commitment on behalf of both the DNR and our Legislature.

These protections are a step in the right direction to tackle the huge public health threat posed by manure contamination of groundwater. But to see any improvement, DNR must maintain some critical elements in the draft rule, including:

1. **"Silurian bedrock" defined to include areas where bedrock consists of Silurian dolomite overlain by soils of 20 feet or less.** DNR should not weaken the potential impact of this rule by limiting the definition to shallower soils. Scientific evidence presented to DNR by researchers involved in the NR 151 stakeholder meetings establishes that Silurian dolomite with 20 feet or less soil depth to bedrock is very susceptible to groundwater contamination. The evidence does not indicate that targeted performance standards for only areas with shallower soils would have a significant positive impact on groundwater quality.

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2. **Section 13(g) prohibits the mechanical application of manure on soils with less than two (2) feet depth to Silurian bedrock.** There was general agreement in NR 151 stakeholder meetings and earlier Kewaunee workgroup meetings that these areas pose the greatest risk of groundwater contamination from manure spreading at any time.
3. **Section 13(13) prohibits mechanical manure applications within 1000 feet of a community water system, 250 feet of a private or non-community water system, and 300 feet upslope or 100 feet downslope of a direct conduit to groundwater.** These setbacks will help prevent manure from entering these direct pathways to groundwater and public drinking supplies. These setbacks are no guarantee given variable fracture networks in this region, but these setbacks are a reasonable protection and are consistent with similar agricultural runoff rules.

In addition to the above items that we urge DNR to retain in the final rule, DNR should clarify the following in the final rule in order to provide a clear and consistent regulatory framework:

1. **Define "direct conduits to groundwater,"** which is used in Sections 1 and 13(13)(c). This phrase is not defined within NR 151, which may create confusion and regulatory uncertainty. This phrase is defined in a similar regulation, Wisconsin Administrative Code ch. NR 243, which applies to animal feeding operations. DNR should add a definition of "direct conduits to groundwater" that is consistent with the definition in Wis. Admin. Code § NR 243.03(20).
2. **Define the term saturation** as it is used in section 13(3). This provision prohibits the mechanical application of manure on soils with 24 inches or less "between the ground surface and saturation." The term saturation is not defined in Chapter NR 151 or the draft rule. DNR should define saturation consistent with the definition of "saturated soils" in Wis. Admin. Code § NR 243.03(57), or simply refer to the depth to groundwater, as in Wis. Admin. Code § NR 243.14(2)(b)7.
3. **Clarify the definition of "closed depression" and the corresponding manure application prohibition** in sections 1 and 13(14). The draft rule prohibits mechanical manure applications within "100 feet of an area in a closed depression." The boundary of the closed depression to which this 100 foot setback applies remains unclear even taking into consideration the definition of closed depression in section 1 of the draft rule. The definition of closed depression refers to a "topographical basin where water ponds to a seasonal high water mark . . ." DNR should clarify the intended extent of a closed depression area and from what point in a closed depression the manure setback begins. A reasonable compromise would be to define the boundary of the closed depression area as the extent of ponded water or visible indications of a groundwater infiltration area.

Additionally, this draft rule will be more likely to improve groundwater quality and protect drinking water supplies with some modest improvements to strengthen the rule.

1. **Modify application rate restrictions for 2-5 feet depth to bedrock.** To protect the most vulnerable areas of the Silurian dolomite, that area with less than 5 feet of soil depth to this fractured bedrock, DNR should modify the application rate restrictions provided in Table 1 for liquid manure. The annual application rates provided do not limit hydraulic loading of the soil which creates an increased risk of manure contamination. At a minimum DNR should require

split applications, which is consistent with the Sensitive Area and Practices Recommendations from the Kewaunee workgroups.

2. **Include restrictions on manure applications on frozen or snow covered ground.** The restriction in section 13(7) that prohibits manure application or headland stacking on frozen or snow covered ground with 5 feet or less depth to bedrock is a reasonable restriction for these highly vulnerable areas. But the evidence indicates that Silurian dolomite with between 5-20 feet soil depth to bedrock is also very vulnerable to manure contamination. DNR should include protections for these vulnerable areas either by expanding section 13(7) to apply to the entire Silurian dolomite with 20 feet or less depth to bedrock, or at least to reflect the winter spreading restrictions in the 2015 update to the NRCS 590 Standard.
3. **Apply the general performance standards to the entire Silurian dolomite bedrock region.** Several of the performance standards apply without regard to a specific soil depth to bedrock, namely those in sections 13(2), 13(4), 13(13-16). DNR should modify the draft rule to make these performance standards applicable to the entire Silurian dolomite region, not just the area defined as Silurian bedrock, which includes only the area with 20 feet or less depth to bedrock. Based on the evidence discussed in the Kewaunee workgroups and NR 151 stakeholder meetings, this entire region with 50 feet or less soil depth is vulnerable to groundwater contamination. It is reasonable to apply modest restrictions—such as well setbacks—to the entire sensitive area. Notably, permitted animal feeding operations are already required to comply with many of these requirements. *See generally* NR ch. 243.

Finally, while we commend DNR for tackling the existing public health threat in northeast Wisconsin, we urge DNR to be proactive and prevent similar problems elsewhere in the state. The Silurian dolomite fractured bedrock is not the only area in the state vulnerable to groundwater contamination. In the NR 151 stakeholder meetings, researchers presented evidence that southwest Wisconsin is similarly vulnerable to contamination due to shallow soils and fractured bedrock. Even though DNR chose not to develop targeted performance standards for southwest Wisconsin at this time, DNR should demonstrate its commitment to preventing widespread groundwater contamination in southwest Wisconsin. We ask that DNR explain its reasons for limiting the NR 151 targeted performance standards to the northeast Wisconsin Silurian dolomite region. We further ask that DNR explain its plan to better understand the potential threat to groundwater quality in southwest Wisconsin.

Sincerely,

/s/

Sarah Geers
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Midwest Environmental Advocates

Jennifer Giegerich
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