Permit Fact Sheet

General Information

Permit Number	WI-0066222-02-0
Permittee Name:	Highway Dairy Farms LLC
Address:	16639 Highway 23 N, Darlington, WI 53530
Permit Term	March 01, 2025 to February 28, 2030
Discharge Location	16639 Highway 23 N, Darlington, WI 53530
Receiving Water	To unnamed tributaries to the Pecatonica River within the Ames Branch – Pecatonica River Watershed and groundwaters of the state
Discharge Type	Existing

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**
Milking and Dry Cows	1820	1859	0	0	
Heifers (800 lbs. to 1200 lbs.)	99	90	0	0	
Total	1919	1859	0	0	

Facility Description

Highway Dairy Farms, LLC is an existing Concentrated Animal Feeding Operation (CAFO). Highway Dairy Farms, LLC is owned and operated by Jay Stauffacher and Jean Stauffacher. The farm currently has 1,919 animal units (1,300 milking and dry cows, 90 heifers 800-1200lbs.). Highway Dairy Farms, LLC has a total of 3,536.8 acres (1,121.5 owned and 2,415.3 controlled through manure agreements) of which 3,461.1 are spreadable acres. Highway Dairy Farms, LLC has no large expansions planned during the proposed permit term. Approximately 16,792,235 gallons of manure and process wastewater and 104 tons of solid manure is predicted to be generated in the first year of the permit term. The farm has approximately 286 days of liquid manure storage and at least 59 days of solid manure storage.

Highway Dairy Farms, LLC is located at16639 Highway 23 North, Darlington, WI 53530 and is composed of three freestall barns, a dry cow barn, a milking parlor, four waste storage facilities, and a feed storage area with a runoff collection basin. All production areas were inspected the day of the inspection.

Highway Dairy Farms, LLC has submitted an application for reissuance of their Wisconsin Pollutant Discharge Elimination System (WPDES) Permit. The application is complete, and the facility has been determined to be in substantial compliance. This will be the second permit reissuance for this facility. Highway Dairy Farms, LLC has an

approved Nutrient Management Plan (NMP) that is written according to WPDES Permit and Chapter NR 243 Wisc. Admin. Code requirements. Highway Dairy Farms, LLC was also found to have at least 180 days of liquid manure storage.

Substantial Compliance Determination

Enforcement During Last Permit: During the last permit term, Highway Dairy Farms, LLC received a Notice of Noncompliance for allegedly failing to comply with their WPDES permit compliance schedule. The facility has completed all previously required actions as part of the enforcement process.

After a desk top review of all compliance schedule items and pertinent documents, and a site visit on August 25, 2022, this facility has been found to be in substantial compliance with their current permit.

Sample Point Designation For Animal Waste		
Sample Point Number	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**	
001	Sample point 001 is for liquid waste storage facility 1 (WSF 1) located at Highway Dairy Farms. WSF 1 is a liquid-tight concrete storage located north of the freestall barns. WSF 1 is the first-stage lagoon in a three-stage lagoon system. The facility has an approximate capacity of 1,129,377 gallons and was constructed in 2008. This storage accepts manure and process wastewater from the freestall barns and parlor. WSF 1 meets permit requirements.	
002	Sample point 002 is for liquid waste storage facility 2 (WSF 2) located at Highway Dairy Farms. WSF 2 is a clay-lined storage located to the west of WSF 1. WSF 2 is the second-stage lagoon in a three-stage lagoon system. The facility has an approximate capacity of 2,406,437 gallons at the maximum operating level and was constructed in 2008. This storage accepts manure and process wastewater from WSF 1. WSF 2 meets permit requirements.	
003	Sample point 003 is for liquid waste storage facility 3 (WSF 3) located at Highway Dairy Farms. WSF 3 is a liquid-tight concrete storage located to the west of WSF 2. WSF 3 is the third-stage lagoon in a three-stage lagoon system. The facility has an approximate capacity of 9,277,101 gallons at the maximum operating level and was constructed in 2017. This storage accepts manure and process wastewater from WSF 2 and the feed storage runoff controls.	
004	Sample point 004 is for liquid waste storage facility 4 (WSF 4) located at Highway Dairy Farms. WSF 4 is a liquid-tight concrete storage located north of the heifer barn. The facility has an approximate capacity of 362,626 gallons at the maximum operating level and was constructed in 2014. This storage accepts manure and process wastewater from the heifer barn. WSF 4 meets permit requirements.	
005	Sample point 005 is for visual monitoring and inspection of the feed storage area and associated runoff control system located at Highway Dairy Farms. The system is comprised of seven concrete feed bunkers, a reception tank, and transfer piping that directs feed leachate and runoff to WSF 3. 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. The runoff collection basin was constructed in 2019 with department approval.	
006	Sample point 006 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.	

