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RE: Golden Sands Dairy LLC Project

Gentlemen:

On August 2, 2016, counsel for Golden Sands Dairy, LLC (GSD) sent a letter to the Department of Natural Resources (DNR) setting forth its position on the Department's authority to regulate GSD operations with respect to groundwater quality. As you know, our office serves as legal counsel to the Town of Saratoga where GSD proposes to site its operations.

The Town of Saratoga is home to 5,385 residents who rely on groundwater for their drinking water. Currently, the predominant land uses are woodlands and residential subdivisions, and its groundwater quality is excellent. There are nearly 500 residential

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homes within 1/2 mile of the cropland on which GSD proposes to annually apply 55 million gallons of liquid manure and 25,000 tons of solid manure. This area of the State is known as the Central Sands area and the soils in the Town are predominated by Plainfield Sands. The U.S. Geological Survey has identified the areas around the Town of Saratoga as “highly susceptible to groundwater contamination.”

GSD asserts in its letter that the DNR has no authority to impose conditions more stringent than the standard best management practices (BMPs) in Wis. Admin. Code ch. NR 243, even if groundwater standards are exceeded. GSD asserts that the DNR cannot rely on models, or apparently other data, and that “[i]n short WDNR is authorized to impose the nutrient management standards contained in Wis. Admin. Code Ch. NR 243 to protect groundwater, and not more.” Ltr. at 3.

GSD’s assertion is as astonishing as it is legally incorrect. The Department has ample authority – and indeed a legislative mandate – to protect the health of the residents of Saratoga by ensuring through appropriate permit conditions that GSD’s application of animal wastes to its crop fields does not violate the state’s groundwater quality standards. Accepting GSD’s legal position would require DNR to abdicate its fundamental and explicit responsibilities to protect citizens’ drinking water.

1. GSD Wants DNR to Ignore the Facts Associated with Groundwater Contamination in the Central Sands.

The threshold question before the DNR is to what extent the GSD operation will create adverse impacts to groundwater and in particular to the hundreds of residential wells in Saratoga. There are basically two sources of information from which to make an informed decision on that question: (1) data from existing agricultural operations; and (2) models that project impacts based on existing data and projected applications.

The existing data from agricultural operations in the Central Sands region indicates a substantial likelihood of groundwater contamination from an operation such as the proposed GSD enterprise. As the EIR acknowledged, “Historical agricultural practices in the Central Sands region and elsewhere in Wisconsin have been documented to have had adverse impacts on groundwater quality.” EIR at 75. Whereas the state drinking water standard for nitrates is 10 mg/l¹, the EIR documents various studies that have shown nitrate levels in the 20 to 30 mg/l range in agricultural areas within the Central Sands

¹ This is 10 milligrams per liter. These concentrations are can also be expressed as parts per million (ppm). Thus, 10 mg/l is the same as 10 ppm.

area. EIR at 75-76. Groundwater contamination throughout the Central Sands region above 20 mg/l of nitrates continues to be well documented. This is not surprising since the Central Sands area is highly susceptible to groundwater contamination.

However, GSD asserts that the DNR should not look at that existing data:

The water-quality impacts of the GSD Project cannot be estimated by assuming that the impacts will be similar to those at other agricultural fields in the Central Sands or those previously studied. The “Farming Full Circle” principles that will be followed at the GSD will ensure that nutrient and pesticide losses to groundwater and surface water are significantly reduced relative to those that occur with conventional unregulated agricultural practices that dominate in the Central Sands. EIR 76

Those “Farming Full Circle” practices are those used by its “sister” operation at CSD.² What has DNR observed at that site? Widespread nitrate contamination continues to be a major problem. Nitrate contamination at levels as high as 77 mg/l (nearly 8 times the enforcement standard of 10 mg/l) have been observed in fields adjacent to the CSD production area. Regular quarterly samples have been in excess of 20-30 mg/l.

