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VIA ELECTRONIC MAIL

September 22, 2017

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RE: Comments on Pinnacle Dairy, LLC, WPDES Permit No. WI-0065773-01-0

Mr. Cain:

Midwest Environmental Advocates, Inc. (MEA) appreciates to opportunity to submit comments regarding the proposed Wisconsin Pollutant Discharge Elimination System (WPDES) permit for Pinnacle Dairy, LLC (Pinnacle). MEA is a non-profit environmental law center that provides legal and technical assistance to communities and families working for clean air, water, land and government.

The WPDES permit for Pinnacle (the Permit) would allow construction and operation of a new concentrated animal feeding operation (CAFO) with 8,294 animal units, making the facility by far the largest CAFO in Green County. Like Kewaunee County, Green County has Karst topography, exposed bedrock at the surface, shallow depth to groundwater and permeable soils. Also similar to Kewaunee County, a high percentage of the land base in Green County is in agricultural use and is susceptible to groundwater contamination.

The karst landscape of southwest Wisconsin differs from Kewaunee County but unquestionably is still susceptible to groundwater contamination. Susceptibility is demonstrated by the USGS Groundwater Contamination Susceptibility Map for Green County, which illustrates that approximately 85% of groundwater by section in the county is "more susceptible" to contamination and approximately 75% of the sections demonstrate significant risk.

Green County already has a dairy cattle population of 30,000; almost equal to the human population of Milwaukee. Pinnacle's proposed 8,000-head operation will add an organic pollution potential greater than that of the city of Green Bay. Because CAFO manure is spread on crop fields, deployment of a landspreading plan or nutrient management plan is the centerpiece of all CAFO WPDES permits in Wisconsin. Kewaunee County has some of the highest compliance rates of agricultural nutrient management planning in the State, yet the groundwater of the County is now heavily degraded with nitrates, E. coli and other pathogens.

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Until the Department of Natural Resources (DNR) begins to issue WPDES permits that take into account vulnerable areas, proposals such as Pinnacle may place Green County on the same track toward extensive ground and surface water contamination.

For these reasons, MEA requests that the DNR modify the Permit as detailed in the remainder of our comments.

Pinnacle's proposed manure storage system insufficiently protects groundwater, surface water, and public health.

The DNR's Permit Fact sheet describes Pinnacle's manure storage system as consisting of one concrete-lined and three High Density Polyethylene-lined waste storage facilities.¹ Cracking of concrete structures and puncturing of HDPE-lined structures, resulting in runoff to ground and/or surface water, are of particular concern in karst areas such as the proposed location of Pinnacle. Karst topography heightens the possibility of connectivity between ground water and surface water. Discharge of pollutants from Pinnacle to ground water is therefore more likely than usual to cause pollution of waters regulated under the federal Clean Water Act.

One crucial question throughout the local and state-level permitting processes for Pinnacle is whether the free water encountered in the test holes at the proposed manure storage site is perched, and as such not connected to the regional water table. That is, whether an unsaturated, confining layer of soil exists below the saturated soil that was encountered. If such a layer exists, the free water may be drained away to surface water. If not, local surface water resources as well as the regional water table face risk from annual production of 95 million gallons of liquid manure.

Pinnacle's consultants have made the case for the existence of the needed confining layer based on "connecting dots" horizontally among some of the few unsaturated data points collected. Data collected thus far is inconclusive as to whether these "dots" actually connect in the soil layers, as per review of the Permit and corresponding documentation by one of the signatories to this letter, Mr. Gordon Stevenson. Mr. Stevenson is a retired agricultural engineer and retired DNR Chief of Runoff Management.

Despite this uncertainty, the DNR has concurred with Pinnacle's consultants and is allowing construction of the manure storage system and simultaneous verification of the perched groundwater condition at the site. This wagers the public health and safety of the citizens of Green County, particularly because of the slow movement of groundwater. Hydrogeological conditions mean that it could take years before any contamination of groundwater and drinking water supplies from Pinnacle's manure storage system would become apparent. Though the DNR is requiring production area groundwater monitoring, the requisite quarterly monitoring fails to adequately protect against the possibility of ground and surface water contamination due to waste storage structure breaches.

¹ See page 2, Pinnacle Dairy Permit Fact Sheet, available at <http://dnr.wi.gov/topic/wastewater/documents/pinnacleFS.pdf> (last visited Sept. 21, 2017).

