Permit Fact Sheet

General Information

Permit Number:	WI-0064700-03-0
Permittee Name:	Iron Ridge Dairy LLC
Permitted Facility Address:	Main Site: 5385 Sunset Drive, Kewaskum, WI 53040, NE SE Sec 23 T12N R18E Across Road Site: 5412 Sunset Drive, Kewaskum, WI 53040, SW NE Sec 23 T12N R18E Down Road Site: 5245 Sunset Drive, Kewaskum, WI 53040, SW NW Sec 24 T12N R18E
Permit Term:	July 01, 2025 to June 30, 2030
Receiving Water:	Unnamed tributaries to the Upper Milwaukee River and East Branch of Rock River Watersheds and groundwater of the state

Animal Units					
	Current AU		**Proposed AU** **(Note: If all zeroes, expansions are not expected during permit term)**		
Animal Type	**Mixed**	**Individual**	**Mixed**	**Individual**	**Date of Proposed Expansion**
Dairy Calves (under 400 lbs.)	30	0	30	0	01/01/2028
Milking and Dry Cows	490	501	595	608	01/01/2028
Heifers (400 lbs. to 800 lbs.)	60	100	60	100	01/01/2028
Heifers (800 lbs. to 1200 lbs.)	220	200	220	200	01/01/2028
Steers or Cows (400 lbs. to market)	100	100	100	100	01/01/2028
Total	900	501	1005	608	

Facility Description

Iron Ridge Dairy, LLC is an existing Concentrated Animal Feed Operation (CAFO) owned and co-managed by Shaun and Justin Volm in the Wayne Township of Washington County, Wisconsin. Iron Ridge Dairy has one Main Site and two satellite locations: Across Road Site and Down Road Site. The main site is located at 5385 Sunset Drive, Kewaskum, WI 53040; Across Road Site is located at 5412 Sunset Drive, Kewaskum, WI 53040; Down Road Site is located at 5245 Sunset Drive, Kewaskum, WI 53040.

The current herd size is 900 animal units (490 milking/dry cows, 300 heifers, 100 steer, 30 calves). The proposed herd size by 2029 is 1,005 animal units. Approximately 7,528,539 gallons of liquid manure/process wastewater and 1,031 tons of solid manure is produced annually at the current herd size. The total usable waste storage capacity at Iron Ridge is approximately 5.2 million gallons or 239 days of storage capacity. Iron Ridge Dairy currently has 2,058 acres of cropland (542 owned and 1,516 controlled through contracts, rental agreements or leases, or under manure agreements), of which approximately 2,048 acres are available for manure application.

Substantial Compliance Determination

Enforcement During Last Permit: Iron Ridge Dairy was issued the following Notice of Noncompliance (NON). The facility has completed all required actions as part of the enforcement process.

• January 13, 2020: NON issued for failure to adhere to their WPDES permit schedule. Return to compliance issued 2/21/2024.

• December 5, 2024: NON issued for unapproved Feed Stacking. Return to compliance issued 3/12/2025.

After a desk top review of all discharge monitoring reports, land app reports, compliance schedule items, and a site visit on November 14, 2024, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Jean Weaver (WDNR CAFO Specialist) on 3/27/2025.

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 a below-grade concrete storage tank located north of the former digester. WSF 1 has a MOL of 523,349 gallons and was constructed in 2001. This storage accepts manure and wastewater from the Main Site's freestall barns. An engineering evaluation of WSF 1 is awaiting department approval (R-2022-0207); see Schedules section of the permit for further 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 above ground circular concrete tank located south of the digester. The facility has a MOL of 4,084,110 gallons and was constructed in 2008. This storage accepts manure and process wastewater from the solids separator system and leachate collection system at the Main Site. An engineering evaluation of WSF 2 is awaiting department approval (R-2022-0207); see Schedules section of the permit for further requirements.	
003	Feed Storage Area & Runoff Control System: Sample point 003 is for visual monitoring and inspection of the feed storage area and associated runoff control system located at the Main Site. FSA 1 has a concrete feed pad, multiple bunkers, and a leachate collection system that was installed in 2023. Proper operation and maintenance is required to ensure discharges of process wastewater meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. No runoff controls are present at the feed storage location. An engineering evaluation for the feed storage area is awaiting department approval (R-2021-0249); see Schedules section of the permit for further requirements.	
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	Solid Manure at the Main Site: Sample point 006 is for any solid manure generated by Iron Ridge at the Main Site that are directly land applied and not stored in a waste storage facility. This includes solid sources such as solids separator manure, calf hutch manure, maternity pen bedpack, heifer bedpack, steer manure, feedlots, etc. Representative samples shall be taken for each manure source type.	
009	Solid Manure at Across Road Site: Sample point 009 is for any solid manure generated by Iron Ridge at the Across Road Site, located northwest of the Main Site on the north side of Sunset Drive, that are directly land applied and not stored in a waste storage facility. This includes solid sources such as calf	