Sample Point Designation For Animal Waste		
Sample Point Number	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**	
007	Sample point 007 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.	
008	Sample point 008 is for visual monitoring and inspection of all production site stormwater conveyance systems. This includes roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated stormwater. 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.	
009	Sample point 009 is for visual monitoring and inspection of the feed bag storage area. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to the monitoring and inspection program. Note: If feed with greater than 40% moisture will be stored outside the approved feed storage area (sample point 005), then Department approval must first be obtained in accordance with Permit Section 1.2.1 (for non-permanent feed storage areas) or Permit Section 3.1.13 (for permanent feed storage areas).	

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 286 days of storage for liquid manure. 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 1,919 animal units (1,300 milking and dry cows, 90 heifers), it is estimated that approximately 16,792,235 gallons of manure and process wastewater and 104 tons of solid manure will be produced per year. The permittee owns *approximately* 1,121.5 acres of cropland and rents about 2,415.3 acres. Given the rotation commonly used by the permittee, 3,461.1 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 permitee 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 1; 002- WSF 2; 003- WSF 3; 004- WSF 4

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 points 001 – WSF 1, 002 – WSF 2, 003 – WSF 3, and 004 – WSF 4 were edited to include a more accurate description of the facilities and current operations.

1.1.2 Explanation of Operation and Management Requirements

Wastes shall be sampled, stored, and land applied according to permit and nutrient management plan requirements per NR 243, Wis. Admin. Code.

1.2 Sample Point Number: 005- Feed Storage Runoff Controls; 008- Stormwater Runoff Controls, and 009- Feed Bag Storage

1.2.1 Changes from Previous Permit

Sample point 005 – Feed Storage Runoff Controls, was edited to include a more accurate description of the facilities and current operations.

Sample Point 008 – Stormwater Runoff Controls was added to account for the monitoring and inspection requirements for stormwater runoff controls located around the production area.

Sample Point 009 – Feed Bag Storage was added to account for the monitoring and inspection requirements for the bagged feed that is stored at the facility.

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: 006- Miscellaneous Solid Manure and 007- Solids from Liquid Storages

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

No Changes

1.3.2 Explanation of Operation and Management Requirements

Wastes shall be sampled, stored, and land applied according to permit and nutrient management plan requirements per NR 243, Wis. Admin. Code.

2 Schedules

2.1 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.	03/31/2025

2.2 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 30 days of the effective date of this permit.	03/31/2025

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 the 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 the 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 the 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 the 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 the 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).	
Management Plan Annual Update #1: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of the department for 3400-025D.	03/31/2025

Management Plan Annual Update #2: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of the department for 3400-025D.	03/31/2026
Management Plan Annual Update #3: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of the department for 3400-025D.	03/31/2027
Management Plan Annual Update #4: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of the department for 3400-025D.	03/31/2028
Management Plan Annual Update #5: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of the department for 3400-025D.	03/31/2029
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

2.5 Submit Permit Reissuance Application

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

2.6 Explanation of Schedules

Schedules are included in the permit to ensure compliance with NR 243, Wis. Admin. Code, requirements. All of the Schedule items are typical for a large dairy facility like this one. The schedules contained in 2.1, 2.2, 2.3, 2.4, and 2.5 are standard permit schedules.