In the EIR, and again in its most recent letter to the DNR, GSD asserts that the DNR should not be concerned because GSD’s groundwater modeling shows, in the “worst-case scenario,” the nitrate level would be 8 mg/l, after 20 years and the “best-case scenario” would see increases of 2 mg/l over the assumed baseline of 0.3 mg/l. (EIR at 80-81; Appendix E at 10). The DNR asked questions about the model and assumptions in Appendix E which GSD has refused to answer. Apparently the DNR has again asked GSD for additional information which prompted GSD’s August 2, 2016 letter.

In that response, GSD begins by disparaging the validity and usefulness of modeling, even its own model. It asserts that “the N loss model is not scientifically reliable, and yields results of such a wide range as to be practically of no predictive use.” Ltr. at 3-4. This attack on modeling is not only groundless, but disingenuous.

² In GSD’s own words, “The GSD Project will be a sister operation to the CSD located west of the Wisconsin River in Juneau County, Wisconsin. The purpose of this project is to construct a dairy farm utilizing advanced manure handling and nutrient recycling systems that will promote crop rotations with vegetable and forage crops allowing the area’s pine plantation to transition to a sustainable farming production system. EIR at 31. [T]he “Farming Full Circle” concept described below, that has been demonstrated at the CSD, also located in the Central Sands area of Wisconsin.” EIR at 4.

Modeling is a widespread practice in environmental regulation to predict outcomes under conditions that have not yet occurred.³ The parties may disagree about the appropriate assumptions used in a model, or the degree of accuracy a model affords, but this does not make modeling useless. In determining whether the project is likely to cause nitrate contamination of any of the 500 private drinking wells near the GSD fields, the DNR should consider all relevant information, including modeling.

GSD takes its argument a step further, asserting not only that the modeling is unreliable—but that the DNR is precluded as a matter of law from even considering it. According to GSD, pursuant to Act 21, codified at Wis. Stat. § 227.10(2m), the DNR “is not allowed to use the model as a regulatory standard or a threshold for permitting purposes without explicit authority in statute or rule.” Ltr. at 5.

GSD misconstrues the statute. Wis. Stat. § 227.10(2m) provides as follows:

No agency may implement or enforce any standard, requirement, or threshold, including as a term or condition of any license issued by the agency, unless that standard, requirement, or threshold is explicitly required or explicitly permitted by statute or by a rule that has been promulgated in accordance with this subchapter

A model is not a substantive standard, requirement or threshold, but merely relevant information for the DNR to consider in determining whether the proposed project is likely to cause an exceedance of substantive standards, in this case groundwater quality standards. Modeling is obviously useful to this endeavor. The DNR certainly has a right and obligation to see the basis upon which GSD is asserting that its operation will not create groundwater contamination and impact hundreds of residential wells.

In sum, GSD argues that DNR cannot look at any of the following in developing GSD’s permit: (1) data from studies of agricultural practices in the Central Sands; (2) data from GSD’s “sister” facility, Central Sands Dairy (CSD); and (3) forecasts based upon scientific modeling, including apparently GSD’s own groundwater model. But if DNR cannot look at existing data or models, then what is left? According to GSD, DNR’s authority is limited to enforcing the BMPs set forth in NR ch. 243 – regardless of what the actual facts show about the threat to the Saratoga residents’ drinking water.

³ Modeling is used in almost every DNR environmental regulatory program. For example, models are used to develop total maximum daily loads to develop water quality standards; air dispersion modeling is used to determine air permit limits; and groundwater models are used to determine how to remediate and whether to close contaminated sites.

In other words, under GSD's logic, even if its activities are likely to contaminate the water supply of hundreds of neighboring residents by exceeding the water quality standards for nitrates, the DNR can do nothing other than issue the permit and deal with the inevitable crisis later, after the wells are contaminated. Fortunately, neither the law nor common sense warrants such a callous and absurd result.

2. DNR Has Express Authority and A Clear Duty to Enforce Wisconsin's Groundwater Standards.

In 1984, Wisconsin enacted a comprehensive groundwater quality protection law in Wis. Stat. ch. 160. DNR adopted Wis. Admin. Code ch. NR 140 to implement that law for regulatory programs under its jurisdiction.