Sample Point Designation For Animal Waste		
Sample Point Number	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**	
	hutch manure, maternity pen bedpack, heifer bedpack, steer manure, feedlots, etc. Representative samples shall be taken for each manure source type.	
010	Solid Manure at Down Road Site: Sample point 010 is for any solid manure generated by Iron Ridge at the Down Road Site, located east of the Main Site on the south side of Sunset Drive, 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, feedlots, etc. Representative samples shall be taken for each manure source type.	
013	Solid Manure Removal: Sample point 013 is for any manure solids removed from bottom of liquid waste storage facilities. This includes manure-laden sand solids, manure fiber solids, etc. Representative samples shall be taken from each waste storage facility.	
019	Storm Water Runoff Control System: Sample point 019 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 is 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.	
020	Grain Bins: Sample point 020 is for visual monitoring and inspection of the grain bins located at the Down Road Site. Proper operation and maintenance is required to ensure any spilled feed is immediately addressed to ensure discharges of process wastewater meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
021	WSF 3: Sample point 021 is for solid waste storage facility 3 (WSF 3) located at the Main site. WSF 3 is a concrete stacking pad located north of the former digester. The facility was constructed in 2009. Iron Ridge places bedpack on WSF 3 when unable to land apply.	
022	Former Digester: Sample point 022 is for the former digester currently operating as a waste storage facility at the Main Site. The former digester is a covered concrete storage structure with a MOL of 587,599 gallons located south of WSF 3. It was constructed in 2009 to be used as an anerobic digester and converted to waste storage in 2020. This storage acts as a transfer pit between WSF 1 and the solids separator system.	

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 submitted to the Department for approval.
The permittee currently has approximately 239 days of total waste storage. The permittee must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

Solid Manure Stacking

The operation has proposed to stack solid manure. All stacking of solid manure shall be done in accordance ch. NR 243, Wis. Adm. Code, which includes restrictions from NRCS Standard 313. Stacking of manure is considered to be part of the production area and is subject to the Production Area Discharge Limitations.

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

With 900 animal units (490 milking/dry cows, 300 heifers, 100 steer, 30 calves), it is estimated that approximately 7.5 million gallons of manure and process wastewater will be produced per year. The permittee owns *approximately* 542 acres of cropland and rents about 1,516 acres. Given the rotation commonly used by the permittee, 2,048 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 or 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 (>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, and 022- Former Digester

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 022 was added in the case that Iron Ridge Dairy needs to pump manure directly out of the digester tank.

1.1.2 Explanation of Operation and Management Requirements

Liquid manure and process wastewater is required to be sampled twice per calendar month that land application occurs. Samples are to be analyzed for the parameters listed in the table above. Land application shall occur in accordance to the operation's monitoring and inspection program. Inspection findings shall be submitted to the department annually on January 31.

1.2 Sample Point Number: 003- Feed Area & Runoff Controls; 019- Storm Water Runoff Controls; 020- Grain Bins

1.2.1 Changes from Previous Permit

Sample points 007, 014, 015, 016, 017, 018 were removed from the permit due to operation abandonment of the calf hutch outdoor lots/feedlots 1, 2, 3, 4, 5. Sample point 003 was updated to include the leachate collection system installed in 2023.

1.2.2 Explanation of Operation and Management Requirements

Runoff control systems are required to be inspected in accordance with the operation's monitoring and inspection program. Results shall be submitted to the department annually on January 31.

1.3 Sample Point Number: 005- Headland Stacking Sites; 006- Solid Manure Main Site; 009- Solid Manure Across Road Site; 010- Solid Manure Down Road Site; 013- Solid Manure Removal, and 021- WSF 3

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	

1.3.1 Changes from Previous Permit

Sample point 004 was omitted and replaced by sample point 006. Sample point 006 was updated to include solids from the solid separator system.

1.3.2 Explanation of Operation and Management Requirements

Solid manure is required to be sampled once per quarter that land application occurs. Samples are to be analyzed for the parameters listed in the table above. Land application shall occur in accordance with the operation's approved nutrient management plan. Solid manure storage structures shall be inspected according to the operation's monitoring and inspection program. Inspection findings shall be submitted to the department annually on January 31.

