

Permit Fact Sheet

General Information

Permit Number	WI-0064131-04-0
Permittee Name and Address	Heims Hillcrest Dairy LLC E3730 Rockledge Rd, Algoma, WI 54201
Permit Term	February 01, 2026 to January 31, 2031
Discharge Location	Main Site- E3730 Rockledge Rd, Algoma, WI 54201 NW ¼ NW ¼ S22 T24N R24E, Township of Casco Slovan Site- N5566 County Rd E Casco, WI 54205 SW ¼ NW ¼ S27 T24N R24E, Township of Casco
Receiving Water	Unnamed Tributaries within the Ahnapee River Watershed and Lake Michigan Drainage Basin, and groundwaters of the state

Animal Units					
Animal Type	Current AU		Proposed AU (Note: If all zeroes, expansions are not expected during permit term)		
	Mixed	Individual	Mixed	Individual	Date of Proposed Expansion
Dairy Calves (under 400 lbs.)	16	0	20	0	08/29/2027
Milking and Dry Cows	1260	1287	2618	2674	08/29/2027
Heifers (400 lbs. to 800 lbs.)	48	80	96	160	08/29/2027
Heifers (800 lbs. to 1200 lbs.)	319	290	550	500	08/29/2027
Total	1643	1287	3284	2674	

Facility Description

Heim's Hillcrest Dairy LLC is an existing Concentrated Animal Feeding Operation in Kewaunee County, WI. The operation consists of two sites: the Main Site is located at E3730 Rockledge Rd, Algoma, WI 54201 and the Slovan Site, which houses their heifers, is located at N5566 County Rd E, Casco, WI 54205. Heim's Hillcrest Dairy is owned and operated by Jeremy Heim and his family. Heim's Hillcrest Dairy LLC has 900 milking and dry cows, 370 heifers, and 80 calves (1,643 animal units). There is a planned herd size of 1,870 milking and dry cows, 660 heifers, and 100 calves (3,284 animal units) by 2027. Heim's Hillcrest Dairy LLC generates 14,321,044 gallons of liquid manure and processed wastewater and 5,375 tons of solid manure. Currently, Heim's Hillcrest Dairy LLC has 239 days of storage and will have 218 days of storage after the expansion. Heim's Hillcrest Dairy LLC has 1,987 acres in their approved nutrient

management plan, of which 587 acres are owned and 1400 are rented or in contract agreements. Heim's Hillcrest Dairy LLC has 1,839 acres available for land application.

In accordance with Wisconsin Statutes §283.53, the Department will be revoking and reissuing Heim's Hillcrest Dairy LLC's Wisconsin Pollutant Discharge Elimination System permit. This action is being taken because the facility has proposed a significant expansion that is expected to occur prior to the expiration of the current permit term.

Under §283.53(2), the Department may modify, revoke and reissue, or terminate a permit if cause exists, including when a permittee plans significant alterations or additions to their facility or operations that may impact the characteristics of the discharge or the conditions of the permit.

As a result, revocation and reissuance of the permit will allow the Department to evaluate the proposed expansion and ensure the permit conditions reflect the facility's updated operations and design.

Substantial Compliance Determination

Enforcement During Last Permit:

No formal enforcement occurred during the previous permit term.

After a desk top review of all WPDES application materials and a site visit on June 3, 2025, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Brittiny Mueller on October 21, 2025.

Sample Point Descriptions

Sample Point Designation for Animal Waste		
Sample Point Number	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)	
001	WSF 1: Sample point 001 is for liquid waste storage facility 1 (WSF 1) located at the Main Site. WSF 1 is an in-place earthen storage located west of WSF 2. The facility has a capacity of approximately 2.4 million gallons and was constructed in 1983. This storage is the first stage in a two-cell system and accepts manure and process wastewater from the freestall barns and milking parlor at the Main Site. WSF 1 was last evaluated in 2017 and met permit requirements.	
002	WSF 2: Sample point 002 is for liquid waste storage facility 2 (WSF 2) located at the Main Site. WSF 2 is an in-place earthen storage located east of WSF 1. The facility will have a capacity of approximately 15.7 million gallons and will be modified in 2026. This storage is the second stage in two-cell system and accepts manure and process wastewater from feed storage runoff controls and WSF 1. Plans and specifications for a modification of WSF 2 were approved by the department on July 29, 2025.	

Sample Point Designation for Animal Waste		
Sample Point Number	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)	
003	WSF 3: Sample point 003 is for liquid waste storage facility 3 (WSF 3) located at the Slovan Site. WSF 3 is a liquid-tight concrete storage located on the northeast corner of the production site. The facility has a capacity of approximately 1.3 million gallons and was constructed in 2008. This storage accepts manure and process wastewater from the freestall barns at the Slovan Site. WSF 3 was last evaluated in 2008 when it was constructed and met permit requirements.	
008	Leachate Attenuation Basin: Sample point 008 is for proposed leachate attenuation basin (LAB) located at the Main Site. LAB will be an in-place earthen storage located east of the feed storage area. The facility will have a capacity of approximately 1.3 million gallons and will be constructed in 2026. This storage will accept process wastewater from the feed storage area. Plans and specifications for LAB were approved by the department on July 29, 2025. No sampling is required unless directly land applied from.	
004	Solid Manure: Sample point 004 is for solid manure sources that are directly land applied and not stored in a waste storage facility. This includes solid sources such as calf hutch manure, maternity pen bedpack, heifer bedpack, steer manure, etc. Representative samples shall be taken for each manure source type.	
005	Headland Stacking Sites: Sample point 005 is for solid manure stacked in approved headland stacking locations. Representative samples shall be taken of this manure prior to land application. Note: Headland stacking sites are subject to production site discharge limitations; weekly visual monitoring is required during use of stacking sites to ensure discharges meet permit requirements.	
006	Feed Storage Area: Sample point 006 is for visual monitoring and inspection of the feed storage area and associated runoff control system located at the Main Site. Proper operation and maintenance are required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
007	Outdoor Lot: Sample point 007 is for visual monitoring and inspection of the outdoor concrete lot and associated runoff controls at the Slovan Site. Proper operation and maintenance are required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
009	Storm Water Runoff Controls: Sample point 009 is for visual monitoring and inspection of all production site storm water conveyance systems. This includes roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance are required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required and shall be recorded according to monitoring program.	

Permit Requirements

1 Livestock Operations - Proposed Operation and Management

Production Area Discharge Limitations

Beginning on the effective date of the permit, the permittee may not discharge pollutants from the operation's production area (e.g., manure storage areas, outdoor animal lots, composting and leachate containment systems, milking center wastewater treatment/containment systems, raw material storage areas) to navigable waters, except in the event a 25-year, 24-hour rainfall event (or greater) causes the discharge from a structure which is properly designed and maintained to contain a 25-year, 24-hour rainfall event for this location as determined under s. NR 243.04. If an allowable discharge occurs from the production area, state water quality standards may not be exceeded.

Runoff Control

The permit requires control of contaminated runoff from all elements of the production area to prevent a discharge of pollutants to navigable waters in accordance with the Production Area Discharge Limitations and to comply with surface water quality standards and groundwater standards. Beginning on the effective date of this permit, (if needed) interim measures shall be implemented to prevent discharges of pollutants to navigable waters. In addition, permanent runoff control system(s) shall be designed, operated and maintained in accordance with the requirements found in USDA Natural Resources Conservation Service standards and ch. NR 243, Wis. Adm. Code. If any upgrading or modifications to runoff controls are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

Manure and Process Wastewater Storage

The permit requires the operation to have adequate storage for manure and process wastewater and that storage or containment facilities are designed, operated and maintained to prevent overflows and discharges to waters of the state. In order to prevent overflows, the permittee must maintain levels of materials in liquid storage or containment facilities at or below certain levels including a one-foot margin of safety that can never be exceeded. If any upgrading or modifications to the storage facilities are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

The permittee currently has approximately 8 months of storage for liquid manure. The permittee must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

Ancillary Service and Storage Areas

The permittee shall take preventative maintenance actions and conduct visual inspections to minimize pollutant discharges from areas of the operation that are not part of the production area or land application areas. These areas are called ancillary service and storage areas and include access roads, shipping and receiving areas, maintenance areas, refuse piles and CAFO outdoor vegetated areas.

Nutrient Management

Currently, Heim's Hillcrest Dairy LLC has 900 milking and dry cows, 370 heifers, and 80 calves (1,643 animal units). There is a planned herd size of 1,870 milking and dry cows, 660 heifers, and 100 calves (3,284 animal units) by 2027. Heim's Hillcrest Dairy LLC generates 14,321,044 gallons of liquid manure and processed wastewater and 5,375 tons of solid manure. Currently, Heim's Hillcrest Dairy LLC has 239 days of storage and will have 218 days of storage after the expansion. Heim's Hillcrest Dairy LLC has 1,987 acres in their approved nutrient management plan, of which 587 acres are owned and 1,400 are rented or in contract agreements. Given the rotation commonly used by the permittee, 1,890 acres are available (or open) to receive manure and process wastewater on an annual basis. The permit requires all landspreading of manure and process wastewater be completed in accordance with an approved nutrient management plan. The permit will require sampling and analysis of manure and process wastewater that will be landspread. Landspreading rates must be adjusted based on sample analysis. The permit requires the permittee to maintain a daily log that documents landspreading activities. The permit also requires the submittal of an annual report that summarizes all landspreading activities. Plans must be updated annually to reflect cropping plans and other operational changes. Among the requirements, the plans must include detailed landspreading information including field by field nutrient budgets.

The permittee is required to implement a number of practices to address potential water quality impacts associated with the land application of manure and process wastewater. Among the permit conditions are restrictions on manure ponding, restrictions on runoff of manure and process wastewater from cropped fields, and setbacks from wells and direct conduits to groundwater (e.g., sinkholes, fractured bedrock at the surface). In addition, the permittee must implement a phosphorus based nutrient management plan that addresses phosphorus delivery to surface waters by basing manure and process wastewater applications on soil test phosphorus levels or the Wisconsin Phosphorus index. Additional phosphorus application restrictions apply to fields that are high in soil test phosphorus (>100 ppm).

The permittee must also implement conservation practices when applying manure near navigable waters and their conduits, referred to as the Surface Water Quality Management Area (SWQMA). These practices include a 100-foot setback from navigable waters and their conduits, a 35-foot vegetated buffer adjacent to the navigable water or conduit, or a practice that provides equivalent pollutant reductions equivalent to or better than the 100-foot setback.

In addition, the permittee must comply with restrictions on land application of manure and process wastewater on frozen or snow-covered ground. Included in these restrictions is a prohibition on surface applications of solid manure ($\geq 12\%$ solids) on frozen or snow-covered ground during February and March. Non-emergency surface applications of liquid manure ($< 12\%$) on frozen or snow-covered ground are prohibited.

Monitoring and Sampling Requirements

The permittee must submit a monitoring and inspection program that outlines how the permittee will conduct self-inspections to determine compliance with permit conditions. These self-inspections include visual inspections of water lines, diversion devices, storage and containment structures and other parts of the production area. The permit requires periodic inspections and calibrations of landspreading equipment. The permittee must take corrective actions to problems identified inspections or otherwise notify the Department. Samples of manure, process wastewater and soils receiving land applied materials from the operation must also be collected and analyzed.

Sampling Points

The permit identifies the different sources of land applied materials (e.g., manure storage facilities, milking centers, egg-washing facilities) as “Sampling Points.” For these Sampling Points, the permittee is required to sample and analyze the different sources for nutrients and other parameters which serve as the basis for determining rates of application for these materials. Other areas are also identified as Sampling Points as a means of identifying them as areas requiring action by the permittee, such as an upgrade or evaluation of a certain system or structure (e.g., runoff control systems), even though sampling is not actually required.

