

# Permit Fact Sheet

## General Information

Permit Number	WI-0063827-04-0
Permittee Name	Drake Dairy Inc
Address	N8870 Drake Court, Elkhart Lake, 53020; Sheboygan County, WI
Permit Term	March 01, 2025 to February 28, 2030
Discharge Location	Unnamed tributaries within the Sheboygan River-Frontal Lake Michigan Watershed and groundwaters of the state.

Animal Units					
	Current AU		Proposed AU (Note: If all zeroes, expansions are not expected during permit term)		
	Mixed	Individual	Mixed	Individual	Date of Proposed Expansion
Milking and Dry Cows	4200	4290	0	0	N/A
Heifers (800 lbs. to 1200 lbs.)	550	500	0	0	N/A
Total	4750	4290	0	0	N/A

## Facility Description

Drake Dairy Inc. is an existing Concentrated Animal Feeding Operation (CAFO) located in the Township of Russell in Sheboygan County. Drake Dairy Inc. is owned and operated by Jim Drake, Brian Drake and Omar Guerrero. The current herd size is 4,750 animal units (3,000 milking/dry cows, 500 heifers). Currently there are no planned expansions in the next permit term.

Drake Dairy Inc. generates 37.9 million gallons of manure and process wastewater. With the recent construction of waste storage facilities WSF 3 and WSF 4, total usable liquid storage capacity is approximately 21 million gallons, or the capacity for approximately 206 days of storage. Drake Dairy Inc. currently owns and rents approximately 5588 acres of cropland, of which 5,516 acres are available for manure application.

## Substantial Compliance Determination

**Enforcement During Last Permit:** A notice of noncompliance (NON) was sent on July 17, 2024 in response to waste petroleum placed into Waste Storage Facility 3 (WSF 3) to reduce foaming. The facility moving forward must dispose of their waste petroleum products in an appropriate fashion in accordance with NR243.17(2)(c).

After a desk top review of all discharge monitoring reports, land app reports, compliance schedule items, permit application materials, and a site visit on April 23, 2024, this facility has been found to be in substantial compliance with their current permit.

**Compliance determination made by Kate Markiewicz, permit drafter on 12/10/2024.**

<b>Sample Point Designation For Animal Waste</b>		
<b>Sample Point Number</b>	<b>Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)</b>	
001	WSF 2 (South/Middle Pit) - Sample point 001 is for the liquid waste storage facility located at the Main Site. WSF 2 is a liquid-tight concrete lined storage located west of the freestall barns. This sample point is the middle lagoon. The facility has a capacity of 4.6 million gallons and was built in 2008. This storage accepts manure and process wastewater from WSF 1 (Far South Pit).	
002	WSF 3 (North Pit) - Sample point 002 is for the liquid waste storage facility located at the Main Site. WSF 3 is a liquid-tight concrete lined storage located west of the freestall barns. This sample point is the northern lagoon. The facility has a capacity of 7.5 million gallons and was built in 2010. This storage accepts manure and process wastewater from WSF 2 (South/Middle Pit).	
003	Feed Storage & Runoff Controls - Sample point 003 is for visual monitoring and inspection of the feed storage area and associated runoff control system at the Main site. Proper operation and maintenance is required to ensure discharges of process wastewater to waters of the state do not occur. Weekly inspections are required and shall be recorded according to the monitoring program.	
004	General 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 Solid Manure - 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 to waters of the state do not occur.	
006	Storm Water Runoff Controls - Sample point 006 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 waste water handling systems. Weekly inspections are required and shall be recorded according to the monitoring program.	
009	WSF 1 (Far South Pit) - Sample point 009 is for liquid waste storage facility 1 (WSF 1) located at the Main Site. WSF 1 is a concrete lined storage located south of WSF 2. The facility has a (MOL) capacity of 10.7 million gallons and was constructed in the fall of 2021. This storage accepts manure and process wastewater from the freestall barns and milking center via a waste transfer system. WSF 1 was reviewed and approved by the department in 2023.	
010	WSF 1 Solids - Sample point 010 is for solids stacked on waste storage facility 1 (WSF 1 Solids). WSF 1 solid stacking area is located at the Main Site. WSF 1 Solids is a concrete storage located west of the WSF 1 liquid manure pit. The facility has a capacity of 800 tons and was constructed in the fall of 2021. This storage accepts solid manure from the production area. All runoff from WSF 1 Solids flows directly into WSF 1. WSF 1 was reviewed and approved by the department in 2023.	
011	WSF FSA - Sample point 011 is for the liquid waste storage facility located at the Main Site. WSF FSA is a clay lined storage located southwest of the feed storage area (FSA). The facility has a capacity of 975,000 gallons and was built in 2010. This storage accepts runoff and leachate from the feed storage area.	