2 Schedules

2.1 Emergency Response Plan

Required Action	Due Date
Develop Emergency Response Plan: Update the written Emergency Response Plan within 90 days of permit coverage and submit to the Department upon request.	10/01/2025

2.2 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 90 days of the effective date of this permit.	10/01/2025

2.3 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	01/31/2026
Submit Annual Report #2: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E	01/31/2027
Submit Annual Report #3: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E	01/31/2028
Submit Annual Report #4: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E	01/31/2029
Submit Annual Report #5: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E	01/31/2030
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

2.4 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.	

2.5 Feed Storage - Engineering Evaluation

This schedule item pertains to FSA 1 (Sample point 003). An evaluation has been submitted and is awaiting department approval (R-2021-0249).

Required Action	Due Date
Retain Qualified Expert: The permittee shall retain a qualified expert to complete an engineering evaluation for the feed storage area and report the name of the expert to the Department.	07/01/2025
Written Description of Existing System: Submit an engineering evaluation that includes a written description of the existing feed storage area and its adequacy to meet the conditions found in the Production Area Discharge Limitations subsection and NR 243.15, Wis. Adm. Code.	07/01/2025
Plans and Specifications: If the engineering evaluation identifies any adverse conditions; submit plans and specifications to DNR to remedy those adverse conditions within 90 days of DNR's response to the complete evaluation. Submit plans and specifications for Department review and approval in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	
Corrections and Post Construction Documentation: Complete construction of the DNR-approved plans and specifications within one year of their approval by DNR. Submit post construction documentation within 60 days of completion of the project.	

2.6 Manure Storage Facility - Engineering Evaluation (WSF 1 &2)

This schedule item pertains to WSF 1 & WSF 2 (sample point 001 & 002). An engineering evaluation has been submitted and is awaiting department review (R-2022-0207).

Required Action	Due Date

Retain Expert: Retain a qualified expert to complete an engineering evaluation for WSF 1 & WSF 2 and report the name of the expert to the Department.	07/01/2025
Written Report: Submit a written report evaluating the existing manure storage facility's ability to meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	07/01/2025
Plans and Specifications: If the engineering evaluation identifies any adverse conditions; submit plans and specifications to DNR to remedy those adverse conditions within 90 days of DNR's response to the complete evaluation. Submit plans and specifications for Department review and approval in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	
Corrections and Post Construction Documentation: Complete construction of the DNR-approved plans and specifications within one year of their approval by DNR. Submit post construction documentation within 60 days of completion of the project.	

2.7 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	12/30/2029

2.8 Explanation of Schedules

The following schedule items are standard permit requirements to monitor and fulfill requirements of discharge limitations, and ensure compliance with s. NR243, Wis. Admin. Code, Requirements: Emergency Response Plan, Monitoring and Inspection Program, Annual Reports, Nutrient Management Plan, Submit Permit Reissuance Application. Schedules for the following items have been incorporated into the permit to comply with s. NR 243 WPDES permit conditions:

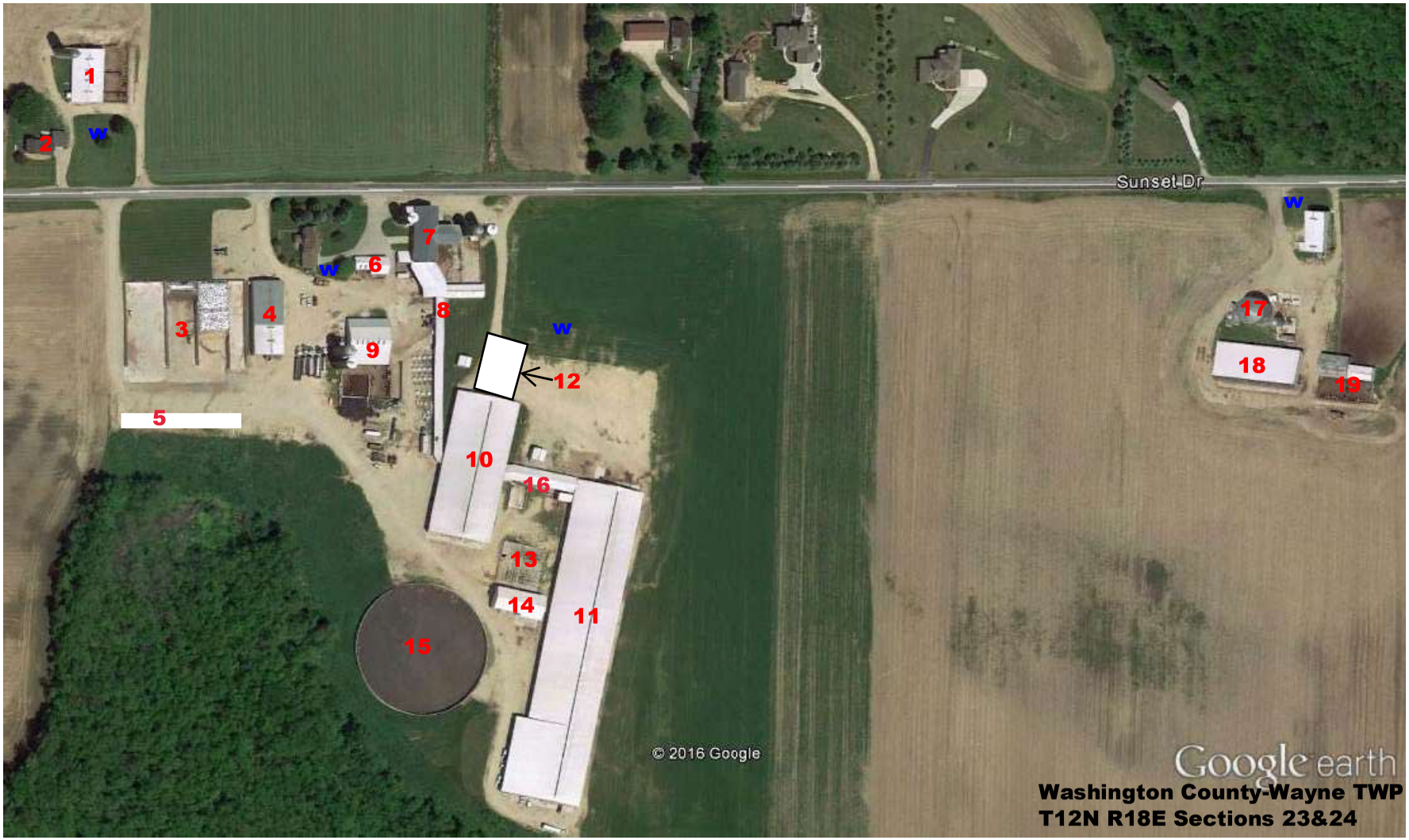
Sections 2.5 & 2.6- Feed Storage and Manure Storage (WSF 1 &2) Engineering Evaluations:
The department received engineering evaluations for the feed storage area (sample point 003) and waste storage facilities 1 and 2 (sample points 001 & 002). Pending department approval of the evaluations additional plans or plan corrections may be required within 90 days of department response.

Attachments

Farm overview and sample point map
Evaluation Review for Days of Storage Approval Letter
5-year NMP Conditional Approval Letter
Return to Compliance Letters
Public Notice

Prepared By: Jean Weaver Agricultural Runoff Management Specialist Date: 4/18/2025