1.1 Sample Point Number: 001- WSF 1; 002- WSF 2; 003- WSF 3, and 008- Leachate Attenuation Basin

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lb/1000gal	2/Month	Grab	
Nitrogen, Available		lb/1000gal	2/Month	Calculated	
Phosphorus, Total		lb/1000gal	2/Month	Grab	
Phosphorus, Available		lb/1000gal	2/Month	Calculated	
Solids, Total		Percent	2/Month	Grab	

1.1.1 Changes from Previous Permit

Sample point 008 (Leachate Attenuation Basin) was added to the permit to account for the proposed leachate attenuation basin which was approved by department on July 29, 2025.

1.1.2 Explanation of Operation and Management Requirements

Liquid manure sources must be properly sampled and land applied according to the permit and nutrient management plan.

1.2 Sample Point Number: 004- Solid Manure; 005- Headland Stacking Sites

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lbs/ton	Quarterly	Grab	
Nitrogen, Available		lbs/ton	Quarterly	Calculated	
Phosphorus, Total		lbs/ton	Quarterly	Grab	
Phosphorus, Available		lbs/ton	Quarterly	Calculated	
Solids, Total		Percent	Quarterly	Grab	

1.2.1 Changes from Previous Permit

There are no changes from previous permit.

1.2.2 Explanation of Operation and Management Requirements

Solid manure sources must be properly sampled, and land applied according to the permit and nutrient management plan.

1.3 Sample Point Number: 006- Feed Storage Area; 007- Outdoor Lot; 009- Storm Water Runoff Controls

1.3.1 Changes from Previous Permit

There are no changes from the previous permit.

1.3.2 Explanation of Operation and Management Requirements

Proper operation and maintenance are required to ensure unlawful discharges to waters of the state do not occur. Weekly or quarterly inspections are required and shall be recorded according to the monitoring plan.

2 Schedules

2.1 Emergency Response Plan

Required Action	Due Date
Develop Emergency Response Plan: Update the written Emergency Response Plan within 30 days of permit coverage and submit to the department.	03/01/2026

2.2 Explanation of Schedules

Schedule 2.1 is included in the permit as a general permit requirement.

2.3 Monitoring & Inspection Program

Use of the department's monitoring and inspection program template is encouraged, but optional.

Required Action	Due Date
Proposed Monitoring and Inspection Program: Consistent with the Monitoring and Sampling Requirements subsection, the permittee shall submit a proposed monitoring and inspection program within 60 days of the effective date of this permit.	04/01/2026

2.4 Explanation of Schedules

Schedule 2.3 is included in the permit as a general permit requirement.

2.5 Annual Reports

Submit Annual Reports by January 31st of each year in accordance with the Annual Reports subsection in Standard Requirements.

Required Action	Due Date
Submit Annual Report #1: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2027
Submit Annual Report #2: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2028
Submit Annual Report #3: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2029
Submit Annual Report #4: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2030
Submit Annual Report #5: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2031
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

2.6 Explanation of Schedules

Schedule 2.5 is included in the permit as a general permit requirement.

2.7 Nutrient Management Plan

Submit annual nutrient management plan (NMP) updates by March 31 of each year. Note, in addition to annual NMP updates, submit NMP amendments and substantial revisions to the department for written approval prior to implementation of any changes to the NMP.

Required Action	Due Date
Management Plan Submittal: Submit any necessary updates to the Nutrient Management Plan to meet the conditions outlined in this permit (see conditions in the Livestock Operational and Sampling Requirements section).	
Submit NMP Update #1: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2026
Submit NMP Update #2: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2027
Submit NMP Update #3: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2028
Submit NMP Update #4: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2029
Submit NMP Update #5: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2030
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

2.8 Explanation of Schedules

Schedule 2.7 is included in the permit as a general permit requirement.

2.9 Manure Storage Facility - Installation

Applicable to WSF 2 at the Main Site. Sample point 002.

Required Action	Due Date
Complete Installation: Complete construction of the manure storage facility. The facility shall be functional and in operation by the specified Date Due. Post construction documentation shall be submitted within 60 days of completion of the project.	12/31/2026

2.10 Explanation of Schedules

Schedule 2.9 is included in the permit to complete construction of WSF 2 at the Main Site.

2.11 Leachate Attenuation Basin - Installation

Applicable to the leachate attenuation basin at the Main Site. Sample point 008.

Required Action	Due Date
Complete Construction: Complete construction of manure storage facility. System shall be functional and in operation by the specified Date Due. Post construction documentation shall be submitted within 60 days of completion of the project.	12/31/2026

2.12 Explanation of Schedules

Schedule 2.11 is included in the permit to complete construction of the leachate attenuation basin at the Main Site.

2.13 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	08/04/2030

2.14 Explanation of Schedules

Schedule item 2.13 is included in the permit as a general permit requirement.

Attachments

June 3, 2025 Reissuance Inspection Report

October 14, 2025 Conditional Nutrient Management Plan Approval

July 29, 2025 Condition Approval of Plans & Specifications/Days of Storage Review Letter

Site Maps

Prepared By: Brittiny Mueller

Agriculture Runoff Specialist

Date: October 21, 2025

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Tony Evers, Governor
Karen Hyun, Ph.D., Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



July 9, 2025

Heim's Hillcrest Dairy LLC
E3730 Rockledge Rd
Algoma, WI 54201

Permit No.: WI- 0064131-03-0
County: Kewaunee

Dear Mr. Jeremy Heim:

On June 3, 2025, the Department of Natural Resources (department) met with you to conduct a reissuance inspection at Heim's Hillcrest Dairy LLC. Observations made by the department during the inspection are included in the enclosed report.

Heim's Hillcrest Dairy LLC's current WPDES permit WI- 0064131-03-0 will be revoked and reissued due to a significant expansion. A permit reissuance application is due to the department by July 31, 2025.

Please find on page 5 of the enclosed report, a detailed list of action items and items that will be needed during the next permit term. Please review this section carefully.

If you have any questions regarding this letter or your WPDES permit requirements, please contact me at 608-228-9184 or brittiny.mueller@wisconsin.gov.

Sincerely,

Brittney Mueller
Regional CAFO Specialist

Enclosure: Heim's Hillcrest Dairy LLC's Permit Reissuance Inspection Report

Electronic CC: Joseph Baeten- DNR
Davina Bonness & Travis Engels- Kewaunee County LWCD
Jen Keuning & Nick Coady- GHD
Jake Geiger- Tilth Agronomy
Tim Baumgartner- Voice of Milk

CAFO Compliance Report (July 9, 2025)