Sample Point Designation For Animal Waste	
Sample Point Number	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
	WSF FSA will require an engineering evaluation, see Schedules section for due dates.

# 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 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 6.7 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

With 4,750 animal units (3,000 milking/dry cows, 500 heifers), it is estimated that approximately 37.9 million gallons of manure and process wastewater will be produced per year. The permittee owns *approximately* 1,342 acres of cropland and rents about 4,246 acres. Given the rotation commonly used by the permittee, 5,516 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. Beginning March 1, 2025, 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 2 (South/Middle Pit); 002- WSF 3 (North Pit); 009- WSF 1 (Far South Pit), and 011- WSF FSA

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

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
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 points 001, 002, and 009 were renamed and updated post-construction for a more accurate description.

### 1.1.2 Explanation of Operation and Management Requirements

Wastes shall be stored, and land applied according to permit and nutrient management requirements.

## 1.2 Sample Point Number: 003- Feed Storage & Runoff Controls; 006- Storm Water Runoff Controls

### 1.2.1 Changes from Previous Permit

N/A

### 1.2.2 Explanation of Operation and Management Requirements

There is no required sampling for the runoff controls. Rather, there is required inspection and routine maintenance that should be recorded on a monitoring and inspection form or calendar. A copy of the inspection records shall be submitted with the Annual Report.

## 1.3 Sample Point Number: 004- General Solid Manure; 005- Headland Stacking Solid Manure, and 010- WSF 1 Solids

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 for WSF 4 was combined with WSF 3 (Solids) for more accurate description.

### 1.3.2 Explanation of Operation and Management Requirements

Wastes shall be stored, and land applied according to permit and nutrient management requirements.

## 2 Schedules

### 2.1 Monitoring & Inspection Program

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.	06/01/2025

### 2.2 Emergency Response Plan

Required Action	Due Date
Develop Emergency Response Plan: Develop a written Emergency Response Plan within 30 days of permit coverage, available to the Department upon request.	04/01/2025

### 2.3 Nutrient Management Plan

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).	
Management Plan Annual Update #1: Submit an Annual Update to the Nutrient Management Plan by March 31st of each year. Note: In addition to Annual Updates, submit Management Plan Amendments to the Department for written approval prior to implementation of any changes to nutrient management practices, in accordance with the Nutrient Management requirements in the Livestock Operational and Sampling Requirements section.	03/31/2025
Management Plan Annual Update #2: Submit an Annual Update to the Nutrient Management Plan.	03/31/2026
Management Plan Annual Update #3: Submit an Annual Update to the Nutrient Management Plan.	03/31/2027
Management Plan Annual Update #4: Submit an Annual Update to the Nutrient Management Plan.	03/31/2028
Management Plan Annual Update #5: Submit an Annual Update to the Nutrient Management Plan.	03/31/2029
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

### 2.4 Annual Reports

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

<b>Required Action</b>	<b>Due Date</b>
Submit Annual Report #1:	01/31/2026
Submit Annual Report #2:	01/31/2027
Submit Annual Report #3:	01/31/2028
Submit Annual Report #4:	01/31/2029
Submit Annual Report #5:	01/31/2030
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

## 2.5 Feed Storage - Engineering Evaluation

Regarding runoff controls and modifications made to the waste storage facility's ability to meet permit discharge limitations.