Iron Ridge Dairy, LLC – Site Map



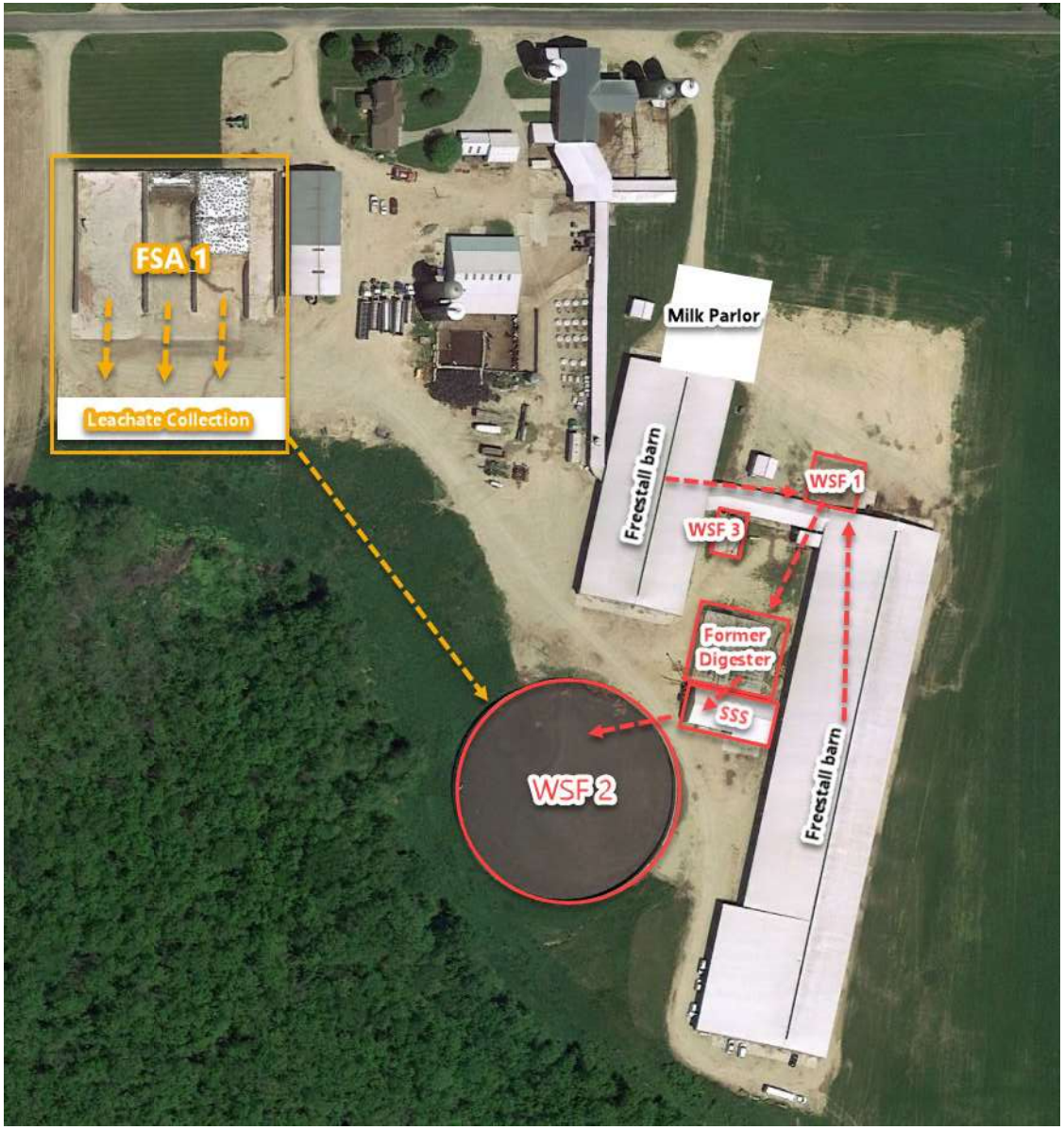
Legend

w=Well

1-Calf Barn-yard not used
2-Residence
3-Feed Bunkers
4-Shop
5-Feed Pad Runoff Collection
6-Shed
7-Old Milking Center
8-Unused Breezeway
9-Loose Housing-yard not used

10-Freestall Barn
11-Freestall Barn
12-Milking Center
13-Anaerobic Digestor-004
14-Solid Seperation Bldg
15-Pipping Tank-002
16-Below Grade Tank-001

17-Grain Bins
18-Heifer Barn-loose housing
19-Heifer Barn-loose housing-yard not used



*Arrows represent waste flow

*SSS = Solid separator system


Across Road Site
Iron Ridge Dairy, LLC
Sample Points
Main Site
Down Road Site
003
001
021
022
002
020

Sample Points – Main Site

- 001 WSF 1
- 002 WSF 2
- 003 Feed Storage Area & Runoff Controls
- 006 Solid Manure at Main Site
- 021 WSF 3- Solids
- 022 Former Digester

Sample Points – Facility Wide

- 005 Headland Stacking Sites
- 013 Solid Manure Removal
- 019 Storm Water Runoff Control System

Sample Points – Across Road Site

- 009 Solid Manure at Across Road Site

Sample Points – Down Road Site

- 010 Solid Manure at Down Road Site
- 020 Grain Bins

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Tony Evers, Governor

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WISCONSIN DEPT. OF NATURAL RESOURCES

July 31, 2024

FILE REF: R-2024-0088
WPDES Permit #: WI-0064700

Shaun Volm
Iron Ridge Dairy
5385 Sunset Drive
Kewaskum, WI 53040

Subject: Days of Storage Review for Iron Ridge Dairy in T12N, R18E, Section 23, Wayne Township, Washington County – NO ADDITIONAL ACTION REQUIRED

Dear Mr. Volm:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has completed its review of the calculation of days of storage submitted by Emily Micolichek, P.E., Miller Engineers & Scientists on February 29, 2024 on behalf of Iron Ridge Dairy.

The Department reviewed the submitted calculations in accordance with ss. NR 243.14(9) and NR 243.15(3)(i) to (k), Wis. Adm. Code. Under s. NR 243.17(3)(c), Wis. Adm. Code, the permittee shall demonstrate compliance with the 180-day design storage capacity requirement at specified times. For the following liquid manure storage calculations, the Department has determined **no additional actions** on your part are required.

Days of Available Liquid Waste Storage: The submitted information states that Iron Ridge Dairy currently has 252 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 current number of animal units provided for the calculation is 900. The farm is planning to expand to 1,005 animal units over the next permit term which will bring the liquid waste storage down to 226 days. Both existing and proposed volumes are provided below. However, because two of the waste storage ponds (WSF1 and WSF2) currently have evaluations that have been submitted and not yet reviewed, the number of days of storage may actually be less, in accordance with s. NR 243.15(3). The number of days of storage will be confirmed once the evaluations for the waste storages have been reviewed and require no further actions. The liquid waste volumes are based on the NRCS spreadsheet and other estimated or calculated values for a collection period of 365 days. The facility has full collection of leachate and contaminated runoff from the feed storage areas for the 25-yr, 24-hr storm event.

