

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

NOTICE OF FINAL DETERMINATION TO REISSUE A WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM (WPDES) PERMIT No. WI-0059374-05-0

Permittee: Pagels Ponderosa Dairy, LLC, N4893 Hwy C, Kewaunee, WI, 54216

Facility Where Discharge Occurs: Pagels Ponderosa Dairy, LLC, N4893 County Road C Kewaunee

N4893 County Road C, Kewaunee, WI 54216 N ½ NW ¼ S4 T23N R24E, Township of West Kewaunee

N5318 County Road E, Kewaunee, WI 54216 SE ¼ SW ¼ S27 T24N R24E, Township of Casco

E3470 County Rd F, Kewaunee, WI 54216 SE ¼ SW ¼ S16 T23N R24E, Township of West Kewaunee

Receiving Water And Location: Unnamed tributaries within the Kewaunee River Watershed, Lake Michigan Drainage Basin, and groundwaters of the State

Brief Facility Description: Pagel's Ponderosa Dairy LLC is an existing Concentrated Animal Feeding Operation in Kewaunee County, WI. Pagel's Ponderosa Dairy is owned and operated by the Pagel Family. As of January of 2024, it has 6,877 milking and dry cows, 252 large heifers, 1,856 small heifers, and 1,881 calves (11,394 animal units). Pagel's Ponderosa Dairy will annually generate approximately 104,314,148 gallons of liquid manure and process wastewater and 5,364 tons of solid manure. As of March 2024, Pagel's Ponderosa Dairy has greater than the required minimum of 180 days of storage. Pagel's Ponderosa Dairy has 10,964 acres in its approved nutrient management plan, of which 7,923 acres are rented or in contract agreements and 3,041 acres are owned. Pagel's Ponderosa Dairy has 10,548.5 acres available for land application.

Permit Drafter's Name, Address and Phone: James Salscheider, DNR, 2984 Shawano Ave, , Green Bay, WI, 54313, (920) 367-3007

Basin Engineer's Name, Address, and Phone: Bernie Michaud, Bernard.michaud@wisconsin.gov, (608) 512-2065

Date Permit Signed/Issued: August 30, 2024

Date of Effectiveness: September 1, 2024

Date of Expiration: August 31, 2029

Public Informational Hearing Held On: July 11, 2024, at 10:00 a.m. via ZOOM

Following the public informational hearing, the Department has made a final determination to reissue the WPDES permit for the above-named permittee for this existing discharge. The permit application information from the WPDES permit file, comments received on the proposed permit and applicable Wis. Adm. Codes were used as a basis for this final determination.

The Department has the authority to issue, modify, suspend, revoke and reissue or terminate WPDES permits and to establish effluent limitations and permit conditions under ch. 283, Stats.

Following is a summary of significant comments and any significant changes which have been made in the terms and conditions set forth in the draft permit:

Comments Received from the Applicant, Individuals or Groups and Any Permit Changes as Applicable

Substantial changes made as result of comments received:

- 1.) Section 2 of the WPDES permit was updated to include additional sampling parameters, daily log requirements, annual report requirements, and details for nitrogen and chloride loading.
- 2.) A compliance schedule was added to the WPDES permit to require an engineering evaluation of the waste transfer system for the calf hutch washing area.
- 3.) Sample Point 021 was added to the WPDES permit for settled solids that are removed from any manure storage facility.

Comment: The fact sheet notes that Pagel's Ponderosa "was issued several Notice of Violations" during the prior permit period related to permit compliance schedules, as well as "multiple production area discharges to waters of the State." Fact Sheet at p. 2/81. Indeed, the Fact Sheet includes a 2020 inspection report which explicitly stated—twice—that "the permittee is not in substantial compliance." With little explanation and without conducting a follow-up inspection, however, DNR asserted on April 3, 2024, that the CAFO was in substantial compliance for purposes of renewal.

Response: Pagel's Ponderosa Dairy LLC received Notice of Violations (NOVs) on October 14, 2021, April 13, 2023, and January 9, 2024. Pagel's Ponderosa completed necessary actions to return to compliance, including constructing upgrades to the feed storage runoff control system in 2023. After department review of post

construction documentation, the department determined that Pagel's Ponderosa Dairy LLC returned to substantial compliance with WPDES permit requirements and closed out the enforcement case on January 9, 2024.

Comment: Please explain which "compliance schedule items" have been resolved by the CAFO and provide copies of all "associated reporting records" making that demonstration.

Response: Pagel's Ponderosa Dairy LLC completed all necessary actions to comply with permit sections 3.1 Annual Reports, 3.2 Emergency Response Plan, 3.3 Monitoring & Inspection Program, 3.4 Nutrient Management Plan, 3.5 Permanent Markers, 3.6 Submit Permit Reissuance Application, and 3.7 Land Application Management Plan. The department verified compliance with the aforementioned compliance schedule items throughout the permit. Documentation of installation of permanent markers were submitted to the department. All necessary reports and updates were submitted to the department.

Comment: The only inspection report that DNR included in the permit application materials is one dated July 7, 2020, which, as noted above, concluded that Pagel's Ponderosa was not in substantial compliance with its permit. The inspection listed five "areas of concern" four of which related to inadequate runoff controls, and one of which related to inadequate MOL and MOS markers. A review of the available materials suggests that most (if not all) of these issues persist.