<b>Required Action</b>	<b>Due Date</b>
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.	06/01/2025
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.	06/01/2026
Plans and Specifications: Submit plans and specifications for Department review and approval to permanently correct any adverse conditions identified as part of the engineering evaluation for the feed storage area in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	06/01/2027
Corrections and Post Construction Documentation: Complete construction of improvements to permanently correct any adverse conditions in concurrence with and approval by the Department, by the specified Date Due. Submit post construction documentation within 60 days of completion of the project.	06/01/2030

## 2.6 Submit Permit Reissuance Application

<b>Required Action</b>	<b>Due Date</b>
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	09/01/2029

## 2.7 Explanation of Schedules

Schedules are included in the permit to ensure compliance with s. NR 243, Wis. Admin. Code, requirements. Schedules for the following items have been incorporated into the permit:

The schedules contained in 2.1, 2.2, 2.3, 2.4, and 2.5 are standard permit schedules.

Schedule item 2.5 is for feed storage area runoff controls and modifications made to the connected waste storage facility's ability to meet permit discharge limitations.

## **Other Comments**

N/A

## **Attachments**

Inspection Report with Map(s)

Nutrient Management Plan Approval Letter(s)

Days of Storage Review(s)

Public Notice

## **Justification Of Any Waivers From Permit Application Requirements**

N/A

**Prepared By: Kate Markiewicz**

**Agricultural Runoff Management Specialist**

**Date: 12/10/2024**





July 17, 2024

Jim Drake  
Drake Dairy  
N8870 Drake Court  
Elkhart Lake, WI 53020

Subject: Site Inspection Report for Permit Reissuance

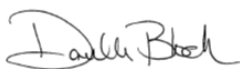
Dear Mr. Drake,

The Department of Natural Resources (department) conducted a compliance site inspection at Drake Dairy Inc on April 23, 2024 as part of the Wisconsin Pollutant Discharge Elimination System (WPDES) permit reissuance process. A site inspection report, including photographs with an accompanying narrative is attached. Review the following action items based on observations made during the inspection:

1. An evaluation of the feed storage area runoff control system will be placed in the next permit (re: weir closure and 2015 feed pad expansion).
2. Future placement of feed should be entirely placed on the feed pad, with appropriate space left for leachate to drain towards collection system. Review the operation and maintenance plan for system if necessary.
3. Properly dispose of petroleum products (not in WSFs).
4. The Drake's Highland Dairy Site:
  - a. At present, with the information provided to the department, this site doesn't meet the definition of a satellite operation. Submit NMP records to the department (with reissue application) that demonstrates that the Drake Dairy site and the Highland site have separate land base/manure management systems.
  - b. If Drake Dairy Inc. chooses to combine both operations under permit coverage the following will need to be completed:
    - i. A site inspection of Drake's Highland Dairy site (to be completed ASAP- Contact Kate Markiewicz)
    - ii. Evaluations of all reviewable structures will be placed in the permit

If you have any questions regarding the action items, the inspection report, or any WPDES permit requirements, please contact me at (920) 400-7014 or [Danielle.Block@wisconsin.gov](mailto:Danielle.Block@wisconsin.gov).