GSD claims that the groundwater law does not create independent regulatory authority and "[a]s such neither ch. 160 nor NR 140 provide explicit substantive criteria which can form the basis of a decision to either grant, deny, or condition or limit a project or approval." Ltr. at 6. Instead, GSD argues that DNR has no authority to impose conditions more stringent than the best management practices in Wis. Admin. Code ch. NR 243. This is a misreading of ch. 160 and NR 140.

It is true that the groundwater protection law does not create "independent regulatory authority." There is no separate groundwater quality permit or separate review process. But what ch. 160 does is to create numeric standards that are to be integrated into every other groundwater regulatory program. The introduction to Wis. Stat. § 160.001 makes this clear when it states:

Legislative intent. The legislature recognizes that prior to May 11, 1984, most groundwater regulatory programs were not based on numerical standards. The legislature intends, by the creation of this chapter, to minimize the concentration of polluting substances in groundwater **through the use of numerical standards in all groundwater regulatory programs.** The numerical standards, upon adoption, will become criteria for the protection of public health and welfare, to be achieved in groundwater regulatory programs concerning the substances for which standards are adopted. (Emphasis added)

Similarly, Wis. Stat. § 160.001(3) anticipates that these numeric standards will be applied in all existing groundwater regulatory programs.

(3) This chapter supplements the regulatory authority elsewhere in the statutes, whether the regulatory programs exist under current statutes on May 11, 1984, or are created after that date. **Regulatory agencies will continue to exercise the powers and duties in those regulatory programs, consistent with the enforcement standards and**

preventive action limits for substances in groundwater under this chapter. This chapter provides guidelines and procedures for the exercise of regulatory authority which is established elsewhere in the statutes, and does not create independent regulatory authority. (Emphasis added).

Responding to this express legislative directive, DNR adopted NR 140, which reiterates that groundwater standards are to be applied into existing regulatory programs, including the WPDES permit program in Chapter 283.

NR 140.02 Regulatory framework.

(1) This chapter supplements the regulatory authority elsewhere in the statutes and administrative rules. **The department will continue to exercise the powers and duties in those regulatory programs, consistent with the enforcement standards and preventive action limits for substances in groundwater under this chapter.** This chapter provides guidelines and procedures for the exercise of regulatory authority which is established elsewhere in the statutes and administrative rules, and does not create independent regulatory authority. (Emphasis added)

NR 140.03 Applicability. This subchapter and subch. II apply to all facilities, practices, and activities which may affect groundwater quality and which are regulated under chs. 85, 93, 94, 101, 145, 281, 283, 287, 289, 291, and 292, Stats. . . .

In short, GSD's claim that ch. 160 and NR 140 do not provide explicit substantive criteria is plainly wrong. On the contrary, the creation of substantive criteria to be applied in existing regulatory programs is precisely the purpose of ch. 160 and NR 140.⁴

Pursuant to that legislative mandate, DNR has created numeric groundwater standards in NR 140. The preventative action limit (PAL) for nitrate is 2 mg/l and the enforcement standard (ES) is 10 mg/l NR 140.10. Table 1. The enforcement standard for nitrates is a "public health related" standard and based on the safe drinking water standard for nitrates. The groundwater standards are to be enforced at any "point of standards application" which includes any point of groundwater use, such as private wells. NR 140.22.

⁴ GSD's extended discourse on WEPA is equally misplaced. It is true that WEPA is designed to inform agency decision making and does not compel a specific regulatory action. However, to the extent the WEPA analysis shows that groundwater standards will be exceeded, that information is relevant in determining appropriate regulatory responses under NR 140.

3. DNR is Required to Apply Groundwater Standards in Issuing WPDES Permits, Including CAFO Permits.

The requirement to apply groundwater standards to WPDES permits under Wis. Stat. ch. 283 is not only referenced in NR 140.03, above, but is also expressly required by Wis. Stat. §§ 283.31(3) and (4), which provide as follows:

(3) The department may issue a permit under this section for the discharge of any pollutant, or combination of pollutants, other than those prohibited under sub. (2), upon condition that such discharges will meet all the following, whenever applicable: ...