Response: Pagel's Ponderosa Dairy LLC completed all action items to alleviate the areas of concern, which included maintaining adequate MOL and MOS markers, upgrading the feed storage runoff control system, regrading the driveways at the Clyde Hill Site, and repairing the gully erosion along the waste storage facility at the Clyde Hill Site. Pagel's Ponderosa Dairy LLC submitted documentation of the necessary actions to the department to verify that they were completed.

Comment: Explain why Pagel's Ponderosa was not required to conduct an engineering evaluation of WSF 3 before this permit period (as required by the July 7, 2020, inspection report)

Response: Per s. NR 243.16(2), "The department may require an evaluation of a constructed facility or system previously reviewed and approved or evaluated by the department based on factors including the age of the facility or system, the facility's or system's ability to meet current design standards, requirements of this chapter or permit conditions, identified environmental impacts or physical location of the storage facility relative to waters of the state." In this case, the department is requiring an engineering evaluation of WSF 3 due to the age of the structure now exceeding 20 years of age.

Comment: Explain why Pagel's Ponderosa has been granted over 6 years to complete necessary upgrades to WSF 3.

Response: The draft WPDES permit requires Pagel's Ponderosa Dairy LLC to submit an engineering evaluation of WSF 3 within the first year of the permit term. The department did not observe any areas of concerns or discharge to require an immediate engineering evaluation to be conducted or take enforcement actions for failing to maintain the structure.

Comment: Explain Why Pagel's Ponderosa was not required to conduct an engineering evaluation and submit plans and specs for changes to the VTA before this permit period (as required by the July 7, 2020, inspection report)

Response: Plans and specifications for upgrades to the feed storage runoff control system were submitted to the department on January 28, 2022, which were approved by the department on May 16, 2022. Construction was completed in 2023. Post construction was submitted on June 19, 2023, and reviewed by a department engineer. A "No Additional Action Required" letter was sent to Pagel's Ponderosa Dairy on July 11, 2023.

Comment: Explain whether Pagel's Ponderosa ever completed engineering evaluation of the waste transfer systems to WSF 2 in the calf hutch washing area at the Clyde Hill site (as required by the July 7, 2020, inspection report). Clarify whether DNR ever initiated an enforcement action related to this apparent violation of Wis. Admin. Code § NR 243.15

Response: The department stated in the report that an engineering evaluation of the waste transfer system will be required as part of the WPDES permit reissuance. This was omitted from the draft permit and has since been added to the WPDES permit as a compliance schedule.

Comment: Require, as a condition of any future permit that may be issued to Pagel's Ponderosa, that the CAFO's owner sign a statement under penalty of perjury swearing that:

- a. these waste transfer systems only deliver wastewater to WSF 2; and
- b. these waste transfer systems are not connected to other tile line systems; and

c. these waste transfer systems do not drain directly into ditches or onto any fields or other land areas that are drained via tile lines.

Response: These questions/concerns will be addressed with an engineering evaluation of the transfer system, which is required by the WPDES permit.

Comment: Identify the documentation establishing that Pagel's Ponderosa currently has adequate MOL and MOS markers clearly designated at all WSFs. If DNR cannot identify such documentation, please explain how DNR was able to confirm that Pagel's Ponderosa met the 180-day storage capacity requirement. If DNR cannot identify such documentation, please also explain how DNR will ensure that Pagel's Ponderosa is meeting the requirements of Section 1.7.1 of the Draft Permit, which requires weekly inspections of manure storage structures, including "the level of materials in all liquid storage."

Response: The department clarified the permanent markers were present within liquid waste storage facilities with Pagel's engineer. The action item was not to install permanent markers, it was to better clarify which permanent marker was the maximum operating level and which permanent marker was the margin of safety.

Comment: The Compliance Check documents included in the permit application materials indicate that Pagel's Ponderosas cooperating farms overapplied nitrogen on 10 fields in 2021, and that Pagel's itself overapplied nitrogen on 5 fields that same year. As far as we can tell, though, none of the permit application documents explain what actions, if any, were taken to address these overapplications.

Response: Better understanding when planning for nutrient values was taken by the farm, cautiously planning nutrients to ensure that over applications do not occur. Pagel's Ponderosa Dairy LLC also changed their certified crop consultant in 2023. No enforcement actions were taken by the department in response to the overapplications.

Comment: Please explain whether these 15 instances of overapplication from one year resulted in any enforcement or other corrective action, and if not, why not?

Response: There were no enforcement actions taken as a result of these 15 instances of overapplication. Staff workload on high priority tasks prevented the department from conducting a comprehensive NMP update review.

Comment: Please explain whether overapplications occurred in any subsequent years, and if so, whether those overapplications resulted in any enforcement actions.

Response: It is unclear if any additional overapplications occurred in subsequent years, as department staff did not conduct comprehensive nutrient management reviews. No violations were alleged for overapplications in any subsequent year.

Comment: What are fall nitrogen restrictions, and why do they "not apply" to tile-drained fields.

Response: Fall nitrogen restrictions can be found in NRCS 590 Section V.B. **Criteria to Minimize Entry of Nutrients to Groundwater:**

"To minimize N leaching to groundwater on high permeability soils, or soils with less than 20 inches to bedrock, or soils with less than 12 inches to apparent water table, or within 1000 feet of a municipal well, apply the following applicable management practices:

Note: A list of soils with a high potential for N leaching to groundwater is provided in Appendix 1 of the Wisconsin Conservation Planning Technical Note WI-1.