Inspection Date: June 3, 2025

Inspection Type: Reissuance

Operation Name: Heim's Hillcrest Dairy, LLC

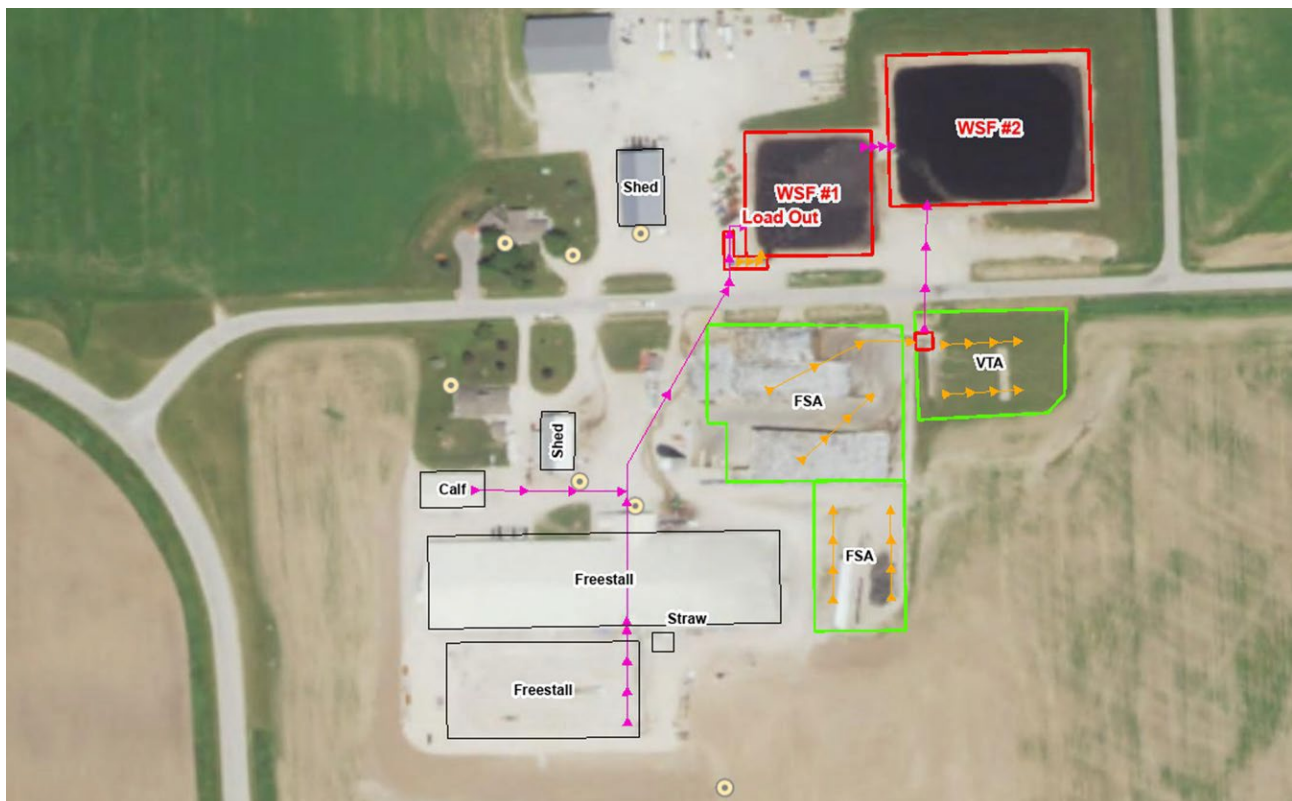
WPDES Permit No. WI- 0064131-03-0

Operation Address: E3730 Rockledge Rd, Algoma, WI 54201

On-Site Representative(s): Jeremy Heim, Owner of Heim's Hillcrest Dairy LLC

DNR Staff / Report Writer: Brittney Mueller, Agriculture Runoff Specialist

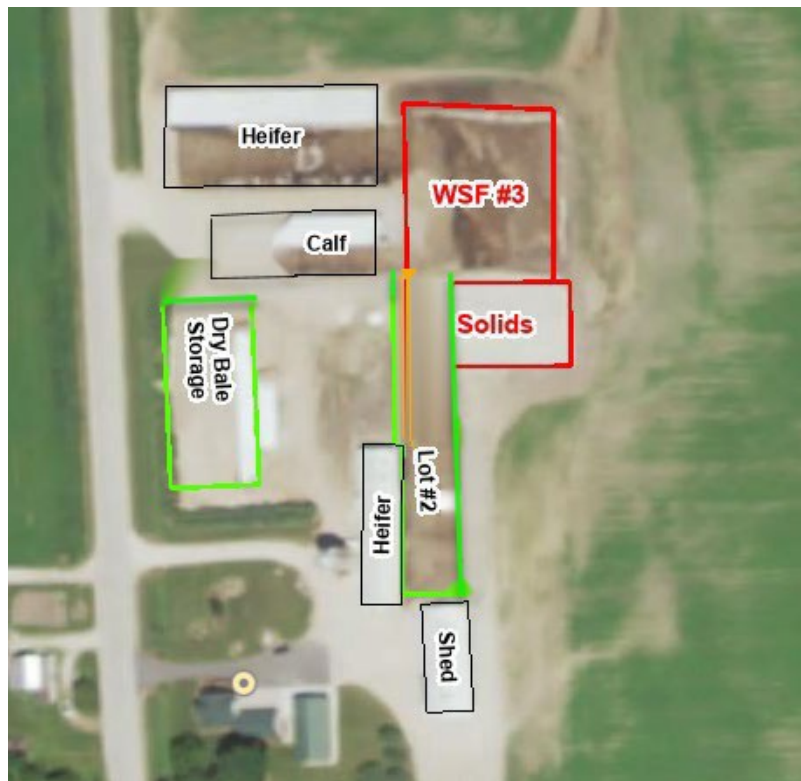
At approximately 10:30 am on June 3, 2025, Brittney Mueller, Agriculture Runoff Specialist, WDNR, met with Jeremy Heim, Heim's Hillcrest Dairy, LLC, to conduct a site inspection for the purpose of WPDES reissuance inspection. Heim's Hillcrest Dairy LLC's WPDES permit is being revoked and reissued due to a significant expansion planned. Plans and specifications for the expansion have already been submitted. Heim's Hillcrest Dairy LLC consists of two production sites. The Main Site is located at E3731 Rockledge Rd, Algoma, WI 54201, NW ¼ of the NW ¼ S22, SW ¼ of the SW ¼ S15, T24N R24E, Township of Casco, Kewaunee County. The Slovan (Heifer) Site is located at N5566 County Rd E, Kewaunee, WI 54216, SW ¼ of the NW ¼, S27 T24N R24E, Township of Casco, Kewaunee County. The weather during the inspection was cloudy and approximately 70° F.



Aerial Map 1. The figure above illustrates the aerial view of Heim's Hillcrest Dairy LLC's Main Site. The Main Site at Heim's Hillcrest Dairy LLC consists of two liquid waste storage facilities, two freestall barns, one calf barn, three sheds, one milking parlor, one commodity storage shed, and one feed storage area. The purple lines represent manure and process wastewater transfer lines. The yellow arrows represent surface flow of runoff from the feed storage area. The aerial photo was obtained from WDNR AgViewer.



Aerial Map 2. The figure above illustrates the aerial view of Heim's Hillcrest Dairy LLC's Main Site and the unnamed intermittent stream (WBIC 5016611). The aerial photo was obtained from WDNR Surface Water Data Viewer.



Aerial Map 3. The figure above illustrates the aerial view of Heim's Hillcrest Dairy LLC's Slovan Site. The Slovan Site at Heim's Hillcrest Dairy LLC consists of one liquid waste storage facility, two heifer barns, one calf barn, one shed, and a dry bale storage area. The aerial photo was obtained from WDNR AgViewer.



Aerial Map 4. The figure above illustrates the aerial view of Heim's Hillcrest Dairy LLC's Slovan Site. The aerial photo was obtained from WDNR Surface Water Data Viewer.

SITE OBSERVATIONS

Feedlot Runoff

Heim's Hillcrest Dairy LLC utilizes one outdoor feedlot located at the Slovan Site. Upon completion of construction during the next permit term, the feedlot is planned to be removed. All runoff generated from the outdoor lot gravity flows to WSF 3, where the runoff is stored until it can be land applied. The concrete lot appeared to be in good condition and operating as designed.

Feedlot area is managed to not have current or past indicators of discharges. Feedlot runoff control system is well-maintained, in good repair and in compliance with permit requirements.

Calf Hutch Areas

Heim's Hillcrest Dairy LLC utilizes a few hutches on the south side of the Main Site calf barn for bull calves. The hutches are placed under the overhang of the calf barn, on concrete and are cleaned daily.

Calf hutch area is managed to not have current or past indicators of discharges. Runoff control system is well-maintained, in good repair and in compliance with permit requirements.

Waste Storage Facilities

Heim's Hillcrest Dairy LLC utilizes one concrete and two clay lined liquid waste storage facilities (WSF). The barns are bedded with a recycled paper and sawdust mixture. In the freestall barns, on the Main Site, manure is collected with alley scrapers where it is pushed into the waste transfer system and transferred to WSF 1 until it can be land applied. In the barns, on the Slovan Site, manure is collected daily by a skid steer pushing the manure to WSF 3.

WSF 1 is located west of WSF 2 on the north side of the Main Site. WSF 1 is a clay lined liquid manure storage facility that was last evaluated in 2017 and met permit requirements. WSF 1 has a maximum operating level (MOL) capacity of approximately 800,000 gallons. WSF 1 is the first stage in a two-cell system and accepts manure and processed wastewater from the parlor and freestall barns.

WSF 2 is located east of WSF 1 on the north side of the Main Site. WSF 2 is a clay lined liquid manure storage facility that was built in 2007 and met permit requirements. WSF 2 has a MOL capacity of approximately 7 million gallons. WSF 2 is the second stage of the two-cell system and accepts manure and process wastewater from WSF 1.

WSF 3 is located on the north side of the Slovan Site. WSF 3 is a concrete lined liquid manure storage facility that was constructed in 2008 and met permit requirements. WSF 3 has a MOL capacity of approximately 930,000 gallons.

Heim's Hillcrest Dairy LLC transfers liquid manure generated at the Main Site to NLC Energy to be digested. In return, Heim's Hillcrest Dairy LLC receives digested manure at approximately a 1:1 ratio. A manure transfer system is located on the southwest corner of WSF 1, which loads manure from the WSF into semi-tankers that transfers the manure to NLC Energy.

Waste storage facilities do not have current or past indicators of discharges. Liquid waste storage structures are well-maintained, in good repair, and in compliance with permit requirements. The combined capacity provides Heim's Hillcrest Dairy LLC with 277 days of storage. The Maximum Operating Level (MOL) markers, Margin of Safety (MOS) markers, and safety fencing were present on all three WSFs.

Process Wastewater (other than feed storage area leachate/runoff)

All wastewater generated in the milking parlor enters the waste transfer system and is pumped to WSF 1 where it is stored until land applied.

Process wastewater sources (milking center, wash water, etc.) are managed to not have current or past indicators of discharges.

Feed Storage Area Runoff

Heim's Hillcrest Dairy LLC utilizes one feed storage area located at the Main Site where corn silage and haylage are piled and covered with plastic. Runoff flows to the northeast corner of the feed pad where it enters the collection system. The transfer pump operates continuously on a float system to capture nearly 100% of the runoff. During heavy rain events, when the pump cannot keep up with the peak runoff flow, excess runoff is diverted to a concrete spreader bar where it is dispersed onto a vegetated treatment area. Heim's Hillcrest Dairy LLC is facing difficulty trying to get grass to regrow on part of the vegetated treatment area since Winter. The vegetated treatment area appeared to be in good working condition and is planned to be removed after completion of the construction. Runoff that is collected is transferred to WSF 2, where it is stored until it can be land applied.

The feed storage area and runoff control system are well-maintained, in good repair and in compliance with permit requirements. The feed storage area and associated process wastewater (leachate, runoff) are managed to not have current or past indicators of discharges.

Animal Mortality Disposal

Animal mortalities are stored under roof and picked up daily, as needed, by Sandy Bay Mink Ranch.

Animal mortalities are managed to not have current or past indicators of discharges.

Ancillary Service Areas

Heim's Hillcrest Dairy LLC utilizes surface inlets and culverts to capture and convey clean stormwater offsite. Heim's Hillcrest Dairy LLC does not utilize any outdoor vegetated areas. The feedlot at the Slovan Site is a concrete lot that gravity flows directly into WSF 3. At both sites, the areas surrounding the barns, including the driveways, are maintained to a high standard of cleanliness.

Preventative maintenance actions and visual inspections are occurring to minimize pollutant discharges from ancillary service and storage areas (i.e. storm water conveyance systems, driveways, etc.).

RECORDS REVIEW

The permittee has current WPDES Permit and Nutrient Management Plan onsite.

The permittee provided complete production site inspection records that are required to be retained.

The permittee provided adequate documentation that the facility has a minimum of 180 days of liquid manure storage capacity.

The permittee provided land application records to demonstrate compliance with nutrient management plan requirements.

The permittee has copies of their emergency response and monitoring and inspection plans onsite.

The permittee is up to date on required reporting and actions as specified in the Schedules section of permit.

SUMMARY

Substantial Compliance

The permittee is in substantial compliance with their WPDES permit.

Areas of Concern

No areas of concerns were observed during the inspection.

Permit Violations

No permit violations were observed during the inspection.

Action Items

Submit a complete permit reissuance application by July 31, 2025.

Items for the Next Permit Term

Submit post construction documentation within 60 days of completion of the construction projects.

Materials Required as Part of the Permit Application

Required materials must be submitted together as a complete permit application through the ePermitting System: <http://dnr.wi.gov/permits/water/> . The system will not allow you to electronically sign and submit your application until all of the following are included:

- 3400-025 form (Livestock/Poultry Operation WPDES Permit Application)
- 3400-025A form (Animal Units Calculation Worksheet)
- 3400-025G form (Evaluated Facilities of Systems Checklist)
- 3400-025C form (Reviewable Facilities of Systems Checklist)
- A soil survey map of the dairy's production area
- A labeled aerial map showing the existing and proposed features and structures of the dairy's production area
- Calculations documenting days liquid manure and process wastewater storage
- Supporting documentation for days storage calculations
- A complete 5-year Nutrient Management Plan (NMP). If necessary, include a description of permanent spray irrigation systems and any other land spreading or treatment systems (proposed or active)
- Plans and specifications for any proposed facilities

Photo #:	1290
Date/Time of Photo:	June 3, 2025 10:31 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Calf Barn. This Photo was Taken Facing West.



Photo #:	1292
Date/Time of Photo:	June 3, 2025 10:31 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Shed and Parlor. This Photo was Taken Facing Northeast.



Photo #:	1294
Date/Time of Photo:	June 3, 2025 10:32 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of Calf Hutches on the South Side of the Calf Barn. This Photo was Taken Facing Northwest.



Photo #:	1298
Date/Time of Photo:	June 3, 2025 10:32 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the West Side of the Larger Freestall Barn. This Photo was Taken Facing South.



Photo #:	1301
Date/Time of Photo:	June 3, 2025 10:33 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of in Between the Freestall Barns. No Bedding Leaving the Barns Observed. This Photo was Taken Facing Northeast.



Photo #:	1306
Date/Time of Photo:	June 3, 2025 10:35 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of East Side of the Smaller Freestall Barn and Commodity Area. This Photo was Taken Facing Northwest.



Photo #:	1304
Date/Time of Photo:	June 3, 2025 10:34 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Construction for the Expansion. The Construction Site for the Expansion is Well-Maintained, Especially Given the Ongoing Work. This Photo was Taken Facing Southwest.



Photo #:	1308
Date/Time of Photo:	June 3, 2025 10:35 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the South Side of the Current Main Site and the North Side of the Expansion. This Photo was Taken Facing West.



Photo #:	1313
Date/Time of Photo:	June 3, 2025 10:38 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the East Side of the Feed Storage Area. The Yellow Arrow Represents the Runoff Flow Path into the Collection System. This Photo was Taken Facing North.



Photo #:	1315
Date/Time of Photo:	June 3, 2025 10:38 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of Vegetated Treatment Area. The Yellow Arrow Represents the Runoff Flow Path Through the Vegetated Treatment Area. This Photo was Taken Facing Northeast.