Other Comments

None

Attachments

Inspection report with maps

Nutrient Management Plan Approval

Days of Storage Approval Letter

Public Notice

Justification Of Any Waivers From Permit Application Requirements

N/A

Prepared By: Josie Borgrud Agricultural Runoff Management Specialist **Date: 1/15/2025**

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
1300 W. Clairemont Ave.
Eau Claire WI 54701

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
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October 4, 2022

WPDES Permit No. WI-0066222-01-0

Jay Stauffacher
Highway Dairy Farms LLC
16639 Highway 23 North
Darlington, WI 53530

Subject: August 25, 2022 Reissuance Inspection Report – Response Requested

Dear Mr. Stauffacher:

On August 25, 2022 the Department met with you at your operation, Highway Dairy Farms LLC located at 16639 Highway 23 North, Darlington, Wisconsin, to conduct a full site inspection for permit reissuance. Department observations and a record of our conversation is included in the enclosed report.

A complete permit reissuance application must be submitted through the Department's ePermitting System (https://dnr.wisconsin.gov/permits/water) no later than **December 31, 2022**. A list of materials required for a complete permit application have been provided within the summary section of the enclosed report. The summary section also includes a list of additional action items to be completed. Please refer to the enclosed report for a complete list of required action items and associate deadlines.

Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,

Clare Freix

Clare Freix
Agricultural Runoff Specialist
Phone: (715) 492-4465
Email: Clare.Freix@Wisconsin.gov

Enc: August 25, 2022 Reissuance Inspection Report
DNR Monitoring & Inspection Program Template

Cc: Josie Hanrahan, Tony Salituro, Falon French – WDNR
Gary Brandt – Quality Crop Care
Andy Skwor – MSA Professional Services
Erica Sauer – Lafayette County Land Conservation Department

CAFO Compliance Report (October 4, 2022)

Inspection Date: August 25, 2022

Inspection Type: Permit Reissuance

Operation Name: Highway Dairy Farms LLC

WPDES Permit No: WI-0066222-01-0

Operation Address: 16639 Highway 23 North, Darlington, WI 53530 (*SE ¼ of the NE ¼ Sec. 16 & SW ¼ of the NW ¼ Sec. 15 T03N R03E*)

On Site Representatives: Jay Stauffacher (Highway Dairy Farms LLC), Jane Stauffacher (Highway Dairy Farms LLC), Andy Skwor (MSA Professional Services), Gary Brandt (Quality Crop Care)