To address the aforementioned concerns, MEA requests that the DNR modify the Permit as follows:

1. Add a Breach Analysis requirement to Section 1.3 of the Permit for Manure and Process Wastewater Storage

Both the DNR and CAFO owners/operators have agreed to incorporate such analyses into other CAFO WPDES permits.² This would allow both the DNR and the interested public to understand the impact of a catastrophic spill from manure storage structure, and to further understand any structure modifications that would prevent or reduce the impact of such a spill. Although the waterway ditch for clean water diversion is intended in the event of a breach to hold the volume of up to one breached Waste Storage Facility (WSF), a more thorough breach analysis is necessary in light of the fact the facilities are located in an area that is uniquely susceptible to groundwater contamination.

2. Modify the monitoring provisions of the Permit to reflect dewatering requirements in Pinnacle's Green County Animal Waste Storage Facility Permit

The Natural Resources Conservation Service (NRCS) and the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) have reviewed Pinnacle's proposed waste storage structures. Both agencies have indicated that the DNR's conditions of approval³ for these reviewable facilities require additional measures in order to ensure that the structures comply with NRCS Standard 313.⁴ Green County responded to NRCS analysis by issuing a more stringent manure storage permit to comport with NRCS Standard 313. Pinnacle Dairy hasn't yet been able to comply in full with these permit requirements.

The DNR's failure to address NRCS concerns or incorporate NRCS recommendations into the Permit contradicts both the Department's typical deference to NRCS standards as well as the DNR's mandate to approve manure storage and containment facilities that, at minimum, comply with such standards.⁵ The DNR can and should in this instance exercise its regulatory authority⁶ to incorporate more stringent groundwater monitoring requirements into the Permit. The groundwater monitoring requirements as written leave significant unresolved questions regarding whether Pinnacle's manure storage system can operate without discharge to surrounding ground and surface water.

² Case No. IH-12-071.

³ See **Attachment A**, DNR Conditional Approval of Plans and Specifications for a New Dairy Site . . . at Pinnacle Dairy, Condition 2 regarding Separation from Saturation, Dec. 28, 2016.

⁴ See **Attachment B**: Letter from John Ramsden, NRCS State Conservation Engineer, to Matthew Woodrow, DATCP (Jan. 12, 2017) (on file with MEA); and Letter from Keith Foye, DATCP, to Todd Jensen, Green County Conservationist (Jan. 27, 2017) (on file with MEA). These letters were obtained via public records request(s).

⁵ Wis. Admin. Code NR § 243.15(3)(f); *see also* § 243.15(7) ("The department may require the installation of groundwater monitoring wells in the vicinity of manure storage facilities, runoff control systems, permanent spray irrigation systems and other treatment systems **where the department determines monitoring is necessary to evaluate impacts to groundwater and geologic or construction conditions warrant monitoring.**") (emphasis added).

⁶ Wis. Admin. Code NR § 243.15(3)(c)2.a.

MEA's specific request is that the DNR add the following monitoring requirements from the Green County Animal Waste Storage Facility Permit to Permit at issue here:

- The temporary dewatering trench shall be left open for 5 days following stoppage of dewatering pumping and prior to installation of the perimeter tile. Separation from saturation is demonstrated if no inflow enters the trench or a water surface develops that is at an elevation higher than 2 feet below the planned WSF bottom.
- Following perimeter tile installation, the water surface in the existing shallow monitoring wells shall be recorded daily for a minimum of 5 days. Separation from saturation is demonstrated if no water level is at an elevation higher than 2 feet below the planned WSF bottom.
- A shallow boring/test pit shall be made midway between monitoring wells along the long dimension of each WSF. Separation from saturation is demonstrated if no inflow enters the boring or a water surface develops that is at an elevation higher than 2 feet below the planned WSF bottom within 24 hours.

The location of similar waste storage facilities on similar karst topography has previously caused state natural resources agencies, along with the Environmental Protection Agency, to take certain preventative measures. In the case of Traditions South Dairy in Jo Daviess County, Illinois, for example, regulatory agencies took such measures as considering modified structure design and eventually a CAFO-funded hydrogeological study. The three above-listed monitoring requirements seem a reasonable step toward ensuring that more extensive measures are not necessary.

If the DNR determines not to include the above-listed conditions into the Permit, please explain in the Department's response how Pinnacle's WSF plans and specifications comply with NRCS Standard 313. If compliance with the standard is based upon assurance from Pinnacle's consultant(s), please explain how the assurance of said consultant(s) warrants disregard of specific recommendations made by NRCS staff—presumably the most suitable experts to determine compliance with NRCS standards.

The Permit must better safeguard against contaminated runoff from Pinnacle's production area into regulated surface waters.