Photo #:	1376
Date/Time of Photo:	June 3, 2025 10:52 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Feed Storage Area. The Yellow Arrows Represents the Runoff Flow Path to the Collection System. This Photo was Taken Facing South.



Photo #:	1377
Date/Time of Photo:	June 3, 2025 10:52 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Feed Storage Area. This Photo was Taken Facing West.



Photo #:	1378
Date/Time of Photo:	June 3, 2025 10:52 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of a Storm Water Inlet. Minimal Feed Observed in the Inlet. This Photo was Taken Facing North.



Photo #:	1386
Date/Time of Photo:	June 3, 2025 10:56 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Runoff Gravity Flowing to the Collection System on the Feed Storage Area. The Yellow Arrows Represents the Runoff Flow Path. This Photo was Taken Facing Southeast.



Photo #:	1318
Date/Time of Photo:	June 3, 2025 10:39 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Collection System and Vegetated Treatment Area Located on the Feed Storage Area. The Yellow Arrow Represents the Runoff Flow Path. This Photo was Taken Facing Southwest.



Photo #:	1319
Date/Time of Photo:	June 3, 2025 10:39 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Collection System and Feed Storage Area. This Photo was Taken Facing Southwest.



Photo #:	1322
Date/Time of Photo:	June 3, 2025 10:39 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of a Storage Area South of the WSFs. This Photo was Taken Facing East.



Photo #:	1336
Date/Time of Photo:	June 3, 2025 10:43 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Exterior of the Storage Area Wall. This Photo was Taken Facing Southeast.



Photo #:	1325
Date/Time of Photo:	June 3, 2025 10:40 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the MOS & MOL Markers in WSF 2. The Yellow Arrow Represents the MOS & MOL Markers. This Photo was Taken Facing North.

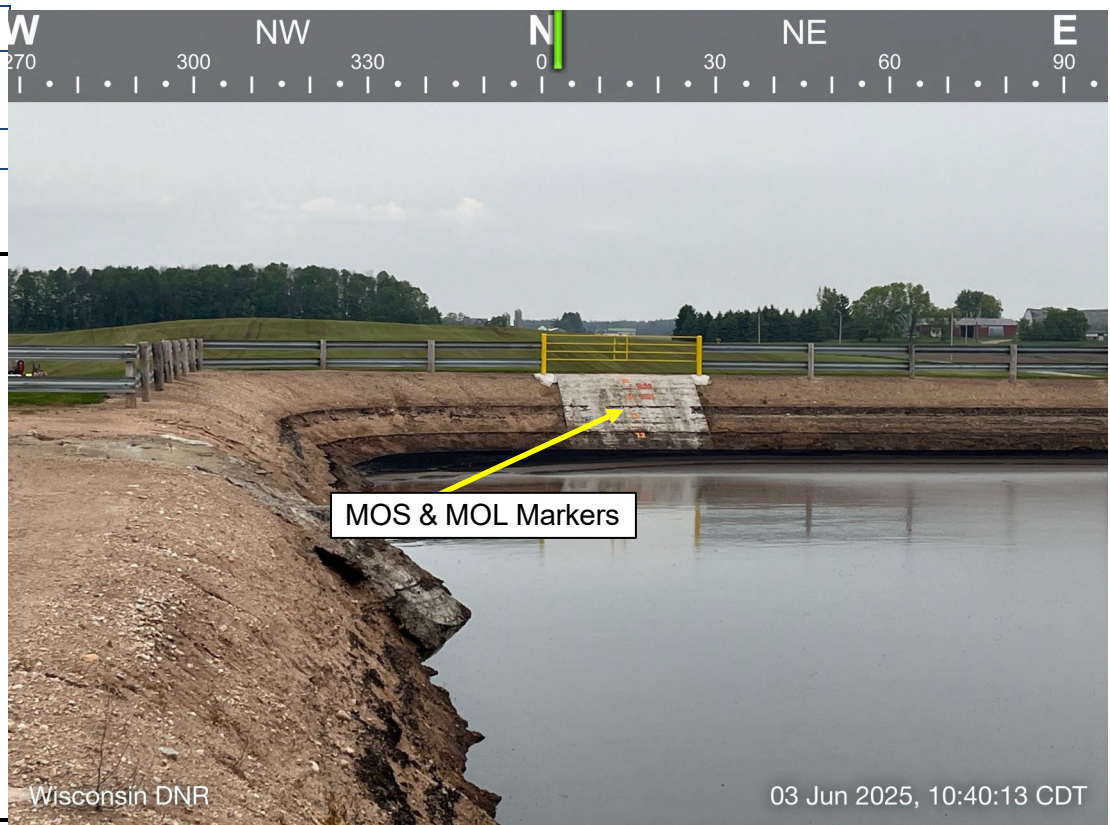


Photo #:	1328
Date/Time of Photo:	June 3, 2025 10:40 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Permanent Markers in WSF 1. The Yellow Arrow Represents the MOS & MOL Markers. This Photo was Taken Facing Northwest.



Photo #:	1334
Date/Time of Photo:	June 3, 2025 10:42 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Transfer System Located in the Southwest Corner of WSF 1. This Photo was Taken Facing West.



Photo #:	1324
Date/Time of Photo:	June 3, 2025 10:39 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Berm Between WSF 1 and WSF 2 Located on the West Side of WSF 2. This Photo was Taken Facing Northeast.

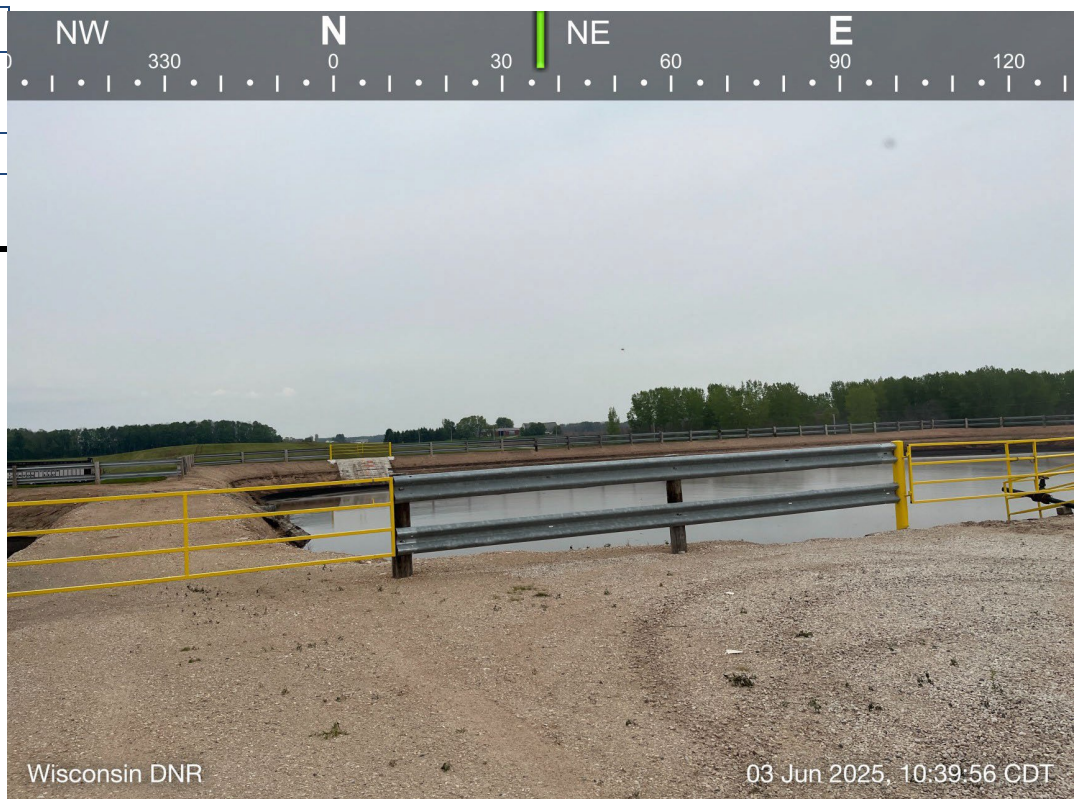


Photo #:	1341
Date/Time of Photo:	June 3, 2025 10:44 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the East Side of WSF 2. This Photo was Taken Facing Southwest.



Photo #:	1342
Date/Time of Photo:	June 3, 2025 10:45 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the North Side of WSF 2. This Photo was Taken Facing Northwest.



Photo #:	1348
Date/Time of Photo:	June 3, 2025 10:45 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of North Side of WSF 1. This Photo was Taken Facing West.



Photo #:	1349
Date/Time of Photo:	June 3, 2025 10:45 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Berm Between WSF 1 and WSF 2. The Pipe in the Berm, Transfers Waste from WSF 1 to WSF 2. The Yellow Arrow Represents the Transfer Pipe. This Photo was Taken Facing East.



Photo #:	1388
Date/Time of Photo:	June 3, 2025 10:56 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Transfer System Located in the Southwest Corner of WSF 1. This Photo was Taken Facing North.



Photo #:	1390
Date/Time of Photo:	June 3, 2025 10:56 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Transfer System Located in the Southwest Corner of WSF 1. This Photo was Taken Facing North.



Photo #:	1352
Date/Time of Photo:	June 3, 2025 10:46 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Transfer System Located in the Southwest Corner of WSF 1 and the Fuel Storage. This Photo was Taken Facing South.



Photo #:	1355
Date/Time of Photo:	June 3, 2025 10:48 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the North Wall of the Feed Storage Area. This Photo was Taken Facing Northeast.



Photo #:	1357
Date/Time of Photo:	June 3, 2025 10:50 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of Grain Bins Located West of the Feed Storage Area. This Photo was Taken Facing Northwest.



Photo #:	1358
Date/Time of Photo:	June 3, 2025 10:50 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Parlor and Southwest Corner of the Feed Storage Area. This Photo was Taken Facing South.



Photo #:	1365
Date/Time of Photo:	June 3, 2025 10:51 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of the Location Milk Tankers are Loaded on the East Side of the Parlor. This Photo was Taken Facing Southwest.



Photo #:	1368
Date/Time of Photo:	June 3, 2025 10:51 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of East Side of the Larger Freestall Barn. This Photo was Taken Facing South.



Photo #:	1397
Date/Time of Photo:	June 3, 2025 10:57 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of a Well Located East of the Shed. The Yellow Arrow Represents the Well. This Photo was Taken Facing North.