Sincerely,



Danielle Block  
Agricultural Runoff Management Specialist

Enclosures: inspection report

ecc: Kate Markiewicz and Falon French, DNR  
Amy Drake, Drake Dairy Inc  
Tyler Betry, Sheboygan County

## CAFO Compliance Inspection Report



Inspection Date: April 23, 2024

Inspection Purpose: Permit Reissuance

Operation Name: Drake Dairy Inc

WPDES Permit #: WI-0063827-03-0

Farm Address: N8870 Drake Court, Elkhart Lake, WI 53020

On-Site Representative(s): Brian, Amy and Jim Drake- Owners/Managers

DNR Staff: Danielle Block (report author) and Kate Markiewicz

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Aerial Maps:



## **Waste Storage Facilities**

Solid and liquid waste storage facilities are managed to not have current or past indicators of discharges.

Solid and liquid waste storage structures are well-maintained, in good repair. Liquid waste storage facilities have permanent markers installed. The permanent markers are located on the south wall of WSF3.

Area of concern:

During the inspection it was observed that waste petroleum products had been placed of the WSF3. Black staining was observed on the concrete side walls. Drake representatives said that this practice was done to help reduce foaming.



Photo 1 -WSF1. Photo taken facing north.



Photo 2- Solid manure stacking area west of WSF1.  
Photo taken facing north.





Photo 3 (left)- WSF2.  
Photo taken facing



Photo 4 (right)- WSF3, black on  
side wall where petroleum product  
was placed. Photo taken facing  
northeast.



## **Feed Storage Area Runoff**

The feed storage area and runoff control system are well-maintained; no evidence of discharge was observed. All FSA runoff is transferred to an earthen leachate basin.

Areas of concern:

-The basin was originally designed with an overflow weir; this weir was closed during the last permit term to prevent a potential of overflow. This modification is considered a temporary solution and will need further engineering/review to ensure the basin's integrity.

-In 2015 the feed pad was expanded in size (DNR approval R-2015-0160); part of this approval included modifications to the existing the runoff collection system. To date the modifications have not been completed.

-Feed placed to close to/over the feed pad edge.



Photo 5 - Northern portion of the feed pad. Photo taken facing south.



Photo 6- Northern portion of the feed pad. Photo taken facing west.





Photo 7-West edge of feed pad, facing north.  
Feed placed over/off concrete feed pad area.  
Photo taken facing north.



Photo 8 - Feed storage area runoff control  
conveyance. Photo taken facing east.





Photo 9- Feed storage area runoff control conveyance and inlet. Photo taken facing south.



Photo 10- Feed storage area runoff control basin. Photo taken facing northeast.



Photo 11- Feed storage area runoff control basin. Photo taken facing northeast.



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

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

### **Animal Mortality Disposal**

Animal mortalities are managed to not have current or past indicators of discharges. Mortalities are collected by Sandy Bay.

### **Ancillary Service Areas**

Preventative maintenance actions and visual inspections are occurring to minimize pollutant discharges from ancillary service and storage areas.



Photo 12- Ancillary area between barns.  
Photo taken facing north.

### **Other**

On January 23, 2024, Drake Dairy Inc. purchased a neighboring dairy farm located at N9631 Sexton Road, Elkhart Lake, this farm is called Drake's Highland Dairy. The purchase included the milking facility, barns, and cattle. According to discussions had with facility representatives during this inspection, the landbase/NMP for the Highland Site (new site) are managed separately from the Drake Dairy site. The distance between the two site is approximately 3.2 miles. Feed is shared between operations and manure is not transferred between sites.



October 30<sup>th</sup>, 2024

Sheboygan County  
Approval

James Drake  
Drake Dairy Inc  
N8870 Drake Court  
Elkhart Lake, WI 53020

SUBJECT: Conditional Approval of Drake Dairy Inc Nutrient Management Plan, WPDES Permit No. 0063827-04-0

Dear James Drake:

After completing a review of Drake Dairy Inc 2024-2028 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 Drake Dairy Inc 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 Drake Dairy Inc 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 Drake Dairy Inc 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 4,750 animal units (3,000 milking & dry cows, 500 heifers). Currently there are no planned expansions in the next permit term.
2. Manure generation and spreading records indicate your herd will annually generate approximately 37,945,946 gallons of manure and process wastewater and 0 tons of solid manure in the first year of the permit term. Approximately 4,000,000 gallons of feed leachate and runoff is collected and managed separately.
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 Drake Dairy Inc currently has 5,588.2 acres (1,342 owned and 4,246 controlled through contracts, rental agreements or leases, or under manure agreements) of which 5,516 are spreadable acres.