The DNR has a duty to issue a WPDES permit to Pinnacle that ensures Pinnacle will not discharge manure or process wastewater from its production area to navigable waters, absent certain exceptions such as when precipitation causes an overflow of a structure that is designed to hold runoff from a 25-year, 24-hour rainfall event. Consistent with that duty, the DNR has explicit authority to require discharge monitoring to ensure Pinnacle meets this discharge limit. The DNR has a delegated responsibility to comply with the federal Clean Water Act and issue a permit that imposes permit terms and conditions that regulate any production area discharges and ensure that discharges comply with water quality standards and groundwater standards.

1. Compliance with antidegradation requirements

One important component of the DNR's delegated Clean Water Act authority is the antidegradation program. Antidegradation statutes and implementing rules at Wisconsin Admin. Code Chapter 207 generally require justification of any new or increased discharges to Wisconsin's surface waters. CAFO WPDES permits do not typically include antidegradation analysis because the DNR issues permits that treat CAFO production areas as zero-discharge. However, as discussed above there are significant unresolved questions regarding whether Pinnacle's manure storage system can comport with zero-discharge requirements.

In this instance, it is therefore appropriate for the DNR to better safeguard against degradation of nearby surface waters as a result of polluted runoff from Pinnacle's production area. The DNR's Surface Water Data Viewer shows that Decatur Lake and other streams and tributaries near the proposed production area and landspreading fields are impaired for phosphorus or sediment. Because Pinnacle is a new permittee, if the production area is going to cause any discharge the Department must complete an antidegradation analysis.

MEA requests that the DNR add the following language to Section 1.1 of the Permit regarding Production Area Discharge Limitations: "For any new or increased discharges to other fish and aquatic life waters, the discharge shall not cause a significant lowering of water quality under chapter 207, Wis. Adm. Code."

2. Adequate monitoring to ensure compliance with permit standards

The Permit must better address the likelihood of contaminated runoff from the production area, most notably due to the feed pad design:⁷ Specifically, the DNR should modify the Permit to add a sample point at the outfall of Culvert 7. This additional sample point is warranted for the following reasons:

- No slope or berm separates the feed pad from the concrete drive that borders the north and east of the feed pad. The design apparently envisions a perfect zero slope in the north/south direction in order to minimize runoff into the driveway to the north. The driveway is designed to direct clean water from precipitation to the waterway adjacent to the driveway. However, the lack of slope on the feed pad that would direct contaminated water away from the driveway or a physical barrier between the feed pad and driveway increases likelihood that contaminated water with runoff onto the driveway and into the waterway to the north. This contaminated runoff will mix with stormwater in the waterway, and will infiltrate into groundwater or be discharged through Culvert 7 and into Searles Creek and Decatur Lake.
- The berm between the feed pad collection tank and the waste water channel on the west side of the feed pad is at a lower elevation than the feed pad itself. The storage capacity of the feed pad collection tank is relatively small, envisioning pumping to WSFs. However, during times of extreme precipitation it seems likely that the pumping

⁷ Comments on feed pad design are primarily based upon the following pages of the Pinnacle Revised Construction Plans: Part 1A pages 37, 42, 46 and 47; part 1B pages 50, 53-56, and 58.

rate may not keep up with flow into the tank. Any overflow would go into Culvert 7, and take the same path into impaired Decatur Lake.

Because of the incorporation of discrete pipes into various components of Pinnacle's plans and specifications, these are feasible additional sampling points that will allow the DNR to better ensure that any production area discharges comply with water quality standards and groundwater standards as required by the Clean Water Act.

Conclusion

MEA understands that the DNR is constrained by state law from reflecting in the Permit all of the local-level exploration into the potential impacts of Pinnacle's operation. That said, the Science Report from the Town of Sylvester's Large Scale Livestock Study Committee,⁸ as well as other data that the Department has heard in verbal and written comments, demonstrate that objection to the Permit as written is well-founded and reasonable. Boiled down, citizen concerns are about protecting public health, water quality, and the unique and vibrant family farming economy that exists in the southwestern region of our state.

At minimum, the DNR should exercise its regulatory authority and require groundwater monitoring that is more stringent than required in the Permit as written. Because of Pinnacle's intent to locate in area that is susceptible to groundwater contamination, MEA is confident in this instance that DNR can look to its authority granted by statutes and administrative codes and issue a more protective water pollution permit.

Thank you for your consideration and response to Midwest Environmental Advocates' comments on the Permit.

Sincerely,

MIDWEST ENVIRONMENTAL ADVOCATES, INC.

/s/

Tressie Kamp
Staff Attorney

/s/

Gordon Stevenson
Board President
Retired, DNR Chief of Runoff Management

⁸ See Town of Sylvester Science Team, Science Team Report and Recommendations (Findings of Fact) (Jan. 18, 2016, rev. Feb. 15, 2016) (available from MEA upon request).