1. Where sources of N are applied:
 - a. No fall commercial N applications except for establishment of fall-seeded crops. Commercial N application rates, where allowed, shall not exceed 30 pounds of available N per acre.
 - b. On irrigated fields, including irrigated manure, apply one of the following management strategies:
 - (1) A split or delayed N application to apply a majority of crop N requirement after crop establishment.
 - (2) Utilize a nitrification inhibitor with ammonium forms of N.
2. When manure is applied in late summer or fall to meet the fertility needs of next year's crop and soil temperatures are greater than 50°F, apply one of the following options:
 - a. Use a nitrification inhibitor with liquid manure and limit N rate to 120 pounds available N per acre.
 - b. Delay applications until after September 15 and limit available N rate to 90 pounds per acre.

- c. Apply to fields with perennial crops or fall-seeded crops. N application shall not exceed 120 pounds available N per acre or the crop N requirement, whichever is less.
3. When manure is applied in the fall and soil temperatures are 50°F or less, limit available N from manure application to 120 pounds per acre or the crop N requirement, whichever is less.

Note: The restrictions in B. 2. and 3. do not apply to spring manure applications prior to planting. The balance of the crop N requirements may be applied the following spring or summer.

4. Where P enrichment of groundwater is identified as a conservation planning concern, implement practices to reduce delivery of P to groundwater.”

These restrictions do apply tiled fields. There was a misunderstanding with Pagel’s Ponderosa’s crop consultant that these restrictions did not apply if the field was tiled, confusing “W” soils for shallow groundwater restrictions. This misunderstanding has since been clarified with the farm.

Comment: DNR has not demonstrated that the existing runoff controls are adequate to prevent the type of unlawful discharges that DNR observed on July 7, 2020. According to Wis. Stat. § 283.31(3), DNR may only issue a permit if the permittee’s discharges meet any and all limitations necessary to meet federal or state water quality standards including groundwater standards. DNR cannot renew this CAFO’s permit without addressing these issues.

Response: As stated above, construction of upgrades to the runoff control system were completed in 2023 to prevent any unlawful discharges to waters of the state.

Comment: DNR also should have conducted a follow-up inspection to ensure that no new problems have arisen at the site over the past four years, including at the recently acquired Hilltop site, which apparently was not subject to any pre-issuance inspection. And of course, a report of any follow-up inspection should have been included in the materials available to the public in connection with this WPDES permit renewal.

Response: The Hilltop Ponderosa Site was previously known as Legend Farms Dairy and was operating under WPDES Permit No. WI-0066265-01-0. The department has inspected the site several times since 2020. The department also conducted partial inspections the Main Site at Pagel’s Ponderosa Dairy LLC several times since 2021 in response to necessary upgrades to the feed storage runoff control system.

Comment: DNR does not explain how a July 7, 2020, site visit, which resulted in a finding of noncompliance and one Permit Violation, could—four years later—support a finding of substantial compliance, nor does DNR provide any documentary evidence showing that anything has changed.

Response: As stated above, the department issued several NOVs to Pagel’s Ponderosa Dairy LLC since July 7, 2020, which required necessary actions to return to compliance with WPDES permit requirements. Pagel’s Ponderosa Dairy LLC completed all necessary actions, and the enforcement case was closed on January 9, 2024, returning Pagel’s Ponderosa Dairy to substantial compliance.

Comment: DNR’s decision to not perform any of the requisite environmental reviews violates state law. DNR should require an Environmental Impact Statement for this permit renewal. It is unacceptable that DNR has not required investigation into the environmental effects of Pagel’s Ponderosa’s persistent and continued noncompliance.

Response: WPDES permit issuance for Pagel’s Ponderosa Dairy LLC, an existing source CAFO, is exempt from s. 1.11, Stats., and the environmental analysis and review procedures in ch. NR 150, Wis. Adm. Code.

Comment: Issuance of this permit may conflict with local, state, or federal environmental policies. Issuance of the Pagel’s Ponderosa permit will conflict with the DNR’s own Northeast Lakeshore TMDL, which is intended to address excess TSS and total phosphorus, a contaminant strongly associated with CAFOs. By permitting an expansion in a recently approved TMDL watershed, DNR’s actions are conflicting with state and Federal policies.

Response: Requirements in NR 243 Wis. Adm. Code creates a zero-discharge policy for production sites at Concentrated Animal Feeding Operations, requiring more control and collection of runoffs at the production site.

As for the land base, Pagel’s Ponderosa Dairy LLC is required to more meticulously manage Phosphorus levels within fields to not be in excess. As stated in NR 243.14(5), the permittee must minimize the delivery potential of phosphorus to waters of the state from fields by applying manure and process wastewater in accordance with methods set forth within NR 243.14(5). Additionally, the department will have significant nutrient management oversight with WPDES permit requirements to ensure compliance with NR 243 Wis. Adm. Code.

To remain compliant with nutrient management requirements, Pagel's Ponderosa Dairy will be required to manage fields to maintain tolerable soil loss (T). T-value means the maximum rate of soil erosion established for each soil type that will permit crop productivity to be sustained economically and indefinitely. Erosion calculations shall be based on current approved erosion prediction technology found in NRCS FOTG Section I or the soil loss assessment calculated using the Phosphorous Index Model. Tolerable soil erosion rates shall be determined using the RUSLE2 Related Attributes Report located in Section 2, e-FOTG, Soil Report. Pagel's Ponderosa Dairy is prohibited from land applying nutrients to fields that exceed the tolerable soil loss. Erosion controls shall be implemented so that tolerable soil loss (T) over the crop rotation will not be exceeded on fields that receive nutrients.