DNR Staff/Report Writer: Clare Freix, Agricultural Runoff Specialist

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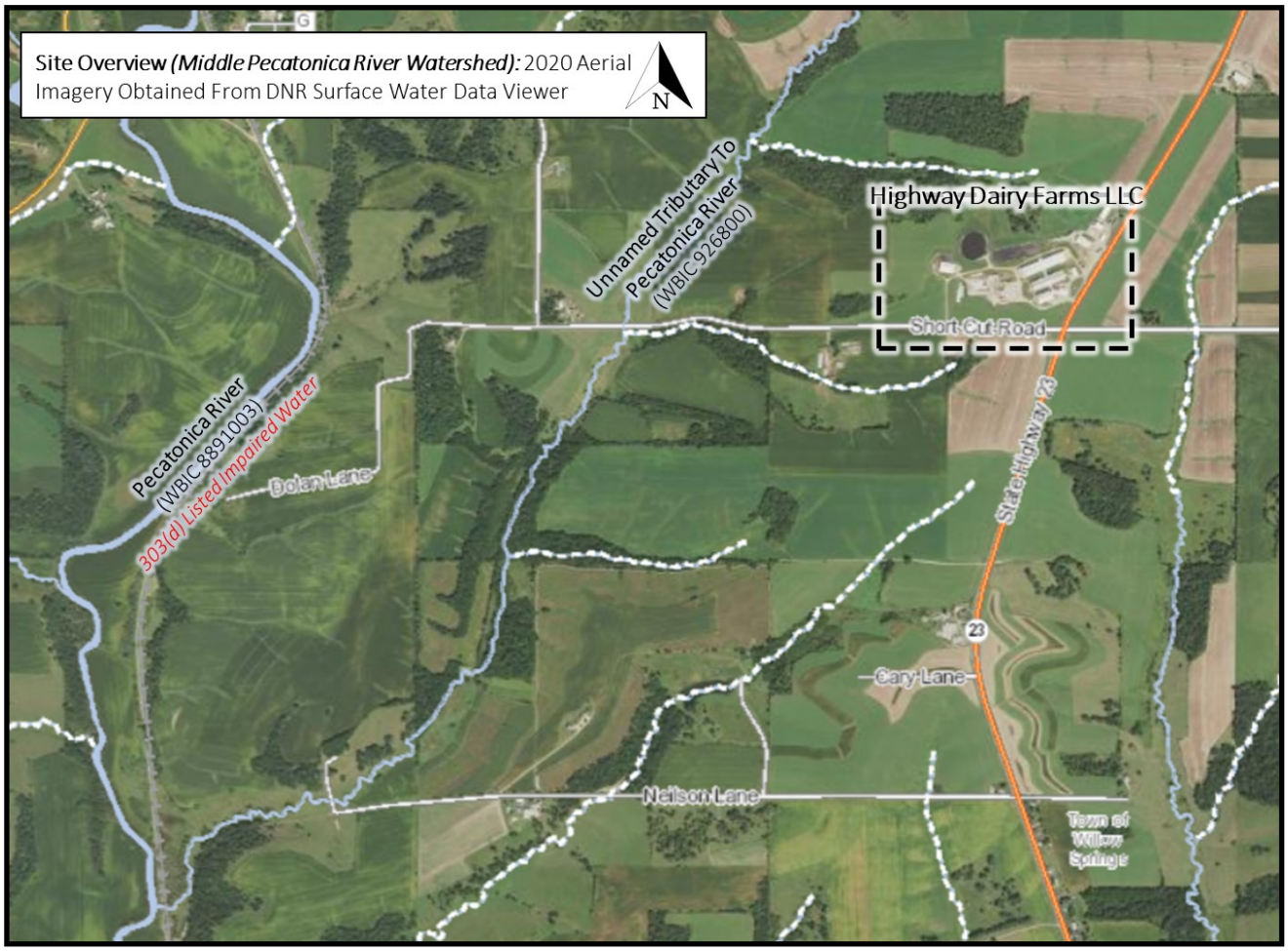
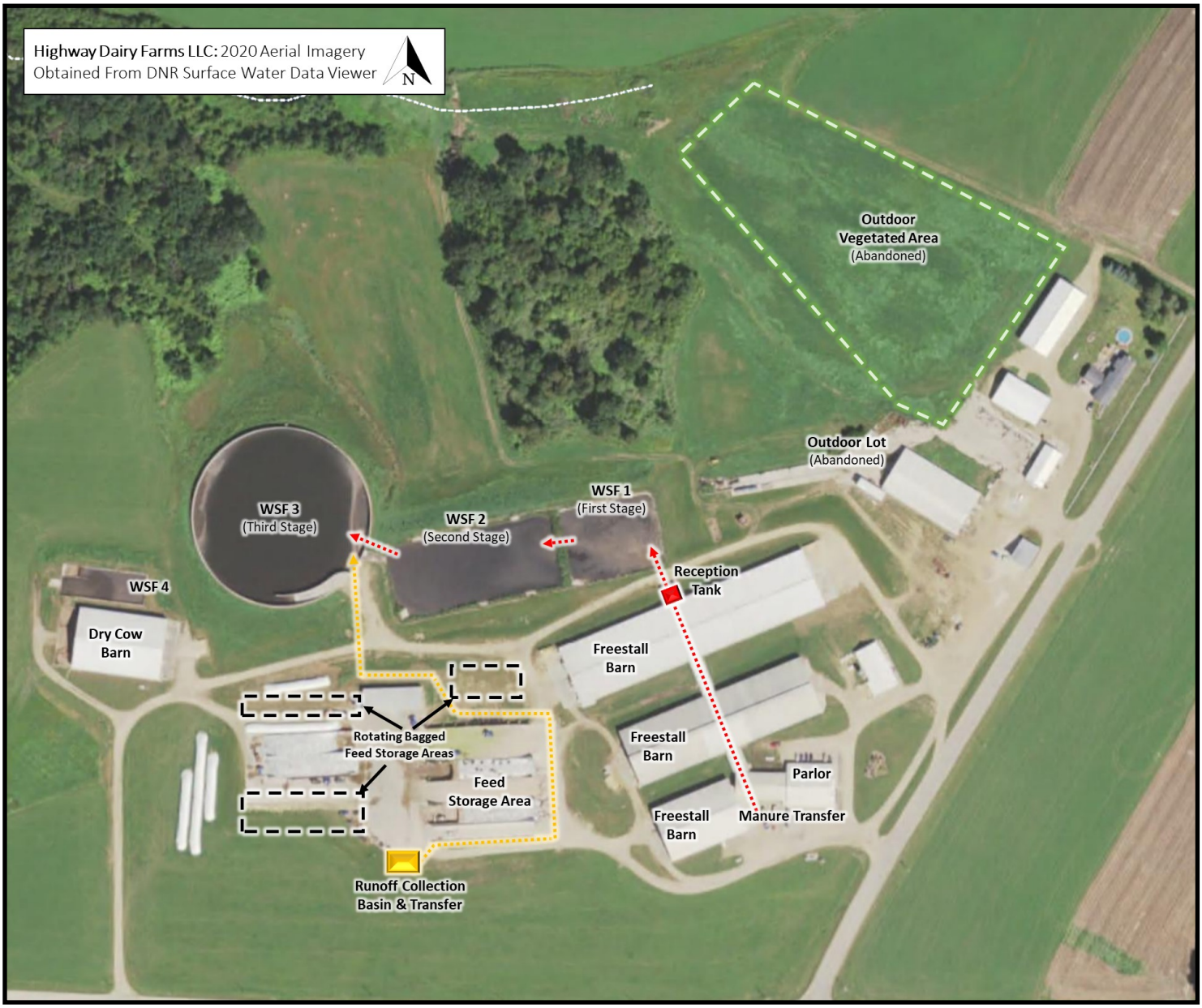
BACKGROUND