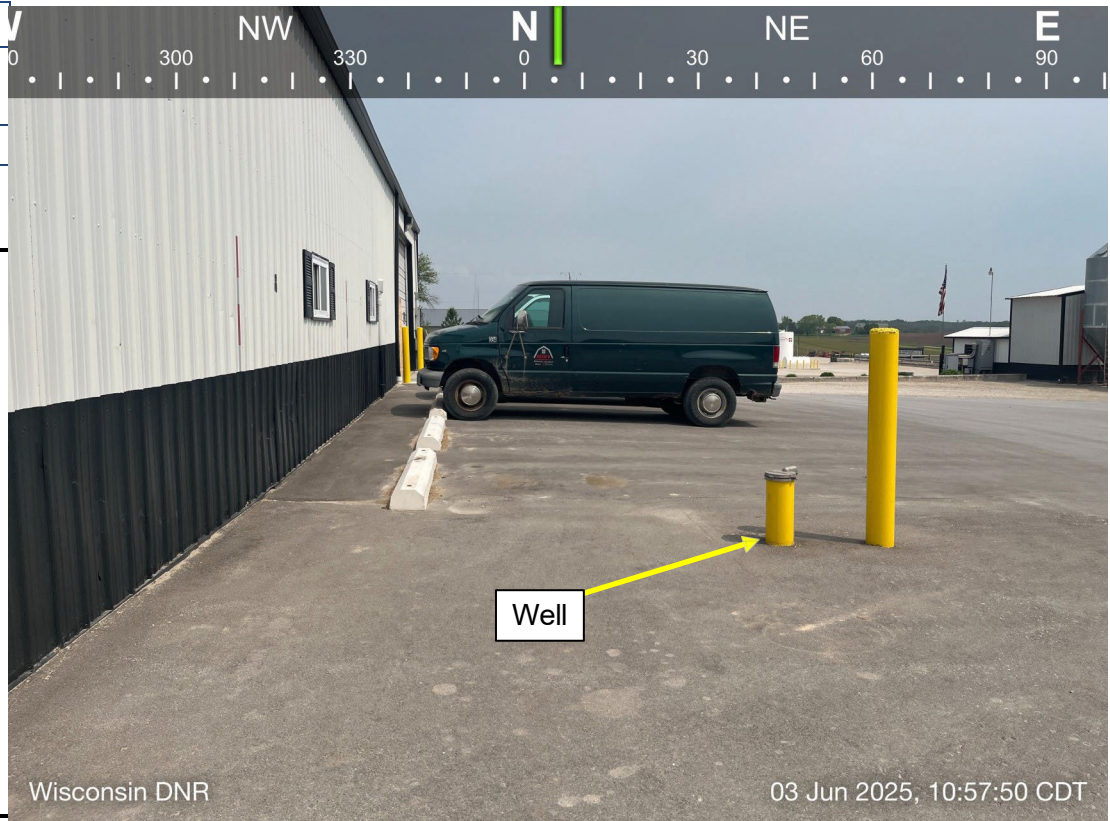


Photo #:	1399
Date/Time of Photo:	June 3, 2025 10:58 am
Photo By:	Mueller
Photo Location:	Main Site

Photo Description:

View of a Well Located West of the Parlor. The Yellow Arrow Represents the Well. This Photo was Taken Facing South.

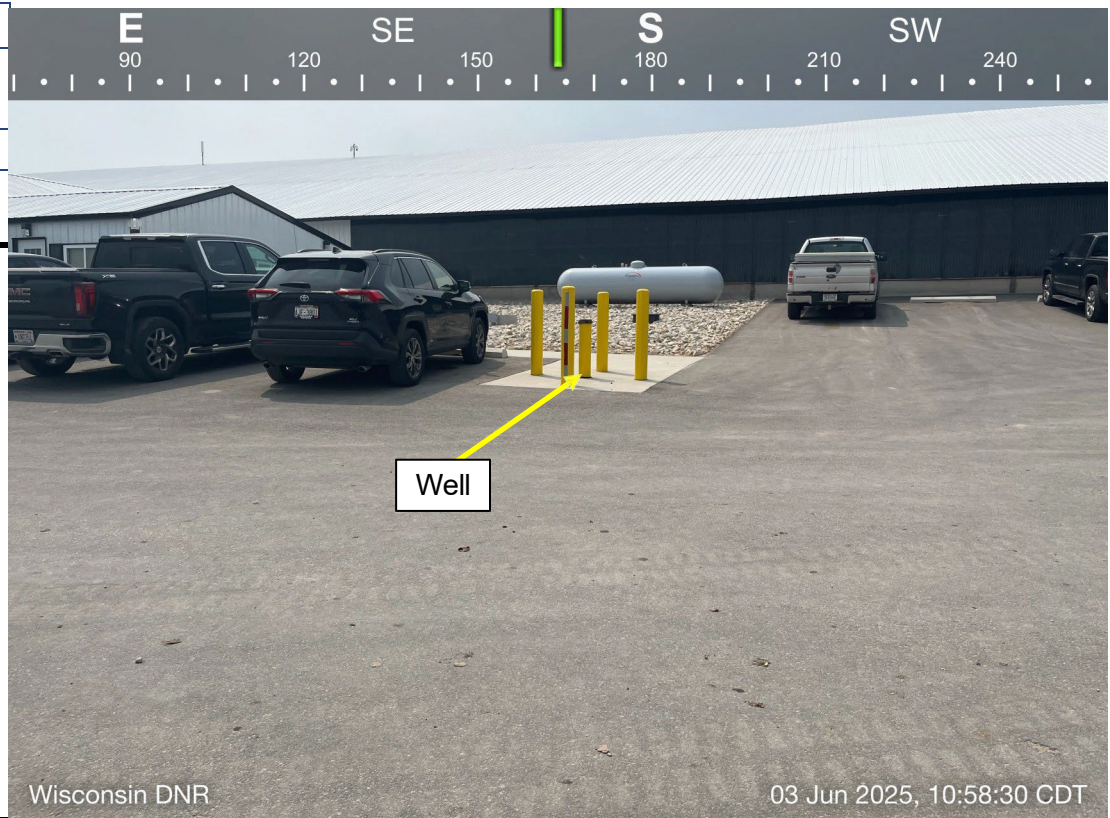


Photo #:	1403
Date/Time of Photo:	June 3, 2025 11:03 am
Photo By:	Mueller
Photo Location:	Slovan Site

Photo Description:

View of in Between the Heifer and Calf Barn. This Photo was Taken Facing Northeast.



Photo #:	1405
Date/Time of Photo:	June 3, 2025 11:03 am
Photo By:	Mueller
Photo Location:	Slovan Site

Photo Description:

View of the North Side of the Heifer Barn. Minimal Bedding/ Solids Leaving the Barn Observed. This Photo was Taken Facing Northeast.



Photo #:	1410
Date/Time of Photo:	June 3, 2025 11:04 am
Photo By:	Mueller
Photo Location:	Slovan Site

Photo Description:

View of the North Side of WSF 3 and East Side of the Heifer and Calf Barns. This Photo was Taken Facing South.



Photo #:	1414
Date/Time of Photo:	June 3, 2025 11:05 am
Photo By:	Mueller
Photo Location:	Slovan Site

Photo Description:

View of the East Side of WSF 3 and the East Side of the Heifer and Calf Barns. The Yellow Arrows Represent the Location Where Manure is Manually Pushed into WSF 3 from the Barns. This Photo was Taken Facing Southwest.



Photo #:	1419
Date/Time of Photo:	June 3, 2025 11:05 am
Photo By:	Mueller
Photo Location:	Slovan Site

Photo Description:

View of South Side of WSF 3. This Photo was Taken Facing Southwest.



Photo #:	1442
Date/Time of Photo:	June 3, 2025 11:11 am
Photo By:	Mueller
Photo Location:	Slovan Site

Photo Description:

View of the MOL & MOS Markers in WSF 3. The Yellow Arrow Represents the MOS & MOL Markers. This Photo was Taken Facing North.

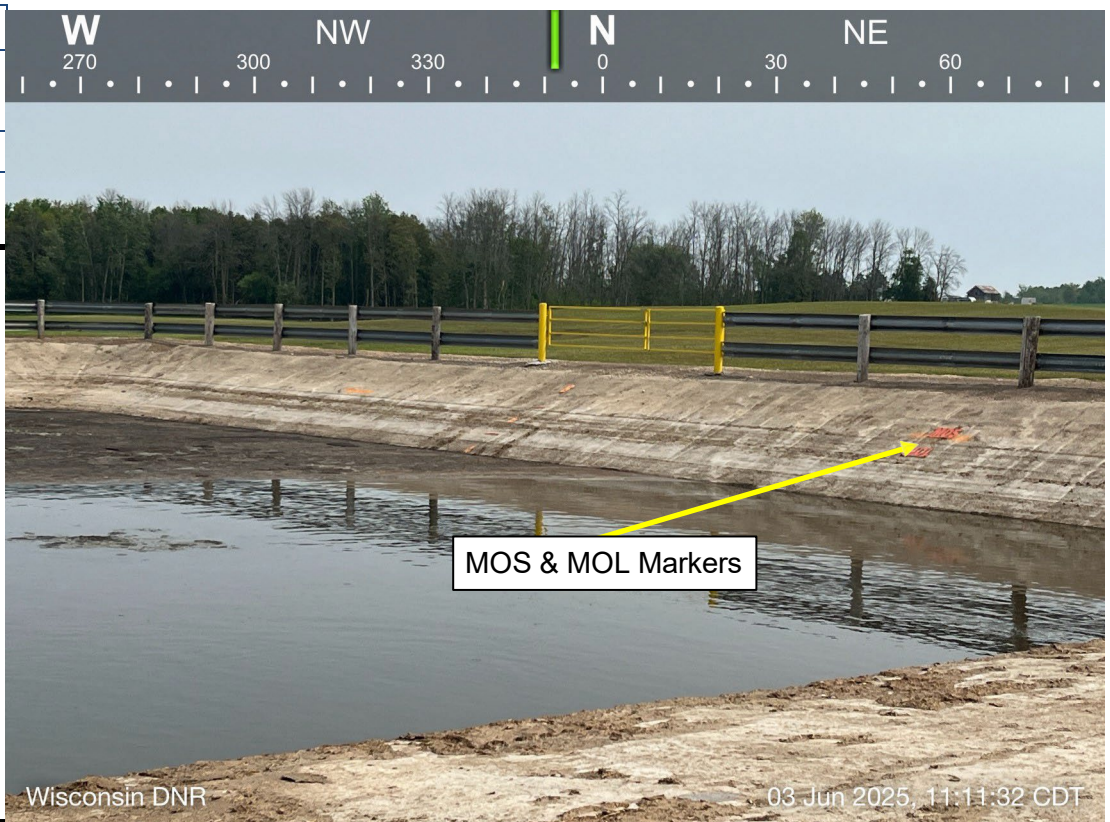


Photo #:	1425
Date/Time of Photo:	June 3, 2025 11:06 am
Photo By:	Mueller
Photo Location:	Slovan Site

Photo Description:

View of the Feedlot on the Southeast Side of the Slovan Site. This Photo was Taken Facing West.



Photo #:	1434
Date/Time of Photo:	June 3, 2025 11:08 am
Photo By:	Mueller
Photo Location:	Slovan Site

Photo Description:

View of the Calf Barn. This Photo was Taken Facing North.





October 14, 2025

Kewaunee County
Approval

Jeremy Heim
Heim's Hillcrest Dairy LLC
E3731 Rockledge Rd
Algoma, WI 54201

SUBJECT: Conditional Approval of Heims Hillcrest Dairy LLC Nutrient Management Plan,
WPDES Permit No. 0064131-04-0

Dear Jeremy Heim:

After completing a review of Heims Hillcrest Dairy LLC 2026-2030 Nutrient Management Plan (NMP) the Wisconsin Department of Natural Resources (Department) is providing conditional approval that it is consistent with Nutrient Management Requirements in s. NR 243, Wis. Adm. Code. This part of your WPDES permit application is now ready for the public notice and comment process as required by Ch. 283 Stats.

Before applying manure onto approved fields each season, the Department recommends Heims Hillcrest Dairy LLC review the NMP with those individuals involved with manure applications to ensure all remain familiar with the approved manure spreading protocol, spreading maps, field and map verification, record keeping requirements, and all the conditions of this approval.