Comment: The Pagel's Ponderosa Draft Permit also appears to conflict with DNR's duty to address nitrate contamination in groundwater. Chapter 160 of the Wisconsin Statutes assigns DNR the duty to protect Wisconsin communities by regulating groundwater contaminants, reducing the concentration of polluting substance in groundwater, and protecting groundwater for present and future consumptive and nonconsumptive uses. The current proposed reissuance conflicts with state law mandating the reduction of polluting substances in groundwater, instead allowing an increase.

Response: The permit includes required terms for groundwater protection, including production area discharge limitations, implementation of an NMP and development of an emergency response plan, will prevent exceedances of groundwater standards. The operation's WPDES permit and associated nutrient management plan contains conditions designed to protect groundwater quality. Examples of these conditions include:

- Manure or process wastewater may not be applied within 100 feet of a direct conduit to groundwater.
- Nutrients shall not be spread within 200 feet upslope of direct conduits to groundwater unless the nutrient is effectively incorporated within 48 hours
- No manure application within 100 feet of direct conduits to groundwater (sinkholes, private wells)
- No causing fecal contamination of water in a well.
- No application on fields with soils that are 60 inches thick or less over fractured bedrock when ground is frozen or where snow is present.
- No application when snow is actively melting.
- No application on areas of fields that have less than 24 inches of soil to bedrock.
- Field verification procedures include ground depth evaluations on fields with mapped shallow soils. A detailed protocol for determining bedrock depth on fields with such soils is outlined in the NMP. All fields must be evaluated before applying manure.
- The operation is required to have an emergency response plan to help avoid impacts associated with spills.
- Adherence to production area engineering requirements, including NRCS design standards that are intended to minimize groundwater quality impacts.
- Fall nitrogen restrictions on wet, permeable, and shallow soils shall be followed to minimize leaching to groundwater.

Comment: The Pagel's Ponderosa Draft Permit also conflicts with § 39.075(2) of the Kewaunee County Civil Code, which mandates that "mechanical manure application may not cause the fecal contamination of water in a well." It conflicts with Wis. Admin. Code § NR 151.075 as well, which establishes the same requirement on a state level. As evidenced by research, CAFOs are causing fecal contamination of well water in Kewaunee County.

Response: While the DNR works with other governmental agencies, it does not have the authority to enforce local permit conditions or requirements of other agencies as part of the WPDES permit.

The department has not documented evidence to indicate that Pagel's Ponderosa Dairy LLC has caused fecal contamination of water within wells.

Comment: DNR's approval of the Draft Permit may set precedent for reducing or eliminating environmental policies. If DNR approves this permit without requiring any additional investigation into the environmental impacts, it will set a dangerous precedent for rubber stamping permits without sufficient consideration of potential environmental consequences. Environmental review is necessary in this instance where the permitted activity may further exacerbate a known problem. DNR should develop a more robust environmental review that assesses what the community costs are to permitting continued CAFO expansions in Kewaunee County.

Response: WPDES permit issuance for Pagel's Ponderosa Dairy LLC, an existing source CAFO, is exempt from s. 1.11, Stats., and the environmental analysis and review procedures in ch. NR 150, Wis. Adm. Code.

Comment: Given the growth of Pagel's Ponderosa over the past permit term, the proposed expansion, the known noncompliance, and the limited available storage, DNR must establish an animal unit maximum for the CAFO. An

animal unit maximum is necessary to quantify and limit the amount of waste produced by Pagel's because an NMP alone is not an effective enough instrument.

Response: The DNR does not prohibit operation expansion nor limit the number of animal units at a given operation under the WPDES permit program. Instead, the DNR monitors compliance with permit requirements to maintain adequate storage and land base for storing and land spreading manure and process wastewater.

Permittees report animal unit numbers, associated manure and process wastewater generation, and available storage to the DNR at the time of application for permit reissuance, when submitting plans and specifications, when proposing a 20% expansion in animal units, and on an annual basis. The DNR reviews this information to determine if the facility has maintained enough spreadable acreage in the approved nutrient management plan and a minimum of 180 days of storage for liquid manure.

When an operation proposes to expand during the permit term, they must confirm adequate land base and manure storage to support the addition of animal units. If the facility needs to build additional storage that requires a permit modification or add land base to support the expansion, those items are available for public review and comment and can be viewed online via the DNR's ePermitting system at <https://dnr.wi.gov/permits/water/>.

The application materials submitted as part of the permit reissuance application, including the days of storage calculations and nutrient management plan, have been reviewed and determined to be sufficient for the animal numbers at Pagel's Ponderosa Dairy LLC.

Comment: As an initial matter, DNR rejected the CAFO's first NMP for its permit renewal on October 23, 2023 (nearly two years after it was submitted). In the rejection letter, DNR identified numerous, serious problems with the NMP, including improper manure calculations, inaccurate nutrient content averages, and inconsistent acreage totals. The commenters were unable to find any documentation explaining how-or even whether-these deficiencies were corrected in the revised NMP, which DNR conditionally approved on March 29, 2024. Please explain whether and how each and every deficiency identified in the rejection letter was corrected.

Response: On October 23, 2023, the department issued a rejection letter for the nutrient management plan submitted on December 13, 2021. The nutrient management plan was rejected for the following reasons:

Restriction Maps

1. Restrictive features on manure spreading restriction maps are un-readable due to the percent zoom and/or the color/transparency of the layer selected.
2. Road ditches and other areas of possible concentrated flow are not being properly marked and labeled with appropriate setbacks.