Highway Dairy Farms LLC first obtained WPDES permit coverage on July 1, 2018 under their current individual permit, which is set to expire on June 30, 2023.

On August 23, 2022 at approximately 11:00 AM Clare Freix and Josie Hanrahan (DNR Agricultural Runoff Specialist) met with Jay Stauffacher, Jane Stauffacher, Andy Skwor, and Gary Brandt on site at the operation. The purpose of the site visit was to conduct a complete inspection of the operation for permit reissuance. Weather Conditions were overcast with temperatures in the mid 70s. No significant precipitation had occurred within 72 hours prior to the inspection, and only trace amounts of precipitation (less than 0.05 inches) had occurred within 24 prior to the inspection.

SITE OVERVIEW





SITE OBSERVATIONS

Feedlot Runoff

The operation once utilized an outdoor concrete feedlot located near the north east end of the site. Plans to abandon the outdoor lot were approved by the Department on August 29, 2017 and the lot has since been abandoned.

Photo 1 (Right): Looking north west at the former outdoor concrete feedlot. The outdoor lot has been completely abandoned and is now being used for storage.

Waste Storage Facilities

The operation utilizes a three stage liquid waste storage facility system. The first stage waste storage facility (WSF 1) is a concrete lined waste storage facility that was constructed in 2008 and has an approximate maximum operating level capacity of 1,124,935 gallons. The second stage waste storage facility (WSF 2) is a clay lined waste storage facility that was also constructed in 2008 and has an approximate maximum operating level capacity of 2,846,644 gallons. WSF 1, WSF 2 and the associated waste transfer systems were evaluated in 2018 and the Department determined no further action was required. The third stage waste storage facility (WSF 3) is a round concrete lined waste storage facility that was constructed in 2017 and has an approximate maximum operating level capacity of 9,668,646 gallons. Plans and specifications for WSF 3 and the associated waste transfer systems were approved by the Department on August 29, 2017 and post construction documentation was submitted on December 10, 2019.

Liquid manure, contaminated sand bedding, and parlor wastewater generated within the three freestall barns and milking parlor are transferred to WSF 1 through a gravity transfer system that runs through the freestall barns. Once WSF 1 approaches maximum operating level capacity, liquid manure overflows from WSF 1 into WSF 2. As WSF 2 approaches maximum operating level capacity, liquid manure then overflows from WSF 2 into WSF 3. WSF 3 also accepts leachate and feed storage area runoff captured by the feed storage runoff control system. Majority of the manure solids and contaminated sand bedding that are transferred to the three stage waste storage system settle out and accumulate within WSF 1. WSF 2 and WSF 3 are agitated as needed to prevent accumulation of any remaining solids entering either of these storages.