(f) Groundwater protection standards established under ch. 160.

(4) The department shall prescribe conditions for permits issued under this section to **assure compliance with the requirements of sub. (3)...** (Emphasis added)

The DNR has adopted a rule for CAFO facilities in Wis. Admin. Code ch. NR 243 which prescribes standard BMPs. GSD asserts that the DNR lacks authority to impose any permit conditions beyond those BMPs explicitly articulated in NR 243. According to GSD, “[w]ith respect to nutrient management, a CAFO must at minimum comply with the practice standard of NRCS Standard 590 (9/05) and the requirements of Wis. Admin. Code § NR 243.14. The management standard for land application of nutrients from CAFOs constitutes the effluent standard applicable to that practice or activity.” Ltr. at 7. Thus, GSD asserts that DNR can impose standard NR 243 BMPs but “not more. Ltr at 3.

The claim that the DNR cannot impose additional conditions beyond standard NR 243 BMPs to protect groundwater is incorrect. The BMPs comprise a regulatory floor, not a ceiling. NR 140.22(1) itself states, in relevant part, that “practices or activities regulated by the department . . . shall be designed to minimize the level of substances in groundwater and to comply with the preventive action limits to the extent technically and economically feasible . . .” It does not provide that DNR cannot tailor permit conditions – including more stringent ones as appropriate – where necessary to avoid water quality limit exceedances.

Nor does NR 243 hamstring the DNR as GSD claims. Quite the opposite. In its analysis, GSD wholly ignores NR 243.14(10), which explicitly authorizes DNR to fashion individualized permit conditions beyond the general best practices set forth in the rule:

The department may require the permittee to implement practices in addition to or that are more stringent than the requirements specified in this section when necessary to prevent exceedances of groundwater quality standards . . . These conditions may include

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additional restrictions on nitrogen and phosphorus loadings or other nutrients and pollutants associated with the manure or process wastewater, injection or incorporation requirements . . . and other management or site restrictions.

As if this were not clear enough, the rule further expressly directs the DNR to consider project-specific factors such as the “permeability, infiltration rate, [and] drainage class” of the receiving soils; the “[v]olume and water content of the waste material;” the [n]utrient requirements of the crop or crops to be grown on the fields utilizing the manure;” and “[p]otential impact to groundwater in areas with direct conduits to groundwater, shallow soils over bedrock, highly permeable soils and shallow depth to groundwater.” NR 243.14(10)(a), (b), (d) and (g).

Simply put, the DNR has the authority – and the obligation – to impose non-standardized permit conditions that will prevent exceedance of water quality standards. Section 283.31(3)(f) makes clear that DNR may not issue a permit that it reasonably expects will result in groundwater quality violations and § 283.31(4) expressly provides that DNR “**shall** prescribe conditions for permits issued under this section to **assure compliance** with the requirements sub (3)” including the groundwater standards of ch. 160.

GSD’s assertion that the Department cannot impose any permit conditions beyond the general BMPs listed in NR 243 has no basis in the law. It also has no basis in fact. Standard BMPs may be a perfectly acceptable way to protect groundwater in many parts of the State. But there are clearly some areas, such as the Central Sands, where standard BMPs may not be sufficient. Section 283.31 requires the DNR to assure compliance with water quality standards, and NR 243.14(10) provides the regulatory mechanism authorizing the DNR to impose additional conditions necessary to ensure such compliance.

Finally, Act 21 is not an impediment to enforcing these groundwater standards. Section 227.10(2m) provides that agencies like the DNR may only enforce a “standard, requirement, or threshold [that] is explicitly required or explicitly permitted by statute or by a rule that has been promulgated in accordance with this subchapter.” Here, the provisions of Wis. Stat. ch. 160, Wis. Admin. Code § NR 140.22, Wis. Stat. §§ 283.31, and NR 243.14(10) could not be more explicit in providing DNR with the authority and duty to enforce state groundwater standards.⁵ Enforcing the law as written and protecting

⁵ Contrary to GSD’s strawman arguments about zero discharge and anti-degradation (Ltr. at 8), no one is claiming that either apply here. What does apply however, are the groundwater quality standards DNR has created to protect the health of citizens like the hundreds of town residents whose water supplies are

the residents of Saratoga is fully consistent with the Attorney General's position on Act 21.