Narrative and Checklists

1. Manure and process wastewater generation volumes are not adding up when manure and process wastewater volumes are separated. For example, if the manure generation volume is 1 million and the process wastewater/other liquid waste volume is 500,000, the total generation volumes are not equaling 1.5 million.
2. Acreage totals must be consistent between the NMP, narrative, and 3400 documents.
3. Silurian bedrock fields should be listed in the narrative with the depth to bedrock listed as well as having the fields ranked by most susceptible to GW contamination.
4. Please clarify in the narrative what process will be used for verification ground water and bedrock on shallow soil fields. If the farm will use appendix C or an alternative to DNR guidance, this should be listed.
5. Please clarify if headland stacking is a utilized practice for this facility. If so, provide all required documentation for approval (i.e., maps, labeled sites, and % dry matter of manure).

Applications and Cropping

1. There are too many empty manure/process wastewater sources within the SNAP+ database which makes the reports difficult to interpret. Sources can be removed from the SNAP+ database for a certain year while remaining in past years and not showing in reports for the years they are removed. The SNAP+ team has confirmed that this is possible and does not impact past applied sources. These empty sources should be removed prior to resubmittal. If sources are meant to be in the plan for a specific reason, please explain that in the NMP Narrative.
2. Non-CAFO or other CAFO manure may not be planned for as part of the 5-year NMP which sometimes results in manure/process wastewater not being accounted for in future planning. The CAFO should have a general idea of the volume/tonnage of manure/process wastewater that is being land applied each year on

fields within the CAFO NMP. This generation should be separated out by source and planned for using the best available nutrient content knowledge the CAFO can obtain.

3. Manure sample results from the lab are being improperly used to create manure averages for planning. The sample averages are not what is being put into SNAP+. Averages from at least 3 years of past hauling should be used for creating an average for planning OR the highest nutrient content from samples in the past 5 years.

4. Alfalfa seeding years are missing from crop rotations where alfalfa is in the rotation. Please ensure that if a field will be going back to alfalfa within the crop rotation, that the seeding year is included to ensure rotational calculations are accurate.

On December 15, 2023, Pagel's Ponderosa Dairy LLC submitted an updated nutrient management plan for department review. The review of the nutrient management plan determined that the items listed above were corrected and the nutrient management was sufficient for conditional approval. The department issued the conditional approval letter on May 29, 2024.

Comment: There are a significant number of acres in Pagel's Ponderosa's NMP that should not be included, either because the depth to bedrock is too shallow, or because restrictions make it impractical or impossible to spread on certain fields. Please explain whether all fields with less than 2 feet depth to bedrock have been removed from Pagel's Ponderosa's NMP.

Response: Fields are not required to be removed from the nutrient management plan solely because they have areas with less than 2 feet to bedrock. The permittee is prohibited from land applying manure on less than 2 feet of soil depth to bedrock. The acres that are less than 2 feet of soil depth to bedrock are not included in the spreadable acres available to receive manure.

Comment: How is DNR calculating available acres on fields with complex spreading restriction maps?

Response: SnapPlus is a Nutrient Management Planning software program designed for the preparation of nutrient management plans in accordance with Wisconsin's Nutrient Management Standard Code 590. The program SnapPlus calculates spreadable acreage in the nutrient management plan using SnapMaps. Restrictive acres, such as well setbacks, SWQMA setbacks, setbacks from direct conduits to groundwater, and manure prohibited areas such as less than 2 feet to bedrock are excluded from the spreadable acreage. These features are verified by the farm and updated in SnapMaps to be as accurate as possible.

Comment: How DNR is monitoring compliance with complex intra-field spreading restrictions?

Response: The department conducts periodic manure hauling audits on land application sites to verify compliance with field spreading restrictions. The department verifies several compliance requirements, including depth to bedrock, depth to groundwater, setback requirements from restrictive features, and that the manure application is not migrating or leaving field boundaries.

Comment: According to the Conditional NMP Approval document, 157 fields in Pagel's Ponderosa's NMP are tile drained. Please provide additional information about what measures Pagel's Ponderosa must comply with for the 157 tiled fields in its NMP.

Response: Per the narrative submitted with their nutrient management plan, Pagel's Ponderosa Dairy LLC will adhere to the following procedure to ensure that discharges of manure and process wastewater from fields to surface waters do not occur:

Prior to spreading manure onto fields with drain tiles:

- *UW extension Guidelines for Preferential Flow of Manure in Tile Drainage will be reviewed by Pagel's Ponderosa*
 - *The following UW Discovery Farms Drain Tiles documents will be reviewed by Pagel's Ponderosa Maintaining Tile Drainage Systems*
 - *Understanding and Locating Drain Tiles*
 - *And any other tile drainage fact sheets currently available on the UW Discovery Farms site at <http://www.uwdiscoveryfarms.org/OurResearch/AgriculturalTileDrainage.aspx>*
- *Spreading maps will be reviewed to identify know drain tile locations*
- *Fields will be inspected for drain tile presence or outlets; any new tile outlets/subsurface drainage systems will be identified*
- *All tile outlets will be visually checked for flow and water conditions (e.g., clear, colored, foam, odor, etc.).*

- *Results of all visual tile monitoring will be tracked – using the Compliance Sheet and kept with the plan*
- *Planned manure spreading (rates and locations) on fields will be evaluated and then limited or adjusted, as necessary, according to the following criteria:*
 - *Available water holding capacity of the soil*
 - *Depth of injection*
 - *Clay soil considerations*
 - *Concentration of Application from spreading equipment type used*
 - *Are known tile drains flowing?*
 - *Shallow tillage (3 to 5-inch depth) used or not used prior to application to disrupt the continuity of worm holes, macropores and root channels (preferential pathways) to reduce the risk of manure reaching drain lines.*
 - *Perennial crop and no-till precautions*