Existing Conditions (900 AU) – 252 Days of Storage

Waste Storage	Total Volume	Solids Storage	25-yr, 24-hr Precipitation on Storage	25-yr, 24-hr Collected Runoff	Freeboard Volume	Max. Operating Level (MOL) Volume
#1	636,233	53,019	6,846	0	53,019	523,349
#2	5,411,451	676,775	133,381	178,797	338,388	4,084,110
#4	671,534	41,967	0 (Roof)	0	41,967	587,600
					Total MOL Volume:	5,195,059
					Days of Storage:	**252**

Manure and Bedding:	4,656,356 gallons
Parlor Wastewater:	1,020,225 gallons
Total Feed Storage Leachate:	22,440 gallons
Total Feed Storage Runoff Collected:	1,204,576 gallons
Net Precipitation on Storage Surfaces:	601,863 gallons
Stacking Pad Runoff Collected:	23,079 gallons
Total Liquid Waste Stored Below the MOL:	**7,528,539 gallons**

Proposed Conditions (1,005 AU) – 226 Days of Storage

Waste Storage	Total Volume	Solids Storage	25-yr, 24-hr Precipitation on Storage	25-yr, 24-hr Collected Runoff	Freeboard Volume	Max. Operating Level (MOL) Volume
#1	636,233	53,019	6,846	0	53,019	523,349
#2	5,411,451	676,775	133,381	178,797	338,388	4,084,110
#4	671,534	41,967	0 (Roof)	0	41,967	587,600
					Total MOL Volume:	5,195,059
					Days of Storage:	**226**

Manure and Bedding:	5,293,175 gallons
Parlor Wastewater:	1,238,063 gallons
Total Feed Storage Leachate:	22,440 gallons
Total Feed Storage Runoff Collected:	1,204,576 gallons
Net Precipitation on Storage Surfaces:	601,863 gallons
Stacking Pad Runoff Collected:	23,079 gallons
Total Liquid Waste Stored Below the MOL:	**8,383,196 gallons**

Should you have any questions, please contact Rob Davis, DNR Madison office or your regional CAFO Specialist.

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

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

Rob Davis, P.E.
Water Resources Engineer
Watershed Management Program

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July 31, 2024

Shaun Volm
Iron Ridge Dairy
5385 Sunset Dr
Kewaskum, WI 53040

SUBJECT: Conditional Approval of IRON RIDGE DAIRY Nutrient Management Plan
WPDES Permit No. 0059439-05-0

Dear Shaun Volm:

After completing a review of IRON RIDGE DAIRY 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 IRON RIDGE DAIRY 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. Specifically, some fields in Iron Ridge Dairy may have:

- Soils that may have bedrock or groundwater within 24 inches of surface,
- Multiple setback areas due to streams, conduits to streams, grassed waterways, wetlands or wells, and
- Evidence of possible soil erosion/flow channels. Note: road ditches or other man-made channels may be considered flow channels or conduits to navigable water and may be subject to a SWQMA and setback.

Reviewing the NMP and checking fields for these features and soil conditions prior to manure applications will help Iron Ridge Dairy maintain compliance with their WPDES permit and Ch. NR 243 requirements.

FINDINGS OF FACT

The Department confirms that:

1. A current dairy herd size of 900 animal units (350 milking & dry cows, 450 heifers, and 100 steers). A planned herd size of 1005 animal units (425 milking & dry cows, 450 heifers, and 100 steers) by 2028.
2. Manure generation and spreading records indicate your herd will annually generate approximately 7,528,539 gallons of manure and process wastewater and 1031 tons of solid manure in the first year of the permit term, and 8,383,196 gallons of manure and process wastewater and 1031 tons of solid manure after the full expansion.
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 Iron Ridge Dairy currently has 2057.7 acres (542.2 owned and 1515.5 controlled through contracts, rental agreements or leases, or under manure agreements) of which 2048.3 are spreadable acres. Currently 164.9 acres are prohibited from manure applications until adequate soil samples can be taken.
6. That some fields included in the NMP are directly adjacent to or have high potential to deliver nutrients and sediment to: Kohlsville River (Total Phosphorus), Wayne Creek (Total Phosphorus), West Branch Milwaukee River (Total Phosphorus), Unnamed #5513721 (Total Phosphorus).
7. That no fields are directly adjacent to or have high potential to deliver nutrients and sediment to outstanding/exceptional waters.
8. That the following fields included in the NMP are located within the well head protection area for the Village of Kewaskum: 4, 5, 69, 89, 90, 91, 92, 93, 94, 95.
9. That 11 fields have drainage tile:
    - BV1
    - BV2
    - DD1
    - DD2
    - HN18
    - HW04
    - K10-11
    - LP1
    - ME1-2
    - MW1-2
    - S4
10. 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.
11. 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 2024-2029 Iron Ridge Dairy 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 #
D Miske	NEWBURG VILLAGE	27-4	33061
D Miske	NEWBURG VILLAGE	27-5	19165
D Miske	NEWBURG VILLAGE	27-6	19168
D Miske	EDEN WASTEWATER TREATMENT FACILITY	37-1	69487
D Miske	EDEN WASTEWATER TREATMENT FACILITY	37-2	19189
D Miske	EDEN WASTEWATER TREATMENT FACILITY	37-3	19191
DM Corner	SLINGER WASTEWATER TREATMENT FACILITY	27-7	19171
DM Corner	SLINGER WASTEWATER TREATMENT FACILITY	27-8	19172
V1	SUSSEX WASTEWATER TREATMENT FACILITY	28-11	38710
V1	SUSSEX WASTEWATER TREATMENT FACILITY	28-12	38712
V1	SUSSEX WASTEWATER TREATMENT FACILITY	28-13	38713
V1	SUSSEX WASTEWATER TREATMENT FACILITY	28-14	38714
V1	SUSSEX WASTEWATER TREATMENT FACILITY	28-25	38723

Prior to any manure applications on these fields Iron Ridge Dairy 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 Iron Ridge Dairy 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: Iron Ridge Dairy is responsible for obtaining nutrient content values for all other wastes spread on any field in their NMP.

3. The following fields are prohibited from receiving applications of manure or process wastewater due to the use of a "default" value for planning purposes:
   - DL6
   - DL7
   - HN8
   - MAR1
   - SP01
   - T2

   If Iron Ridge Dairy wishes to use these fields for applications of manure or process wastewater all necessary information shall be submitted to the Department prior to application to demonstrate compliance with NR 243 and other applicable codes. Written Department approval amending this condition approval must be received prior to application.

4. 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.

5. All liquid manure samples collected may be analyzed, at a minimum, for percent dry matter, total nitrogen, percent NH_4-N, percent NO_3-N, phosphorus, potassium, and sulfur.

6. If manure sample results have a dry matter (DM) content less than 2.0% and the percent ammonium (NH_4^+) is greater than 75% of the total N, Iron Ridge Dairy may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

$$\text{First-Year Available N} = NH_4\text{-N} + [0.25 \times (\text{Total N} - NH_4\text{-N})]$$

7. Iron Ridge Dairy shall record daily manure applications by submitting the SnapPlus Daily Log (CNM3) reports.
8. Iron Ridge Dairy shall annually submit a spreading report that summarizes the land application activities listed under NR 243.19(3)(c)5., Wis. Adm. Code by submitting the SnapPlus Annual Spreading (CNM1) reports.

WINTER SPREADING

9. Liquid manure applications during winter conditions, as defined by NR 243.14(7), Wis. Adm. Code, are prohibited with the exception of emergency applications.

10. The following field(s) are approved[1] for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure:
    - BB1-4
    - D Miske
    - DD2
    - DM Corner
    - DP1-10
    - HN9-JH East
    - HN10-17
    - HN18
    - HN19
    - HW04
    - HW1-2
    - JH1

[1] Ensure that the processes to verify depth to water table in the narrative are followed for all W soils, or exclude these areas from manure applications.

- JH2
- M1-4
- MW1-2
- Ramthum
- Terlinden Home 1-4
- Terlinden Home 7
- TS11

11. The following field(s) are denied for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure due to insufficient spreadable acres:
    - DD1
    - HN1-2
    - HN6

12. 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.

13. Winter applications of liquid manure shall only occur under emergency situations, after notifying the Department and receiving verbal approval.

14. 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

15. The following sites are approved for non-winter and winter headland stacking: HN18 Site #1, HW04 Site #1.

    Manure analysis information provided shows that the manure sources that will be stacked are likely to have a solids/dry matter content of 16-32 percent. All headland stacking sites shall comply with the requirements set forth in NR 243.141, as well as the requirements summarized in NRCS 313-14 (2005), Table 9:
    - Stack must be 15,000 cubic feet or less.
    - Stack must reside on land with a down gradient slope of no greater than 3%.
    - Stack must meet required subsurface separation distances of: 3 feet or less to saturation, and 5 feet or less to bedrock.