4. GSD's Assertion that It Can Ignore Preventive Action Limits Is Also Incorrect.

As noted above, Chapter 160 establishes two groundwater standards: a Preventive Action Limit and an Enforcement Standard. GSD projects, in its "best-case" scenario, that its disposal of animal waste will, after 20 years, result in a 2 mg/l increase over the assumed baseline of 0.3 mg/l of nitrate in a well located 300 feet from the GSD property boundary – already above the PAL. (EIR, App. E at 11) GSD's "worst-case" scenario predicts a nitrate level in the same well of 8 mg/l. (*id.*)

The Department cannot issue a permit for activities that are reasonably expected to exceed an applicable PAL. NR 140.28(1) provides that "[t]he department may not approve a proposed facility, practice or activity at a location where a preventive action limit or enforcement standard adopted under s. NR 140.10 or 140.12 has been attained or exceeded unless an exemption has been granted under this section."⁶ That the Department cannot knowingly approve activities that will likely cause an exceedance of a PAL – at least in the absence of an exemption—is reinforced by NR 140.24, which establishes the process for addressing PAL exceedances, including determining appropriate and feasible corrective action that will "[r]egain and maintain compliance with the preventive action limit." NR 140.24(2). It would make no sense for DNR to issue a permit allowing activities that it knows will have to be modified or curtailed to avoid exceeding a PAL.

In fact, the current experience with CSD demonstrates that not only are nitrate levels in the neighboring residential wells likely to exceed the preventive action limit, but most likely will exceed the enforcement standard as well. While a PAL "is not intended to be an absolute standard," an enforcement standard is just that. *See* Wis. Stat. § 160.25(2) ("if the concentration of a substance in groundwater attains or exceeds an enforcement standard at a point of standards application, the department shall require remedial actions for a specific site in accordance with rules promulgated under s. 160.21 as are necessary

at risk from this project. DNR's first order duty is to ensure that GSD's waste disposal activities do not cause those standards to be exceeded.

⁶ GSD has not applied for any exemption from the PAL. Were it to do so, GSD would be required to demonstrate that complying with the existing PAL of 2 mg/l for nitrate is neither technically nor economically feasible. NR 140.28(2)(b)2.

to achieve compliance with the enforcement standard at the point of standards application”).⁷

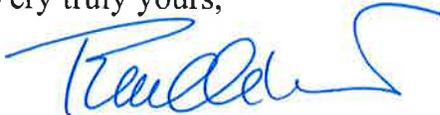
Protecting the drinking water of the families living near the GSD project is paramount, and DNR must ensure that any permit includes sufficient conditions to prevent contamination of those wells.

Conclusion

GSD’s assertion that DNR is legally precluded from imposing conditions to protect hundreds of residents from contamination of their drinking water is astonishing. It is completely contrary to the legislatively imposed obligation that DNR must assure compliance with groundwater standards in its regulatory decisions.

GSD’s assertion that the DNR should ignore existing data and modeling efforts, and ignore the potential for a major impact to public health is equally astonishing. As the experience in Flint, Michigan has shown us, willfully ignoring impacts to people’s drinking water does not make a problem go away, it only makes it worse. The DNR has the opportunity and the obligation not to make that same mistake for the Town of Saratoga residents. DNR must ensure that any GSD permit includes sufficient conditions to prevent contamination of residential wells.

Very truly yours,



Paul G. Kent
John Greene

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cc: Town of Saratoga

⁷ The argument about whether the Attorney General’s letter precludes the DNR from imposing monitoring requirements is a discussion for another day, but it is largely irrelevant here. As GSD concedes, groundwater standards apply at any point of standards application which includes any point of groundwater use, such as the hundreds of private wells around the GSD landspread fields. It also includes any point beyond the property boundary. *See* § NR 140.22(1).