Photo 2 (Left): Looking south west across WSF 1 from the north east corner of the waste storage. A safety fence was observed around the entire perimeter of WSF 1. A layer of solid manure that reaches the top edge of the concrete liner can be seen along the northern and eastern walls of the waste storage facility.

Photo 3 (Right): Looking at the permanent maximum operating level marker in WSF 1 located on the northern wall of the waste storage facility. A permanent margin of safety marker was not present in WSF 1.

Photo 4 (Top Left): Looking west across WSF 1 toward the overflow channel where manure flows into WSF 2.

Photo 5 (Right): Looking south along the east end of WSF 2 toward the overflow channel where manure from WSF 1 flows into the waste storage facility. A safety fence was observed around the entire perimeter of WSF 2.

Photo 6 (Bottom Left): Looking south west across WSF 2. The permanent maximum operating level marker can be seen on the northern wall of the waste storage facility. A permanent margin of safety marker was not present in WSF 2.

Photo 7 (Top Left): Looking at the overflow channel where manure from WSF 2 flows into WSF 3. Manure solids and vegetation growth can been seen accumulating within the overflow channel.

Photo 8 (Right): Looking west across WSF 3.

Photo 9 (Bottom Left): Looking north across WSF 3 toward the permanent maximum operating level marker. A permanent margin of safety marker was not present in WSF 3.

The operation also utilizes a concrete lined liquid waste storage facility located adjacent to the dry cow barn (WSF 4). WSF 4 was constructed in 2014 and has an approximate maximum operating level capacity of 361,735 gallons. WSF 4 was evaluated in 2018 and the Department determined no further action was required. Liquid manure and contaminated sand bedding generated within the dry cow barn are manually transferred to WSF 4.

Photo 10 (Left): Looking west across WSF 4. A safety fence was observed around the entire perimeter of the of the waste storage facility and a permanent maximum operating level marker can be seen on the northern wall. A layer of dried manure extending above the maximum operating level can also be seen along the walls of WSF 4.

Photo 11 (Right): Looking east along the northern wall of WSF 4. Dried manure solids can be seen along the top edge of the waste storage facility.

The operation does not typically generate solid manure aside from solid manure and contaminated sand bedding that accumulates within the liquid waste storage facilities. Therefore, the operation does not utilize any solid manure storage facilities or headland stacking sites and removed solids or other miscellaneous sources solids are directly land applied as needed when conditions allow.

Feed Storage Area Runoff

The operation utilizes a concrete feed storage area located near the south west end of the site. The feed storage area was

initially constructed sometime in the early 2000s without a runoff control system in place. Plans and specifications for a feed storage runoff control system were approved by the Department on August 29, 2017 and the feed storage area itself was evaluated in 2018. Based on the evaluation of the feed storage area, the Department determined no further action would be required provided the proposed feed storage runoff control system was constructed as approved by the Department. A schedule to complete construction of the approved feed storage runoff control system was also included under permit section 2.5 of the current permit. Construction of the approved runoff control system was completed in 2019 and post construction documentation was submitted on December 10, 2019. The feed storage runoff control system consists of a concrete runoff collection basin located on the south end of the feed storage area and a gravity transfer system where leachate and feed storage runoff is captured and transferred directly to WSF 3.

Photo 12 (Left): Looking south along the west end of the feed storage area. The western portion of the feed storage slopes east toward the center of the feed storage area where leachate and feed storage runoff is directed to the runoff collection basin (pictured in photo 16).

Photo 13 (Right): Looking east toward the eastern portion of the feed storage area from the center of the southern end of the feed storage. The eastern portion of the feed storage primarily slopes west toward the center of the feed storage area where leachate and feed storage runoff is directed to the runoff collection basin (pictured in photo 16).

Photo 14 (Top Left): Looking west toward the east end of the feed storage area. Portions of the east end of the feed storage slope east away from the center of the feed storage area where leachate and feed storage runoff is directed to the runoff collection basin. Leachate and feed storage runoff that does not flow west toward the runoff collection basin flows east where it directly enters inlets to the runoff transfer system (pictured in photo 15).