FINDINGS OF FACT

The Department confirms that:

1. A current dairy herd size of 1643 animal units (900 milking & dry cows, 370 heifers, and 80 calves). A planned herd size of 3284 animal units (1870 milking & dry cows, 660 heifers, and 100 calves) by 2026.
2. Manure generation and spreading records indicate your herd will annually generate approximately 14,321,044 gallons of manure and process wastewater and 5,375 tons of solid manure in the first year of the permit term, and 28,308,598 gallons of manure and process wastewater and 9,158 tons of solid manure by 2026.
3. The use of application restriction options 1 and 5 within surface water quality management areas.
4. The use of phosphorus delivery method P Index.
5. That Heims Hillcrest Dairy LLC currently has 1987.3 acres (587 owned and 1400.3 controlled through contracts, rental agreements or leases, or under manure agreements) of which 1839.1 are spreadable acres.
6. That all fields will be checked for the following features prior to/during manure or process wastewater applications: soil areas with possible shallow groundwater (i.e., within 24 inches of surface) at the time of manure application; required setbacks associated with wells, navigable waters, conduits to navigable waters, grassed waterways, wetlands, possible soil erosion/flow channels.

7. That surface applications of manure will not be completed when precipitation capable of producing runoff is forecasted within 24 hours of the time of planned application.

CONDITIONAL NUTRIENT MANAGEMENT PLAN APPROVAL

The Department hereby approves the 2026-2030 Heims Hillcrest Dairy LLC Nutrient Management Plan subject to the following conditions and the applicable requirements of Ch. NR 243, Wis. Adm. Code:

FIELD AND MANURE MANAGEMENT

1. Fields not included in the NMP and new fields shall not receive manure or process wastewater applications until they have been properly soil sampled, entered into Snap Plus, evaluated for their nutrient needs, and approved by the Department.
2. The following fields have also been approved to receive industrial, municipal, or septage waste:

Field Name	Other Permittee Name	Other Permittee Field Name	DNR #
AC-1	ALGOMA WASTEWATER TREATMENT FACILITY	AC-1A	38455
AC-1	ALGOMA WASTEWATER TREATMENT FACILITY	AC-1B	38456
AT-1	ALGOMA WASTEWATER TREATMENT FACILITY	KWAT-1	113735
AT-2	ALGOMA WASTEWATER TREATMENT FACILITY	KWAT-2	113736
DP-4	ALGOMA WASTEWATER TREATMENT FACILITY	KWLH-1	115877
N-01	ALGOMA WASTEWATER TREATMENT FACILITY	DK-N01	121667
N-07	ALGOMA WASTEWATER TREATMENT FACILITY	KWNK-1	111987
N-09	ALGOMA WASTEWATER TREATMENT FACILITY	DK-N09	120443
NO-1	ALGOMA WASTEWATER TREATMENT FACILITY	DK-NO1	122982
NO-2	ALGOMA WASTEWATER TREATMENT FACILITY	DK-NO2	121674
TS-1	ALGOMA WASTEWATER TREATMENT FACILITY	HHD-TS1	123039

Prior to any manure applications on these fields Heims Hillcrest Dairy LLC shall contact the entities listed above to obtain recent spreading records and make the necessary adjustments to the planned manure application rates. At the end of each year Heims Hillcrest Dairy LLC shall contact each entity listed above to obtain spreading records from the previous year so that they can be properly tracked in the NMP. Please Note: Heims Hillcrest Dairy LLC is responsible for obtaining nutrient content values for all other wastes spread on any field in their NMP.

3. If existing fields yield a soil test results equal to or greater than 200 ppm P, those fields would be prohibited from receiving manure or process wastewater applications, unless you obtain Department approval in accordance with NR 243.14(5)(b)2., Wis. Adm. Code.
4. All liquid manure samples collected may be analyzed, at a minimum, for percent dry matter, total nitrogen, percent NH₄-N, percent NO₃-N, phosphorus, potassium, and sulfur.
5. If manure sample results have a dry matter (DM) content less than 2.0% and the percent ammonium (NH₄⁺) is greater than 75% of the total N, Heims Hillcrest Dairy LLC may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

$$\text{First-Year Available N} = \text{NH}_4\text{-N} + [0.25 \times (\text{Total N} - \text{NH}_4\text{-N})]$$

6. Heims Hillcrest Dairy LLC shall record daily manure applications by using form “Heim’s Hillcrest Manure Log”. These forms shall be retained at the farm and provided to the department upon request.
7. Heims Hillcrest Dairy LLC shall annually submit a spreading report that summarizes the land application activities listed under NR 243.19(3)(c)5., Wis. Adm. Code by using form 3200-123.

WINTER SPREADING

8. Liquid manure applications during winter conditions, as defined by NR 243.14(7), Wis. Adm. Code, are prohibited with the exception of emergency applications.
9. The following field(s) are approved for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure:

• CL-1	• H-01	• NO-1	• NO-8
• DP-3	• KW-2	• NO-2	
10. Winter spreading of solid and liquid manure may not occur during the “high risk runoff period” pursuant to s. NR 243.14(6)(c) and NR 243.14(7)(c), respectively.
11. Winter applications of liquid manure shall only occur under emergency situations, after notifying the Department and receiving verbal approval.
12. Liquid applications shall be limited to 3,500 gallons per acre or 30 lbs. P per acre, whichever is less, on slopes 2-6% and 7,000 gallons per acre or 60 lbs. P per acre, whichever is less, on slopes 0-2%. Winter applications of solid manure shall be limited to 60 lbs. P per acre.

HEADLAND STACKING

13. No headland stacking sites are approved.

NR243.143/151.075 SILURIAN BEDROCK PERFORMANCE STANDARDS

14. Manure generated by Heims Hillcrest Dairy LLC that is mechanically applied to the following approved fields meet planning requirements under NR243.143/151.075, Silurian bedrock performance standards. The following fields are required to meet all requirements under NR243.143/151.075, Silurian bedrock performance standards immediately following this approval.

• N-09	• N-12
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MANURE & PROCESS WASTEWATER IRRIGATION

15. Irrigation of manure or process wastewater is prohibited.

SUBMITAL AND RECORDKEEPING REQUIREMENTS

16. A copy of this conditional approval shall be included in all future annual Nutrient Management Plan Updates in addition to the NR 243 and NRCS 590 checklists.
17. The farm is required to take a minimum number of manures samples to meet permit requirements as follows:
 - Solid Manure: One solid sample per source on a quarterly basis when hauling occurs.
 - Liquid Manure: Two liquid samples per source on a monthly basis when hauling occurs.

ITEMS FOR FUTURE CONSIDERATION

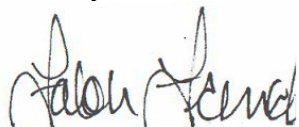
18. The animal unit to acreage ratio will exceed 1:1 following the expansion, and the nutrient management plan utilizes greater than 90 percent of the spreadable acreage through the permit term. This can lead to overutilization of the land base and rising soil test P levels. It is recommended to monitor the soil nutrient content and adjust manure and fertilizer application rates, to ensure that fields do not build soil test P

This conditional approval does not limit the Department's regulatory authority to require NMP revisions (based upon new information or manure irrigation research findings) or request additional information in order to confirm or ensure your farm operation remains in compliance with NR 243 and your WPDES permit conditions. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the Department may ask you to provide further information relating to this activity.

Please keep in mind that approval by the Department of Natural Resources – Runoff Management Program does not relieve you of obligations to meet all other applicable federal, state or local permits, zoning and regulatory requirements.

If you have any questions regarding this approval I can be reached at (608) 228-5265 or Falon.French@Wisconsin.gov.

Sincerely,



Falon French
WDNR CAFO Intake/Nutrient Management Specialist
Wisconsin Department of Natural Resources

cc: Brittny Mueller, WDNR Agricultural Runoff Specialist (brittny.mueller@wisconsin.gov)
Joe B Baeten, WDNR Watershed Field Supervisor (Joseph.Baeten@wisconsin.gov)
Erin Hanson, WDNR Acting Section Manager (ErinE.Hanson@wisconsin.gov)
Aaron O'Rourke, WDNR Nutrient Management Program Coordinator (Aaron.Orourke@Wisconsin.gov)
Ashley Scheel, WDNR CAFO Nutrient Management Plan Reviewer (Ashley.Scheel@Wisconsin.gov)
Anthony Salituro, WDNR CAFO Engineer (anthony.salituro@wisconsin.gov)
Davina Bonness, Kewaunee County (bonness.davina@kewauneeeco.org)
Jake Geiger, Tilth Agronomy Group INC (jake@tilthag.com)
File



July 29, 2025

FILE REF: R-2025-0096
WPDES Permit #: WI-0064131

Jeremy Heim
Heim's Hillcrest Dairy LLC
E3731 Rockledge Rd
Algoma, WI 54201

Subject: Conditional Approval of Plans & Specifications for a Freestall Barn and Milking Parlor Waste Transfer System, WSP2 Expansion, Feed Pad Expansion, and Associated Runoff Controls at, Heim's Hillcrest Dairy LLC, (Home Farm) at T24N, R24E, Section 15 & 22 in Casco Township, Kewaunee County

Dear Mr. Heim:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has reviewed and conditionally approves the above referenced plans and specifications, submitted under certification by Doug Gatrell, GHD and received on May 5, 2025 with revisions received on May 30, 2025 and July 29, 2025. The review was conducted in accordance with s. 281.41, Wis. Stats., chs. NR 151, NR 213, and NR 243, Wis. Adm. Code, and applicable NRCS Standards. The attached engineering report describes the project, lists standards that apply and provides compliance analysis. Questions may be directed to the assigned regional staff or the review engineer Tony Salituro (contact information is at the end of this letter).

Proposed Project: The proposed project includes the following facilities that are reviewable under s. NR 243.15, Wis. Adm. Code: Waste transfer components associated with a new freestall barn and milking parlor, an additional feed storage area with a runoff collection basin, and an expansion of the existing clay lined WSP2.

Conditions of Approval: The plans and specifications for project number R-2025-0096 are hereby approved and subject to chs. NR 151 and NR 243, Wis. Adm. Code, and the conditions listed below:

1. **Permeability Results:** Permeability testing of the soil borrow material for WSP2 has not been completed to date. Permeability results shall be provided to the Department once available to confirm that they meet the requirements of Table 1 of WCS 300 (04/18). If results do not meet clay liner criteria, consult with the Department to determine options for revisions to the WSP.
2. **Revisions:** If revisions are made to the approved plans and specifications, revised plans and specifications shall be submitted for approval modification, in accordance with ss. NR 108.03 and NR 108.04, Wis. Adm. Code, and s. 281.41(1)(c), Wis. Stats. Submit revised plans and specifications via the Department's e-Permitting System. **Note:** This includes revisions for local permitting. If a formal approval modification may not be warranted, contact the review engineer to confirm.
3. **Approval Period:** In accordance with ss. NR 243.15(1)(a)1., and NR 108.04(2)d., Wis. Adm. Code, if construction is not commenced within 2 years from the approval date, the approval is void, and a new approval must be obtained prior to commencing construction.
4. **Notification:** Prior to construction and when construction is complete, notify the Department's regional contact and county contact provided a copy of the approval (contact information is at the end of this letter).
5. **Inspection:** During the construction of critical components, inspection shall be performed by a Wisconsin registered professional engineer or other qualified third party (excludes the owner and construction contractor and their employees).
6. **Post-Construction Documentation:** In accordance with the permit, a post-construction report must be submitted to the DNR's e-Permitting website (<http://dnr.wi.gov/permits/water>) within 60 days of

completing construction. The report must include documentation specified by s. NR 243.15(10), Wis. Adm. Code.