During and after manure spreading on fields with drain tiles, best management practices will be follow:

- *Visual inspection of tile outlets for flow and water conditions (e.g., clear, colored, foam, odor, etc.)*
- *Containing manure or process wastewater tile discharges from release into waterway(s)*
- *Notifying DNR of any spills/discharges to waterways from tiles*
- *Reducing application rates or delaying application(s) to tiled fields*
- *Setbacks from tiled areas*
- *Immediate tillage/ incorporation of applied manure*
- *Use of other manure application equipment (e.g., sweeps)*
- *Update the plan spreading maps or narrative*
- *Results of visual inspections of tiles will be tracked – using the Compliance Sheet and kept with the plan.*

Comment: Consider requiring additional monitoring protocols (including additional visual monitoring during land application) and pre-spreading sampling of CAFO waste before it is applied to tile-drained fields.

Response: Consistent with Permit Section 1.7.2 and s. NR 243.19(1)(c), Pagel’s Ponderosa Dairy LLC is required to collect and analyze representative samples of land applied manure and process wastewater for the parameters outlined in the monitoring requirements for each sample point. Pagel’s Ponderosa Dairy LLC is required to collect and analyze two representative samples from each waste storage facility per month that manure is land applied from each waste storage facility. Pagel’s Ponderosa Dairy LLC is required to collect two representative solid manure samples from each solid manure source per quarter that solid manure is land applied from each source.

Comment: Pagel’s Ponderosa and Dairy Dreams entered into a manure storage agreement on March 8, 2024, which allows Pagel’s Ponderosa to store up to 6 million gallons of CAFO waste in Dairy Dreams’ manure pits. The agreement was both signed and counter-signed by John J. Pagel, as “Its President” of both Pagel’s Ponderosa Dairy, LCC as well as Dairy Dreams, LLC. The “No Additional Action Required” letter sent by DNR 12 days later approved of Pagel’s Ponderosa’s calculation that it had 182 days’ worth of storage available. This approval was based in part on the inclusion of this 6-million-gallon allowance. Wis. Admin. Code § NR 243.14(9) unambiguously requires CAFOs generating liquid manure, like Pagel’s Ponderosa, to “have and maintain” adequate storage, and “adequate storage means a minimum of 180 days of storage.” The application materials are clear, however, that the Pagel’s Ponderosa facility does not meet this requirement. Please explain their legal authority for allowing this type of storage sharing.

Response: Under s. NR 243.142, permittees are allowed to transfer waste to other permittees. Pagel’s Ponderosa Dairy LLC has an agreement with Dairy Dreams LLC to transfer six million gallons of manure to achieve 180-days of storage capacity. The department allows permittees to meet the permit requirement if it is reasonable for the permittee to transfer the manure and that the agreement does not hinder either party’s ability to meet the 180-day permit requirement.

Comment: Pagel’s Ponderosa’s Waste Storage Facilities Are Outdated and Inappropriate for the Karst Region. We request that DNR please require engineering evaluations of all Pagel’s Ponderosa’s facilities, not just WSF 3, that have not been evaluated in the past 10 years (all but WSF 7). These evaluations must be done within one year, with any needed updates to be made within a year after that.

Response: The department can require engineering evaluations of existing facilities under s. NR 243.16(2), which states that the department can require an evaluation “based on factors including the age of the facility or system, the facility’s or system’s ability to meet current design standards, requirements of this chapter or permit conditions, identified environmental impacts or physical location of the storage facility relative to waters of the state.” In this case, WSF 3 is being evaluated due to the age exceeding 20 years and has not been previously evaluated. WSF 1

was last evaluated when it was modified in 2008. WSF 2 was last evaluated in 2007. WSF 4 was last evaluated in 2009 when it was constructed. WSF 1, 2, and 4 will likely require engineering evaluations in the next permit term.

Comment: The Fact Sheet describes various “pushout areas” located at the end of many of Pagel’s Ponderosa’s barns. These areas are supposed to be cleared by the end of every day, but the July 7, 2020, inspection identified at least one instance in which “residual manure” had washed away from the pushout areas; ponding was visible during the inspection. We request that DNR conduct a follow-up inspection to ensure that these pushout areas are not violating NR 243.141. We also request that the DNR require sampling of the wetlands to ensure that the “residual” manure flow paths observed during the July 7, 2020, inspection are not reaching them.

Response: The residual manure observed during the July 7, 2020, inspection was not observed near or within the wetland. The pushout areas are used to temporarily hold manure removed from the barn until it is taken and placed on the solid manure stacking pad that same day. Better housekeeping practices were recommended to ensure that discharges from the production site do not occur. Pagel’s Ponderosa Dairy remediated the residual solid manure and flow path.

Comment: Section 1.3.2 (Discharge Prevention) of the Draft Permit is ambiguous and invites game playing. The Draft Permit does not define or explain which conditions would not “allow removal of material from the facility” such that Pagel’s Ponderosa would be allowed to exceed their MOL. We request that the DNR remove the section of the permit that states “or conditions that do not allow removal of material from the facility in accordance with permit conditions”.

Response: There are circumstances that may arise during the permit term that can result in the better decision for the environment to not remove material from the facility. The Permit cannot predict all circumstances that may arise and this permit term allows the Department discretion on whether conditions are in effect that it is better to not remove and land apply materials. . For example, conditions commonly encountered that would not allow removal of material from the facility primarily refer to adverse field conditions and weather. If soils are saturated or rainfall events do not allow the facility to safely and compliantly land apply manure from a waste storage facility, that would be considered conditions that do not allow removal of material from a waste storage facility.

