Central Sands Dairy, LLC Investigation

Purpose: Ex. 5 Deliberative Process (DP)

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Background: Central Sands Dairy, LLC (CSD) is a large concentrated animal feeding operation (CAFO) (approximately 5000 cows) located in central Wisconsin. The facility has been the subject of numerous citizen complaints over the recent years due to the alleged nitrate contamination of local private wells and significant drawdown of the local water table. The company is also seeking to open a second facility farther north called Golden Sands.

CSD is uniquely located as the only large dairy in the Cambrian-Ordivian Aquifer (COAS). The COAS is mainly comprised of sandstone aquifers, which when combined with the sandy top soil of the Central Sands Region of Wisconsin, creates an area with increased ground infiltration. The flow of groundwater within the COAS is generally in the southern direction toward Petenwell Lake (Reservoir Widening of the Wisconsin River). Some groundwater from the COAS discharges into Petenwell Lake. Petenwell Lake is impaired for Total Phosphorus and in recent years has experienced blue-green algal blooms. (See Satellite Image)

Several local wells down gradient of the facility have reported high nitrate levels in their drinking water.

WDNR's Work: To address the citizen concerns about potential groundwater contamination, WDNR has worked with CSD, to voluntarily installed monitoring wells around their storage structures as part of Phase I of a multi-phase monitoring study which WDNR amended into CSD's permit. The monitoring wells located adjacent to manure storage structures showed the presence of bacteria and high levels of nitrate-nitrite (as high as 77 mg/L). Under Phase II, CSD is to install additional monitoring wells to determine if the sources are coming from outside of CSD. However, CSD is appealing Phase II of the plan. WDNR has not initiated any enforcement action at the facility and is aware of EPA's pending evaluation.

Citizen Issues with CSD: Friends of Central Sands (not the facility, but the region) is a citizens' group that began because CSD started the process of building another large dairy operation near CSD called Golden Sands Dairy, LLC. The Friends of Central Sands started investigating the farming practices of CSD. They have conducted literature searches on the contamination sources of Petenwell Lake and conducted testing on private wells in the area with they have shared with EPA. The nitrate concentrations from nearby citizens' private wells have nitrates as high as 37.8 mg/L (The public water supply standard is 10.0 mg/L).