Limitation of Approval: The Department reserves the right to order changes or additions should conditions arise making this necessary. This approval is not to be construed as a determination on the issuance of a Wisconsin Pollutant Discharge Elimination System Permit or opinion as to the ability of the proposed system to comply with effluent limitations in such a permit, approval of an Environmental Impact Statement that may be prepared, or approval for any activities requiring a permit under chs. 30 or 31, Wis. Stats. Where necessary, plans and specifications should be submitted to the Department of Safety and Professional Services or other state or local agencies to ensure conformance with applicable codes or regulations of such agencies.

Tax Treatment: Tangible personal property, that becomes part of a waste treatment of pollution abatement plant or equipment, may be exempt from sales tax under s. 77.45(26), Wis. Stats. Similarly, property purchased or constructed as a waste treatment facility and used for industrial waste treatment may be exempt from general property taxes under s. 70.11(21), Wis. Stats. A prerequisite to exemption is filing a statement on prescribed forms. To obtain the forms, and information about this sales tax exemption, please contact the Department of Revenue, P.O. Box 8933, Madison, WI 53708, or check their website <http://www.revenue.wi.gov/>.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to WIS. STAT. §§ 227.52 and 227.53, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to WIS. STAT. § 227.42, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with WIS. ADMIN. CODE § NR 2.05(5), and served on the Secretary in accordance with WIS. ADMIN. CODE § NR 2.03. The filing of a request for a contested case hearing does not extend the 30-day period for filing a petition for judicial review.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary



Bernie Michaud, P.E.
CAFO Engineer Supervisor
Watershed Management Program

Enclosures: Wisconsin DNR Engineering Report

email: Jeremy Heim; Heim's Hillcrest Dairy LLC
(920) 536-0118; Jeremy@heimshillcrest.com
Douglas Gatrell; GHD Services, Inc.
(248) 893-3411; doug.gatrell@ghd.com
Matt Woodrow; DATCP
(920) 427-8505; matthew.woodrow@wisconsin.gov
Davina Bonness; Kewaunee County LCD
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WISCONSIN DEPARTMENT OF NATURAL RESOURCES ENGINEERING REPORT**GENERAL INFORMATION****Farm Name:** Heim's Hillcrest Dairy LLC**WPDES Permit#:** WI-0064131**Location Address:** E3730 Rockledge Rd, Algoma, WI**DNR Project #:** R-2025-0096**Engineering Plans Certified by:****Initial Submittal:****Revised Submittal(s):**

Doug Gatrell, P.E.

May 5, 2025

May 30, 2025 and July 29, 2025

Site Assessment: Geographical features of the site include soils that are Hotonville and Symco silt loam. The nearest stream is an unnamed intermittent stream located directly north of the proposed WSP2 expansion. Two wetland delineations were completed by assured wetland delineator Courtney Roach and found the nearest wetland is located around the perimeter of the unnamed intermittent stream. No wetland impacts will occur as part of this project. Clean runoff will be diverted around waste handling areas to existing waterways. No karst features are known to exist within 1,000 ft of the proposed facilities or systems. No ground water supply wells are located within 250 feet of the proposed facilities or systems.

Soil investigations were performed in April 2025 consisting of twenty-five (25) soil borings in the proposed project area, which found the primary subsoils consist of sandy clays (CL and silty sand (SC) overlain by topsoil. Soil samples of the material found a fines content in the range of 49.2 – 89.8% and plasticity index range of 7 – 18. Bedrock was not found in any soil borings. A saturated seam was found in two of the soil borings below the required separation distance of the structures.

Proposed Facilities:

Waste Storage Pond 2 Expansion (WSP2): The proposed design was submitted to meet NRCS 313 (10/17R) and NRCS 520, Table 1 (10/17)). The design is compliant with s. NR 243.15(3), Wis. Adm. Code. The expansion will take place along the north edge of the WSP. Below is a summary of what is proposed.

- The proposed WSP2 expansion will have a new total top planer area of 143,435 sq. ft. x 18 ft deep. The embankment walls and floor are designed with compacted clay materials meeting a P200 > 50% and PI > 12. The side slopes will be 5 ft thick and the bottom will be 4.1 ft thick. All soils will be compacted to WCS 300.
- The proposed storage will have a total and maximum operating level (MOL) volume of 15,632,403 and 14,195,413 gallons respectively.
- The floor elevation will be 708.0 ft and the MOL elevation will be 724.7 ft. Interior and exterior embankment slopes will be 2:1 and 3:1 respectively with a berm width of 10 ft. Core trenches will be installed along the north and east edge of the expansion area where the embankment fill height is greater than 10 ft.
- An agitation pad and sump will be installed along the west edge of the WSP2. The sump will be 12 ft x 12 ft x 1 ft deep constructed of 5-inch thick concrete with 5 lbs/yd³ fiber mesh reinforcing. An additional agitation pad will be installed on the south end of the WSP2 at the location of the pipeline G penetration for scour protection.

Feed Storage Area (FSA): The proposed design was submitted to meet with NRCS Standard 561 Table 4, Column 2 (11/22). The design is compliant with s. NR 243.15(9), Wis. Adm. Code. The feed storage area will be located at the east portion of the production area. Below is a summary of what is proposed.

- The proposed rectangular feed storage pad will be between 222 and 272 ft wide x 415 ft long with a 6-inch thick fiber reinforced concrete working surface. The fiber reinforcement will be 5 lbs/yd³ of 2.25-inch fibers. The design is based on the anticipated HS-20 vehicle loading. A 3 ft thick soil liner consisting of soils meeting a P200% > 20% will be beneath the fiber reinforced concrete.
- Runoff from the feed storage area will be directed to the northeast via gravity to the proposed leachate attenuation basin. Flared asphalt edges will be installed along the north and east edges to prevent runoff from leaving the pad. The south edge of the feed storage area will have 2 ft tall x 8-inch thick

concrete curbs installed. An 8-ft tall retaining wall will be installed on the west edge of the FSA. All walls will have waterstop placed at the floor to wall connection to create a liquid tight connection.

Leachate Attenuation Basin (LAB): The proposed design was submitted to meet NRCS 313 (1/17R) and NRCS 522, Table 2 (10/17). The facility will be used only for process wastewater, but the liquid level will be maintained within one foot of the bottom, and is therefore has been reviewed as a reception tank not subject to ch. NR 213, Wis. Adm. Code. The design is compliant with s. NR 243.15(3), Wis. Adm. Code. The LAB will be installed to the east of the proposed FSA. Below is a summary of what is proposed.

- The proposed LAB will be rectangular shaped with interior top dimensions of 325 ft x 105 ft x 11 - 13 ft deep. The embankment walls and floor are designed with 5-inch thick steel reinforced concrete. In-situ soils beneath the LAB meeting a P200 > 20% and PI > 7 will act as a soil-subliner to create a concrete soil composite liner.
- The proposed storage will have a total and maximum operating level (MOL) volume of 1,338,926 and 494,947 gallons respectively.
- The floor elevation will be between 699.9 to 693.9 ft and the MOL elevation will be 701.0 ft. Interior and exterior embankment slopes will be 2.5:1 and 3:1 respectively with a berm width of 10 ft.

Production Area Runoff Controls: The proposed design was submitted to meet with NRCS Standard 634 (11/22). The design is compliant with s. NR 243.15(2), Wis. Adm. Code. Below is a summary of what is proposed.

- Runoff from the FSA will transfer via gravity to a proposed leachate collection channel on the northeast corner of the FSA. The runoff channel will be constructed of 8-inch thick fiber reinforced concrete. The fiber reinforcement will be 5 lbs/yd³ of 2.25-inch fibers. Waterstop will be placed at the channel to FSA connection. A 9.5-inch thick concrete cover with slats will be installed to allow runoff to enter the channel. The runoff will then transfer to the LAB.
- A 6-ft diameter x 13 ft deep concrete ASTM C478 manhole will be installed to the northeast of the proposed LAB. The manhole will act as a pump station for the runoff held in the LAB. A 12-inch diameter HDPE gravity pipeline (Pipeline F: 51LF) will transfer runoff from the leachate basin to the manhole. The pump station will hold a 10HP Flygt submersible pump to transfer runoff through a 6-inch diameter HDPE DR11 HDPE pressure pipeline (Pipeline G: 924LF) to the proposed WSP2 expansion. The pump will provide an operating velocity and pressure of 8.2 ft/sec and 31.7 psi respectively.
- An 18-inch diameter HDPE gravity pipeline (Pipeline H: 442LF) is proposed to transfer liquids from the existing feed storage area leachate pump station to the proposed LAB. The gravity pipeline is sized to transfer the peak runoff from the existing feed storage area during the 25yr – 24hr storm.

Waste Transfer System: The proposed design was submitted to meet with NRCS Standard 634 (11/22). The design is compliant with s. NR 243.15(4), Wis. Adm. Code. Two distinct waste transfer systems are detailed below.

Freestall Barn 3 Waste Transfer System

- A proposed W25000 precast concrete reception tank will collect manure from the proposed freestall barn. A 3 ft 4 inch wide x 4 ft deep concrete channel will be installed in the freestall barn floor to transfer manure to the reception tank. The concrete channel walls and floor will be 8-inch thick steel reinforced concrete with a liquid tight wall to floor connection. A 9.5-inch thick concrete cover with slats will be installed to allow manure to enter the channel.
- An 8-inch diameter DR11 HDPE pipeline (Pipeline E: 266LF) will recirculate water from the proposed reception tank to flush the concrete channel. The pipeline will have an operating velocity and pressure of 5.0 ft/sec and 5.3 psi respectively. The pipeline is a severe service pipeline and will be pressure tested in accordance with WCS 634.
- A Truck loading station will be installed north of the reception tank. The loading station will be a 15 ft x 15 ft concrete surface graded to the center towards a 1 ft x 1 ft x 2 ft deep catch basin. A 6-inch diameter HDPE gravity pipeline will connect the catch basin to the reception tank.

Parlor Waste Transfer System

- A proposed W25000 precast concrete reception tank (Flush Pit) will collect manure from the proposed holding area. The reception tank will be split into two different cells with a 6 ft weir wall to separate the cells and transfer to two separate areas. A 3 ft 4 inch wide x 2 ft 9 inch deep concrete channel will be installed in the holding area floor to transfer the manure to the reception tank. The concrete channel wall to floor connection will be made liquid tight. A 9.5-inch thick concrete cover with slats will be installed to allow manure to enter the channel. A 24-inch diameter HDPE gravity pipeline (Pipeline B: 24LF) will connect the channel to the reception tank.
- A 12-inch diameter HDPE pressure pipeline (Pipeline C: 225LF) will transfer flush water from the Flush Pit to flush heads in the proposed holding area. The pipeline will operate at a velocity and pressure of 4.6 ft/sec and 7.5 psi respectively.
- An 8-inch diameter HDPE pressure pipeline (Pipeline D: 390LF) will transfer manure from the Flush Pit to the proposed freestall barn 3 reception tank. The pipeline will operate at a velocity and pressure of 3.4 ft/sec and 7.3 psi respectively.
- A proposed Grey Water Pit will collect liquids from the proposed Milking Parlor to the west of the Holding Area. The Grey Water Pit will be an 8 ft diameter x 12 ft deep concrete precast manhole. The drain lines from the Milking Parlor will be 4-inch diameter PVC drain lines. A 6-inch diameter HDPE pressure pipeline (Pipeline A: 173LF) will recirculate water from the Grey Water Tank to flush the concrete channel. The pipeline will have an operating velocity and pressure of 5.7 ft/sec and 7.2 psi respectively. The pipeline is a severe service pipeline and will be pressure tested in accordance with WCS 634.