PLY 1	PLYMOUTH UTILITIES WWTF	18	B	23512
PLY 1	PLYMOUTH UTILITIES WWTF	18	C	23508

Prior to any manure applications on these fields Drake Dairy Inc 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 Drake Dairy Inc 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: Drake Dairy Inc 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:
- 12 (>200 ppm P)

If Drake Dairy Inc 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<sub>4</sub>-N, percent NO<sub>3</sub>-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<sub>4</sub><sup>+</sup>) is greater than 75% of the total N, Drake Dairy Inc may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

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

7. Drake Dairy Inc shall record daily manure applications by using form 3200-123A. These forms shall be retained at the farm and provided to the department upon request.
8. Drake Dairy Inc 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

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 for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure:
- Bartz 1
  - CJOA-3
  - HAU 2
  - Fen 7
11. 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.

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

14. No headland stacking sites are approved.

#### NR243.143/151.075 SILURIAN BEDROCK PERFORMANCE STANDARDS

15. Manure generated by Drake Dairy Inc 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.

- 1	- Arndts 1	- Arndts 2	- BK 12
- BK 14	- BK 15	- BK 16	- BK 17
- BK 18	- C1	- C3	- D2
- DD-1	- DD-2	- DD-3	- Drake-1
- Drake-2	- Drake-3	- Drake-4	- GIN-C1
- JLD-1	- J-Win-1	- J-Win-2	- J-Win-3
- J-Win-4	- J-Win-5	- J-Win-6	- J-Win-7
- J-Win-8	- J-Win-9	- J-Win-10	- J-Win-11
- LD1	- M1	- MJW-1	- MJW-2
- MJW-3	- MJW-4	- MJW-5	- MJW-6
- NB-1	- PJZ-1	- S1	- S2
- S9	- S15	- S16	- S17
- S18	- S19	- Win-2	- Win-3
- Win-4	- Win-10	- Win-23	- Win-24
- Win-25	- WK 1	- WK 2	- WK 3
- WK 4	- WK 5	- WK 6	- WK 7
- WK 8	- WK 9	- WK 10	-

#### MANURE & PROCESS WASTEWATER IRRIGATION

16. Irrigation of manure or process wastewater is prohibited.

#### SUBMITAL AND RECORDKEEPING REQUIREMENTS

17. 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.

#### COMPLIANCE REMINDERS

18. Please consider reduction of future applications on fields which are growing high in Phosphorus if there are lower testing options. Some fields to monitor in future are: 13, Adams 1, Adams 8, Bartz-1, Bartz-2, Bau 3, C3, DD-3, GH-2, LD1, Win-3.

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 608-212-8460 or [Ashley.Scheel@Wisconsin.gov](mailto:Ashley.Scheel@Wisconsin.gov).

Sincerely,

A handwritten signature in black ink that reads "Ashley Scheel". The signature is written in a cursive, slightly slanted style.

Ashley Scheel, CCA  
WDNR Nutrient Management Plan Reviewer  
Wisconsin Department of Natural Resources

cc:

Kate Markiewicz, WDNR Agricultural Runoff Management Specialist ([Kate.Markiewicz@Wisconsin.gov](mailto:Kate.Markiewicz@Wisconsin.gov))  
Michelle Scott, WDNR Watershed Field Supervisor ([Michelle.Scott@Wisconsin.gov](mailto:Michelle.Scott@Wisconsin.gov))  
Christopher Clayton, WDNR Runoff Management Section Chief ([Christopherr.Clayton@Wisconsin.gov](mailto:Christopherr.Clayton@Wisconsin.gov))  
Aaron O'Rourke, WDNR Nutrient Management Program Coordinator ([Aaron.Orourke@Wisconsin.gov](mailto:Aaron.Orourke@Wisconsin.gov))  
Falon French, WDNR Intake Specialist ([Falon.French@Wisconsin.gov](mailto:Falon.French@Wisconsin.gov))  
Tabby Davis, WDNR CAFO Engineer ([Tabatha.Davis@Wisconsin.gov](mailto:Tabatha.Davis@Wisconsin.gov))  
Katie Hanson, Sheboygan County ([Katie.Hanson@Sheboygancounty.com](mailto:Katie.Hanson@Sheboygancounty.com))  
Justin Loehrke, Fond Du Lac County ([Justin.Loehrke@Fdlco.wi.gov](mailto:Justin.Loehrke@Fdlco.wi.gov))  
Amy Drake, Drake Dairy Inc ([Amy@Drakedairy.com](mailto:Amy@Drakedairy.com))

File



September 24, 2024

FILE REF: R-2024-0230  
 WPDES Permit #: WI-0063827

James Drake  
 Drake Dairy Inc.  
 N8870 Drake Court  
 Elkhart Lake, WI 53020

Subject: Days of Storage Review for Drake Dairy Inc. T16N, R20E, Section 14 in Russell Township, Sheboygan County – NO ADDITIONAL ACTION REQUIRED

Dear James Drake:

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 under certification by Andy Dexheimer, Miller Engineers & Scientists on August 27, 2024 on behalf of Drake Dairy Inc. .

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 Drake Dairy Inc. has 206 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 4750. The liquid waste volumes are based on the NRCS spreadsheet and other estimated or calculated values for a collection period of 365 days. There is full collection of the 25-yr, 24-hr storm event runoff from the feed storage area with the runoff being directed to the leachate pond (Waste Storage Facility 4). The feed storage area runoff is directed to a separate leachate pond and is not stored in Waste Storage Facilities 1, 2, and 3. Runoff from the stacking pad is collected in Waste Storage Facility 3.

Total Liquid Waste Storage Capacity (gallons)						
Waste Storage	Total Vol. from Settled Top to Bottom	-Solids Storage	-25-yr, 24-hr Precip. on Storage	25-yr, 24-hr Collected Runoff	Freeboard Vol.	Max. Operating Level (MOL) Vol.
#1	7,501,698		265,163		662,908	6,573,627
#2	4,561,187		144,753		360,656	4,055,778
#3	11,857,827		309,971	35,239	776,843	10,735,774
Total MOL Vol:						21,365,179
Days of Storage:						<b>206</b>



Total Annual Liquid Waste Volume (NRCS Table Values)	
Liquids Collected/Stored	Annual Gallons
Manure and Bedding	33,702,430
Parlor Wastewater	958,125
Net Precipitation on Storage Surface(s)	3,044,523
Stacking Pad Runoff Collected	240,868
<b>TOTAL:</b>	<b>37,945,946</b>

Should you have any questions, please contact Tabby 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




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




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Tabby Davis  
CAFO Review Engineer  
Watershed Management Program

Email: Amy Drake; Drake Dairy  
amy@drakedairy.com

Andy Dexheimer; Miller Engineers & Scientists  
(920) 458-6164; adexheimer@startwithmiller.com

Tyler Betry; Sheboygan County  
(920) 459-3060; tyler.betry@sheboygancounty.com

Matt Woodrow; DATCP  
(920) 427-8505; matthew.woodrow@wisconsin.gov

Kate Markiewicz; DNR-Southeast Region  
(608) 893-4046; kate.markiewicz@wisconsin.gov

Michelle Scott; DNR-Southeast Region  
(920) 252-0679; Michelle.Scott@wisconsin.gov