Photo 15 (Right): Looking north along the east end of the feed storage area where inlets to the runoff transfer system are located. Leachate and feed storage runoff that enters the runoff collection basin or directly enters through the inlets to the runoff transfer system are transferred to WSF 3.

Photo 16 (Bottom Left): Looking south at the feed storage runoff collection basin located toward the center of the south end of the feed storage area. The contents of the runoff collection basin flow through the transfer system to WSF 3.

The operation also utilizes feed bags to store haylage. If feed bags are not stored directly on the concrete feed storage area, the operation rotates among several areas where feed bags are temporarily stored on bare ground. An updated temporary feed storage area plan will need to be submitted as part of the permit reissuance application (see summary section for details).

Photo 17 (Left): Looking south west at an area west of the feed storage area that is being used as one of the temporary feed storage areas for bagged feed.

Animal Mortality Disposal

The operation utilizes a rendering company to pick up animal mortalities as needed.

Ancillary Service & Storage Areas

The operation once utilized an outdoor vegetated area located north east of the abandoned outdoor feedlot. Since the outdoor lot has been abandoned use of the outdoor vegetated area has been discontinued.

No discharge concerns were observed from ancillary service and storage areas.

RECORDS REVIEW

Current WPDES Permit – Provided on site.

Production Area Inspection Records – Provided on site.

Emergency Response Plan – Provided on site.

Monitoring & Inspection Plan – Not provided on site.

NMP & Land Application Records – Provided on site.

Based on findings during a pre-inspection file review, the operation has not been sampling manure and process wastewater in accordance with permit requirements. According to the operation's permit, *two samples* are required to be taken per calendar month for each liquid manure source that is land applied and one sample is required to be taken per quarter for each solid manure source that is land applied. The operation's most recent NMP update reported that no applications of solid manure occurred in 2021 and that applications of liquid manure occurred in April, August, September, October, and November of 2021. Two samples of solid manure were reported for 2021, however, only six samples of liquid manure were reported for 2021. A minimum of 10 liquid manure samples was required for 2021, potentially more if the operation applied more than one source during the same calendar month.

The samples reported for 2021 were from various sources with differing nutrient values. Jay Stauffacher confirmed that liquid manure was applied from more than one source during 2021. However, an average of the 2021 liquid manure samples was

used when reporting the amount of nutrients that were applied to each field that received liquid manure in 2021. For liquids, the amount of nutrients reported as actually applied to a specific field should be based on the nutrient values from the two samples taken during the same calendar month the application occurred for the specific source that was actually applied. For solids, the amount of nutrients reported as actually applied to a specific field should be based on the nutrient values from the sample taken during the same quarter the application occurred for the specific source that was actually applied.

Furthermore, the operation did not clearly indicate the specific source/sample point that was being sampled nor did they provide the actual date the sample was taken. For each manure sample analysis provided, the department recommends the operation clearly specify the sample point(s) from the permit that was sampled along with the date the sample was taken.

180 Days of Liquid Manure Storage Documentation – Provided on site.

PERMIT SCHEDULE

Permit Section 2.1: Emergency Response Plan

Emergency Response Plan: Due 08/01/2018 – Complete

Permit Section 2.2: Monitoring & Inspection Program

Monitoring & Inspection Plan: Due 10/01/2018 – Outstanding

Permit Section 2.3: Annual Reports

Annual Report #1: Due 01/31/2019 – Complete 03/04/2019

Annual Report #2: Due 01/31/2020 – Complete 12/14/2020

Annual Report #3: Due 01/31/2021 – Complete 01/28/2021

Annual Report #4: Due 01/31/2022 – Complete 01/28/2022

Annual Report #5: Due 01/31/2023 – Upcoming

Permit Section 2.4: Nutrient Management Plan

NMP Update #1: Due 03/31/2019 – Complete 04/02/2019

NMP Update #2: Due 03/31/2020 – Complete 12/31/2020

NMP Update #3: Due 03/31/2021 – Complete 04/30/2021

NMP Update #4: Due 03/31/2022 – Complete 04/01/2022

NMP Update #5: Due 03/31/2023 – Upcoming

Permit Section 2.5: Feed Storage Runoff Control System – Installation

Complete Installation: Due 10/01/2018 – Complete 2019, Post Construction Submitted 12/10/2019

Permit Section 2.6: Submit Permit Reissuance Application

Reissuance Application: Due 11/01/2022 – Upcoming

SUMMARY

Areas of Concern

1. The operation does not have a monitoring & inspection plan
2. The operation has not been sampling manure and process wastewater in accordance with permit requirements
3. The operation is missing a permanent margin of safety marker in each liquid waste storage facility
4. A layer of dried manure solids was observed along the upper edges above the maximum operating levels in WSF 1 and WSF 4.