Comment: Section 2.2 of the Draft Permit relates to Pagel’s cheese processing wastewater stream. It states that “[t]he permittee shall comply with the following monitoring requirements and limitations,” but the chart that follows is entirely blank with respect to “Limit Types.” As a result, it is unclear how much of each harmful pollutant—including nitrogen and phosphorus—the CAFO is allowed to discharge from its cheese wastewater. We request that the DNR explain why the draft permit does not provide application rates and limit types for phosphorus and TSS for this waste stream.

Response: Section 2 of the WPDES permit has been updated to include additional requirements that were not included in the original draft permit, including phosphorus and total solids (as a percent). The wastewater from the cheese plant is sampled for the parameters listed in the table prior to being discharged to the waste storage facility. The limits associated with chloride are 340 pounds per acre per 2-year span. The total pounds of nitrogen and phosphorus applied per acre per year shall be limited to the needs of the cover crop minus any other nutrient sources, including fertilizer or manure, added to the landspreading site

Comment: What agronomic benefit “wash water generated from cleaning cheese processing equipment” provides when spread on agricultural land.

Response: Pagel’s Ponderosa Dairy LLC collects samples from the waste that is introduced into the storage facility in accordance with permit requirements. Those samples have shown that the wastewater does have nutrients that are beneficial for soil on agricultural land, including nitrogen and phosphorus.

Comment: According to USDA, “digestate has increased potential for some air and nutrient emissions compared to raw manure,” and “compounds such as nitrogen, phosphorus, and other elements become more soluble due to anaerobic digestion and therefore have higher potential to move with water.” See NRCS Practice Standard 366. Additionally, because digesters selectively remove carbon from manure while converting nitrogen to ammoniacal nitrogen, the remaining digestate is typically enriched in relative nitrogen concentration. As a result, digestate is more likely to result in water pollution through ammonia.

Response: The digestate that will be handled by Pagel’s Ponderosa Dairy LLC is still defined in s. NR 243.03(36) as “manure” and will need to follow the same requirements found in ch. NR 243, Wisc. Adm. Code, the WPDES permit, and Pagel’s approved nutrient management plan. Pagel’s Ponderosa Dairy will be required to sample all waste before it is land applied and account for any increase in nutrients as a result of the treatment process.

Comment: As noted above, Pagel’s Ponderosa plans to (or already does) comingle their waste with Dairy Dreams’ waste at the Dairy Dreams site; this, in turn, means Pagel’s Ponderosa may be comingling its waste—including digestate—with these hyper-concentrated effluent streams. This only underscores our concern that Pagel’s Ponderosa’s landspreading activities could add to the water pollution already burdening this vulnerable area of the state. It does not appear that the permit requires the CAFO to take any additional precautions to account for these increased risks.

Response: The digestate that will be handled by Pagel’s Ponderosa Dairy LLC is still defined in s. NR 243.03(36) as “manure” and will need to follow the same requirements found in ch. NR 243, Wisc. Adm. Code, the WPDES permit, and Pagel’s approved nutrient management plan. Pagel’s Ponderosa Dairy will be required to sample all waste before it is land applied and account for any increase in nutrients as a result of the treatment process.

Comment: Pagel’s Ponderosa and other facilities with digesters should be required to take additional precautions to ensure that the highly soluble nutrients in their digestate are not making their way into the state’s water resources. The precautions could include:

- Requiring submission of GPS-tracked records for all digestate applications and/or all applications of waste that has been commingled with the Dairy Dreams concentrated effluents;
- Requiring more frequent sampling of waste storage facilities holding digestate;
- Requiring groundwater monitoring for land application sites receiving digestate and/or waste that has been commingled with the Dairy Dreams concentrated effluents.

We request that the DNR please explain why the Draft Permit suggests that there is a “new” biodigester under construction at the Pagel’s Ponderosa site.

Response: Currently, the department is not aware of any “new biodigester” that is under construction at Pagel’s Ponderosa Dairy LLC. Pagel’s Ponderosa Dairy LLC is considering adding a nutrient recovery system to the production site, but that is not included in this current permit reissuance.

The digestate that will be handled by Pagel’s Ponderosa Dairy LLC is still defined in s. NR 243.03(36) as “manure” and will need to follow the same requirements found in ch. NR 243, Wisc. Adm. Code, the WPDES permit, and Pagel’s approved nutrient management plan. The digestate will need to be sampled every month that digestate is land applied. Hauling records are required to be tracked and submitted on an annual basis by the permittee.

Comment: Why the DNR did not disclose the 2020 digester fire in any of the permit materials?

Response: The 2020 digester fire spill report is an open record and can be obtained by submitting a public record request to the department. The 2020 digester fire is not related to the permit application materials or the permit reissuance.

Comment: Will the DNR impose any of the above-listed precautions - or any other precautions - to protect water against the increased risk of contamination presented by digestate?

Response: The digestate that will be handled by Pagel’s Ponderosa Dairy LLC is still defined in s. NR 243.03(36) as “manure” and will need to follow the same requirements found in ch. NR 243, Wisc. Adm. Code, the WPDES permit, and Pagel’s approved nutrient management plan.