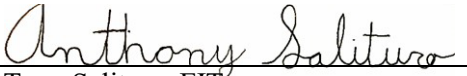
DAYS OF AVAILABLE LIQUID WASTE STORAGE: The submitted information states that Heim's Hillcrest Dairy LLC will have 218 days of liquid waste storage based on the volumes listed in the table below with respect to s. NR 243.15(3)(i) to (k), Wis. Adm. Code. The proposed number of animal units provided for the calculation is 3,284. The calculations are for the site after construction of the new freestall barns and additional runoff captured from the feed storage area expansion. The liquid waste volumes are based on the NRCS spreadsheet and other estimated or calculated values for a collection period of 365 days. All runoff, up to the 25yr – 24hr storm, will be captured from both feed storage areas. WSP1 and 2 are clay lined storages and have a remaining waste value of 1 ft on the bottom.

Waste Storage	Total Vol. from Settled Top to Bottom	Remaining Waste	25-yr, 24-hr Precip. on Storage	25-yr, 24-hr Collected Runoff	Freeboard Vol.	Max. Operating Level (MOL) Vol.
WSP1	2,444,484	172,559	100,556	0	275,483	1,895,886
WSP2	15,658,116	695,293	389,584	0	1,060,984	13,512,255
LAB	1,338,926	0	91,466	550,058	202,455	494,947
WSP3	1,311,406	0	60,896	85,639	168,961	995,910
Total MOL Vol:						16,898,998
Days of Storage:						218

Liquids Collected/Stored	Annual Gallons
Manure and Bedding	20,221,000
Feed Storage Leachate	187,000
Feed Storage Runoff Collected	4,184,278
Concrete Barnyard Runoff Collected	410,272
Net Precipitation on Storage Surfaces	3,064,861
Solid Stacking Pad Runoff Collected	241,184
TOTAL:	28,308,595

PURPOSE OF THIS REPORT: This report documents review of plans and specifications for each structure or practice indicated below, including findings regarding the structure or practice's compliance with applicable standards. The reviewer considered if management and site assessment were conducted, documented, and reflected in the final design, and if proper construction and related plans (operation and maintenance, inspection, erosion control if applicable) were provided, and demonstrated compliance with applicable rules standards.

DECISION RECOMMENDATION: Based on my review completed on July 29, 2025, the proposed plans and specifications meet ch. NR 243, Wis. Adm. Code, and applicable NRCS Standards. Therefore, I recommend the plans and specifications be conditionally approved.


Tony Salituro, EIT
Water Resources Engineer

LEGEND

HOUSE LOCATION

HOUSE AFFILIATED WITH FARM



FACILITY BOUNDARY

PROPOSED STRUCTURE

PROPOSED ACCESS ROAD



1000-FOOT RADIUS SITE BUFFER

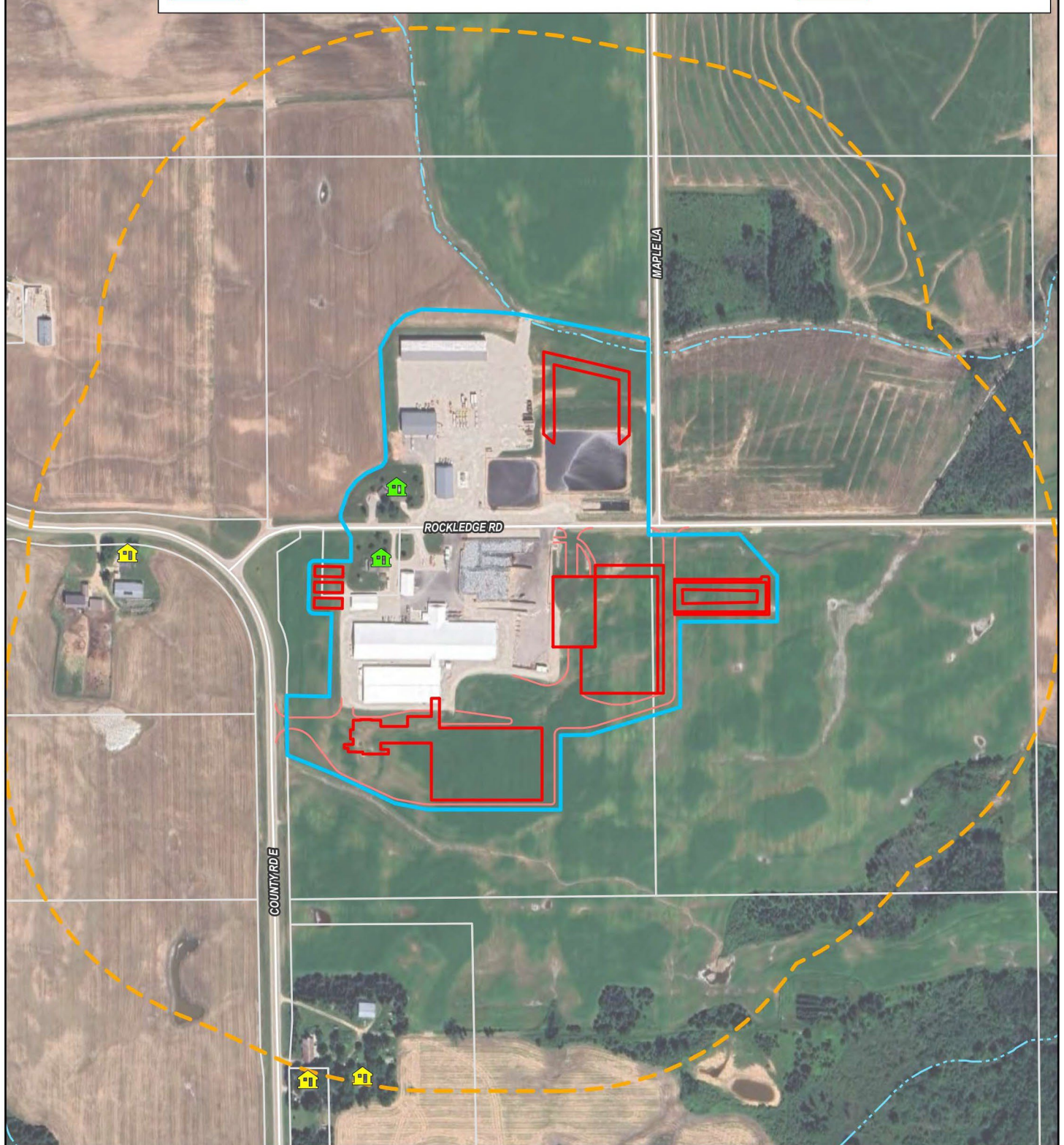
PARCEL BOUNDARY



INTERMITTENT STREAM



PERENNIAL WATERBODY



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Map Projection: Transverse Mercator
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Grid: NAD 1983 HARN WISCRS Kewaunee County Feet

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HEIM'S HILLCREST DAIRY, LLC
KEWAUNEE COUNTY, WISCONSIN

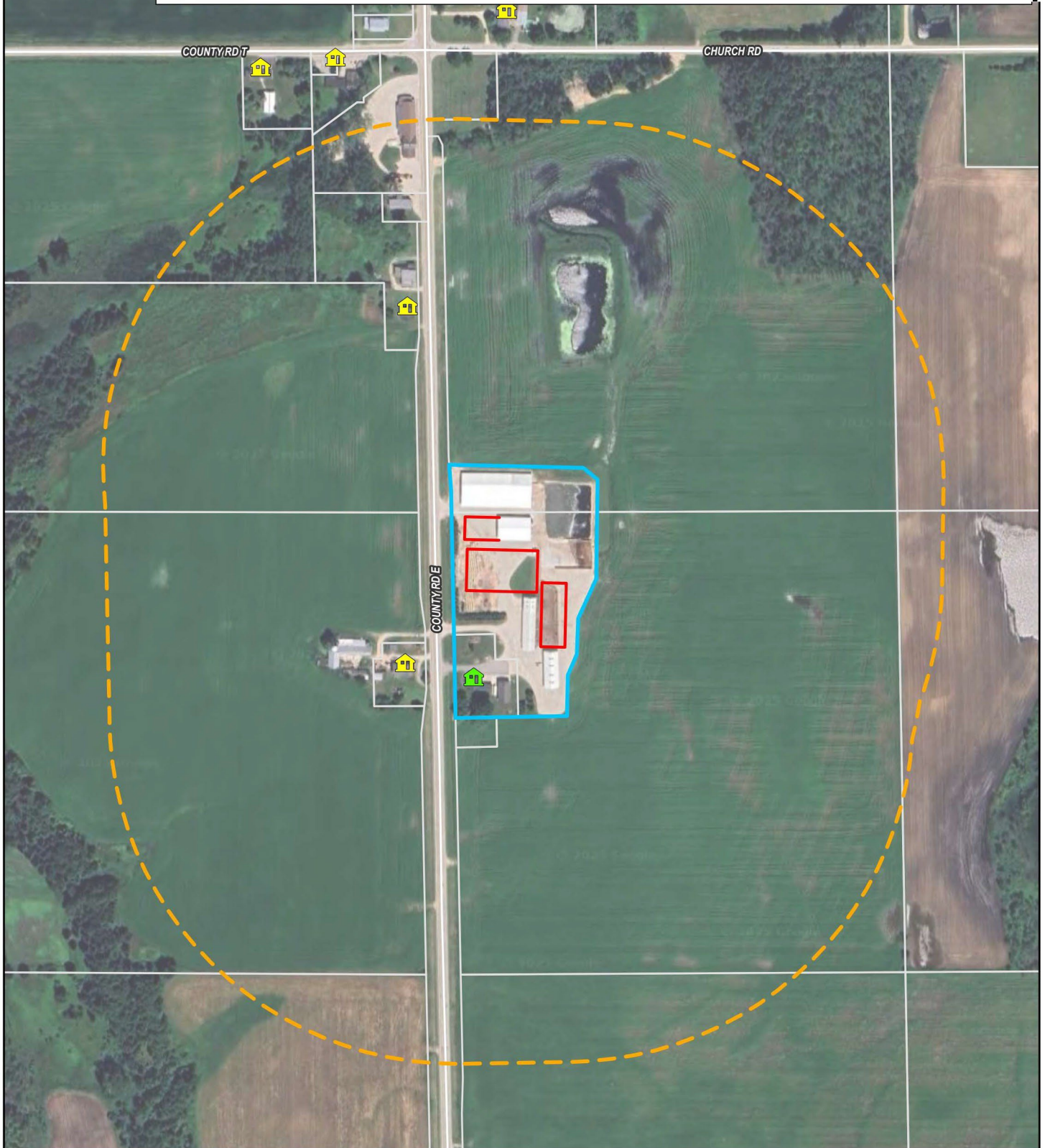
AERIAL PHOTOGRAPH
1000-FOOT SETBACK
MAIN FARM

Project No. 12657355-07
Revision No.
Date 05/05/2025

FIGURE 4

LEGEND

- | | | | | | |
|---|----------------------------|---|--------------------|---|------------------------------|
|  | HOUSE LOCATION |  | FACILITY BOUNDARY |  | 1000-FOOT RADIUS SITE BUFFER |
|  | HOUSE AFFILIATED WITH FARM |  | PROPOSED STRUCTURE |  | PARCEL BOUNDARY |



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HEIM'S HILLCREST DAIRY, LLC
KEWAUNEE COUNTY, WISCONSIN

AERIAL PHOTOGRAPH
1000-FOOT SETBACK
\$LOVAN FARM

Project No. 12657355-07
Revision No.
Date 04/28/2025

FIGURE 5