Ashley Scheel; DNR, Central Office  
(608) 261-6419; ashley.scheel@wisconsin.gov

Tabatha A Davis; DNR-Central Office  
(608) 712-2324; tabatha.davis@wisconsin.gov



STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

PUBLIC NOTICE OF AVAILABILITY OF A NUTRIENT MANAGEMENT PLAN AND INTENT TO REISSUE A WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM (WPDES) PERMIT No. WI-0063827-04-0

Permittee: Drake Dairy Inc, N8870 Drake Court, Elkhart Lake, WI, 53020

Facility Where Discharge Occurs: Drake Dairy Inc, N8870 Drake Court Elkhart Lake

Receiving Water And Location: Surface water and groundwater within the Sheboygan River-Frontal Lake Michigan Watershed

Brief Facility Description : Drake Dairy Inc is a proposed Concentrated Animal Feeding Operation (CAFO). Drake Dairy Inc is owned and operated by Jim Drake, Brian Drake and Omar Guerrero. It currently has 4,750 animal units (3,000 milking/dry cows and 500 heifers) with no planned expansions during this permit term. It is estimated that approximately 37.9 million gallons of manure and process wastewater will be produced per year. The permittee owns 1,342 acres of cropland and has 4,246 acres controlled through contracts, rental agreements or leases, or under manure agreements. Of this acreage, Drake Dairy Inc has a total of 5,516 acres available for land application of manure and process wastewater.

The Department has tentatively decided that the above specified WPDES permit should be reissued.

Permit Drafter's Name, Address, Phone and Email: Kate Markiewicz, DNR, 1027 W St Paul Ave, Milwaukee, WI, 53233, (608) 893-4046, Kate.Markiewicz@wisconsin.gov

Persons wishing to comment on or object to the proposed permit action, the terms of the nutrient management plan, or the application, or to request a public informational hearing may write to the Department of Natural Resources at the permit drafter's address. All comments or suggestions received no later than 30 days after the publication date of this public notice will be considered along with other information on file in making a final decision regarding the permit. Anyone providing comments in response to this public notice will receive a notification of the Department's final decision when the permit is re-issued. Where designated as a reviewable surface water discharge permit, the U.S. Environmental Protection Agency is allowed up to 90 days to submit comments or objections regarding this permit determination. If no comments are received on the proposed permit from anyone, including U.S. EPA, the permit will be re-issued as proposed.

The Department may schedule a public informational hearing if within 30 days of the public date of this notice, a request for a hearing is filed by any person. The Department shall schedule a public informational hearing if a petition requesting a hearing is received from USEPA or from 5 or more persons or if the Department determines there is significant public interest. Requests for a public informational hearing shall state the following: the name and address of the person(s) requesting the hearing; the interest in the proposed permit of the person(s) requesting the hearing; the reasons for the request; and the issues proposed to be considered at the hearing.

Information on file for this permit action, including the draft permit and fact sheet (if required), the operation's nutrient management plan and application may be inspected and copied at the permit drafter's office, Monday through Friday (except holidays), between 9:00 a.m. and 3:30 p.m. Please call the permit drafter for directions to their office location, if necessary. Information on this permit action may also be obtained by calling the permit drafter at (608) 893-4046 or by writing to the Department. Reasonable costs (15 cents per page for copies and 7 cents per page for scanning) will be charged for information in the file other than the public notice and fact sheet. Permit information is also available on the internet at: <http://dnr.wi.gov/topic/wastewater/PublicNotices.html>. Pursuant to the Americans with Disabilities Act, reasonable accommodation, including the provision of informational material in an alternative format, will be made to qualified individuals upon request.

NAME OF PUBLISHING NEWSPAPER: **Enter Name of Publishing Newspaper**

ADDRESS OF PUBLISHING NEWSPAPER: **Enter Address of Publishing Newspaper**

Date Notice Issued: **Enter Date Notice Issued**