Comment: The NMP Narrative included in the permit materials includes a statement that “Pagel’s Ponderosa is considering other opportunities for processing its process wastewater such as a nutrient recovery system.” Please ensure that the public is made aware of and allowed to comment on any potential nutrient recovery system that may be installed at Pagel’s Ponderosa before construction begins.

Response: The WPDES permit will need to be modified to include the nutrient recovery system and associated outfall, which will provide the public an opportunity to review the application materials and provide comment on the permit modification.

Comment: Wis. Admin. Code NR § 243.04 grants DNR authority to consider rainfall events based on “more recent rainfall probability data verified by a government agency.” DNR should exercise that authority here and conform its definition of a 25-year, 24-hour rainfall event to that determined by the University of Wisconsin modeling, which was commissioned by DNR and has undergone peer review.

Response: The permit reference to the 25-year, 24-hour rainfall event is a design standard, not the threshold at which a discharge to navigable waters is allowed. Additional requirements (e.g., proper operation, maintenance and

record keeping) must also be met in order for production area discharges to navigable waters to be allowed under a WPDES permit. These requirements are consistent with ch. NR 243, Wis. Adm. Code, and federal NPDES CAFO requirements. In practice, given the design and operational restrictions associated with a WPDES permit, it is very uncommon for allowable production area discharges to occur at operations with proper containment, even given more extreme precipitation events.

Comment: The DNR should require groundwater monitoring at the Main Site.

Response: Pagel's Ponderosa and both satellite facilities are located in areas where groundwater has the lowest rating for susceptibility to contamination. This is, in part, because bedrock in this area is mapped as 50-100 feet or greater than 100 feet deep. See Figure 1 for depth to bedrock map of Kewaunee County. This information is supported by examining site-specific information, such as well construction reports (WCRs) which provides a higher level of confidence in county-scale information that is typically not appropriate for making site specific determinations. Based on WCRs onsite and nearby (WUWN: US912, UP242, IJ597 and SD436), depth to bedrock at the Main production site ranges from 75-113 feet, and depth to groundwater ranges from 55-98 feet at the time of drilling. Based on the production area being located in an area with deep bedrock and groundwater and a low groundwater susceptibility rating, the department has determined that groundwater monitoring is not warranted.

Comment: The DNR should require groundwater monitoring at the Clyde Hill Site.

Response: Based on WCRs onsite and nearby (WUWN: RO564, DB922, image files KW322 and KW1398), depth to bedrock at the Clyde Hill production site ranges from 48-67 feet, and depth to groundwater ranges from 14-39 feet at the time of drilling. While these WCRs show sand and gravel overlying bedrock, they all have at least 14 feet of clay at the surface. This surficial clay reduces the likelihood of contaminant infiltration and thus reduces susceptibility. Due to the relatively deep bedrock and surficial clay, the department has determined that groundwater monitoring is not warranted at this location.

Comment: The DNR should require groundwater monitoring at the Hilltop Ponderosa Site.

Response: The Hilltop Ponderosa production area is mapped in the lowest GWCS class. Based on WCRs onsite and nearby (WUWN: RA947, HZ699, OP851 and CI541), depth to bedrock at the Hilltop Ponderosa production site ranges from 60-126 feet, and depth to groundwater ranges from 20-58 feet at the time of drilling. Based on the production area being located in an area with deep bedrock and groundwater and a low groundwater susceptibility rating, the department has determined that groundwater monitoring is not warranted.

Comment: The DNR should require off-site groundwater monitoring at land application sites.

Response: Nearly three quarters (73.78%) of Pagel's Ponderosa's landspreading acres are mapped as moderate, low or lowest groundwater contamination susceptibility. There has been previous documentation of contamination of private wells with nitrate and bacteria in areas subject to the Silurian Bedrock standard where some of Pagel's landspreading acres are located. However, these studies were conducted prior to the implementation of the Silurian bedrock performance standard (NR 151.075) that prohibits the mechanical application of manure on soils with less than 2 feet to Silurian bedrock, and limits application rates and methods based on field-verified depth to bedrock. Based on information presented by the Kewaunee County Land & Water Conservation Department, the incidence of bacteria contaminated wells has decreased as a result of implementation of the Silurian bedrock performance standard and the Kewaunee County Public Health & Groundwater Protection Ordinance. As these regulations are intended to minimize risk to groundwater and are applicable to the Pagel's landspreading fields identified as high susceptibility, the department has determined that groundwater monitoring of landspreading locations is not warranted at this time.

Comments Received from EPA or Other Government Agencies and Any Permit Changes as Applicable

No comments received.

As provided by s. 283.63, Stats., and ch. 203, Wis. Adm. Code, persons desiring further adjudicative review of this final determination may request a public adjudicatory hearing. A request shall be made by filing a verified petition for review with the Secretary of the Department of Natural Resources within 60 days of the date the permit was signed (see permit signature date above). Further information regarding the conduct and nature of public adjudicatory hearings may be found by reviewing ch. NR 203, Wis. Adm. Code, s. 283.63 Stats., and other applicable law, including s. 227.42, Stats.

Information on file for this permit action may be inspected and copied at either the above-named permit drafter's address or the above-named basin engineer's address, Monday through Friday (except holidays), between 9:00 a.m. and 3:30 p.m. Information on this permit action may also be obtained by calling the permit drafter at (920) 367-3007 or by writing to the Department. Reasonable costs (15 cents per page for copies and 7 cents per page for

scanning) will be charged for copies of information in the file other than the public notice and fact sheet. Pursuant to the Americans with Disabilities Act, reasonable accommodation, including the provision of informational material in an alternative format, will be made to qualified individuals upon request.