MANURE & PROCESS WASTEWATER IRRIGATION

16. Irrigation of manure or process wastewater is prohibited.

NR243.143/151.075 SILURIAN BEDROCK PERFORMANCE STANDARDS

17. Manure generated by Iron Ridge Dairy 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. Any fields not on this list that are identified as <20ft to Silurian bedrock must abide by the same rules:
    - DL6
    - DL7
    - HW1-2

SUBMITAL AND RECORDKEEPING REQUIREMENTS

18. 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.

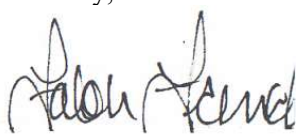
This conditional approval does not limit the Department's regulatory authority to require NMP revisions (based upon new information or manure irrigation research findings) or request additional information in order to confirm or ensure your farm operation remains in compliance with NR 243 and your WPDES 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 locate 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: Kate Markiewicz, WDNR Agricultural Runoff Specialist (kate.markiewicz@wisconsin.gov)
Michelle Scott, WDNR Watershed Field Supervisor (michelle.scott@wisconsin.gov)
Christopher Clayton, WDNR Runoff Management Section Chief (christopherr.clayton@wisconsin.gov)
Aaron O'Rourke, WDNR Nutrient Management Program Coordinator (Aaron.Orourke@Wisconsin.gov)
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Kevin Beckard, AgSource Laboratories (kevin.beckard@agsource.com)
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Tony Evers , Governor

State Customer Service # 888-936-7463

February 21, 2024

Shaun Volm
Terrance Volm
5385 Sunset Drive
Kewaskum, WI 53040

WPDES Permit No. WI-0064700-02-0
Washington County

SUBJECT: Return to Compliance – Failure to Adhere to Permit Schedule

Dear Shaun:

On January 13, 2020, the Department of Natural Resources issued Terrance Volm a notice of noncompliance for failing to adhere to the permit schedule section of permit No. WI-0064700-02-0. The following permit requirements have been satisfied:

Permit Section -2.7 Feedlot 1 Runoff Controls- Complete Engineering Evaluations of Existing System
Permit Section -2.8 Feedlot 2 Runoff Controls- Complete Engineering Evaluations of Existing System

- Photographs submitted to the department on October 5, 2021 showing feedlot areas 1 & 2 abandonment.

Permit Section 2.9-Manure Storage Facility 1- Complete Engineering Evaluations of Existing System
Permit Section 2.10-Manure Storage Facility 2 - Complete Engineering Evaluations of Existing System

- Evaluations for waste storage facility 1 & 2 submitted to the department on September 2, 2022.

Permit Section 2.11-Feed Storage- Complete Engineering Evaluations of Existing System

- Post construction documentation submitted to the department on January 1, 2024.

If you have any questions regarding this letter or your WPDES permit requirements, please contact me at (920)400-7014 or Danielle.block@wisconsin.gov

Sincerely,

Danielle Block
Agriculture Runoff Specialist

Cc: Michelle Scott, Victoria Ziegler- WDNR
Paul Sebo- Washington County
Andy Dexheimmer- Miller Engineering

State of Wisconsin
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3/12/2025

Shaun Volm
Director of Operations
Iron Ridge Dairy LLC
5385 Sunset Drive
Kewaskum, WI 53081

WPDES Permit #: WI-0064700-02-0
Washington County

SUBJECT: **Return to Compliance- Unapproved Feed Stacking**
Iron Ridge Dairy LLC, Down Road/Eastern Site

Dear Mr. Volm:

On December 5, 2024, the Department of Natural Resources issued Iron Ridge Dairy LLC a Notice of Noncompliance (NON) for failing to adhere to the Non-Permanent Feed Storage Area section of Permit No. WI-0064700-02-0. The following permit requirements have been satisfied:

Permit Section 1.2.1 Non-Permanent Feed Storage Areas

- Feed stacks removed from unapproved stacking area and photographs of the area submitted to the department on March 11, 2025.

Due to the actions taken by Iron Ridge Dairy, LLC, no further enforcement action related to the NON is required by the department at this time. However, please be advised that the department reserves the right to reconsider its decision if violations occur in the future.

If you have any questions regarding this letter or the enforcement process, please contact me at 920-400-7014.

Sincerely,

Jean Weaver
Agricultural Runoff Management Specialist

ec: Kevin Beckard, AgSource
Michelle Scott, DNR

Attachment: Unapproved Feed stack area photograph dated 3/11/2025

Photo submitted by Shaun Volm 3/11/2025 via email. Unapproved feed stacking area located at down road/eastern site south of heifer barn facing west.