Action Items

November 30, 2022 – Submit the following items:

1. Monitoring & Inspection Plan
2. Manure and process wastewater sampling plan

3. Photo documentation of the installation of a permanent margin of safety marker in WSF 1, WSF 2, WSF 3, and WSF 4
4. Photo documentation of the removal of dried manure solids from the upper edges of WSF 1 and WSF 4

December 31, 2022 – Submit a complete permit reissuance application that contains the following components through the Department's ePermitting System:

1. 3400-025 Livestock/Poultry Operation WPDES Permit Application
2. 3400-025A Animal Unit Calculation Worksheet
3. 3400-025B Nutrient Management Plan Checklist
4. 3400-025G CAFO Reviewable Facilities and Systems for Livestock/Poultry Operation WPDES Permit
5. Environmental Analysis Questionnaire (EAQ)
   Note: *At a minimum, please complete and submit the first two pages of the EAQ form, which include general contact information and screening questions. Answering the screening questions will determine whether the EAQ is required for the operation, in which case the entire EAQ form must be completed and submitted as part of the permit application.*
6. Aerial map labelling all the existing and proposed facilities and systems at the production area
7. Soil Survey map of the production area
8. Five year nutrient management plan
9. 180 day liquid manure storage calculations & supporting documentation
10. Updated temporary bagged feed storage plan:
    - Provide a map delineating the designated areas proposed to be used for temporary feeds storage and describe the rotation plan for the areas identified.
    - Specify the type, moisture content, and coverage of the feed proposed to be stored in the temporary feed storage areas identified and describe the plan for managing any leachate that may be generated.

Items For Next Permit

1. New sample points will be added for the following:
   - Production area storm water runoff control systems (no sampling required)
   - Temporary feed storage areas and associated runoff control systems (no sampling required)
   - Feed storage leachate and runoff collection basin (liquid sampling)

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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Madison, WI 53707

Tony Evers, Governor
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TTY Access via relay - 711

June 27th, 2024

Lafayette County
Approval

Jay Stauffacher
Highway Dairy Farms, LLC
16639 Highway 23 North
Darlington, WI 53530

SUBJECT: Conditional Approval of Highway Dairy Farms, LLC Nutrient Management Plan, WPDES Permit No. 0066222-02-2

Dear Jay Stauffacher:

After completing a review of Highway Dairy Farms, LLC 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 Highway Dairy Farms, LLC review the NMP with those individuals involved with manure applications to ensure all remain familiar with the approved manure spreading protocol, spreading maps, field and map verification, record keeping requirements, and all the conditions of this approval. Specifically, some fields in Highway Dairy Farms, LLC 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 Highway Dairy Farms, LLC 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 1,919 animal units (1,300 milking & dry cows, 90 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 16,792,235 gallons of manure and process wastewater and 104 tons of solid manure in the first year of the permit term.
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 Highway Dairy Farms, LLC currently has 3,536.8 acres (1,121.5 owned and 2,415.3 controlled through contracts, rental agreements or leases, or under manure agreements) of which 3,461.1 are spreadable acres.

6. That some fields included in the NMP are directly adjacent to or have high potential to deliver nutrients and sediment to Pecatonica River (listed 303(d) impaired water by 'total phosphorus') and Otter Creek (listed 303(d) impaired water by 'BOD' & 'Ammonia').
7. That 2 fields are tiled.
   - E07
   - E09

8. 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.
9. 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 2024-2028 Highway Dairy Farms, LLC Nutrient Management Plan subject to the following conditions and the applicable requirements of Ch. NR 243, Wis. Adm. Code:

FIELD AND MANURE MANAGEMENT

1. Fields not included in the NMP and new fields shall not receive manure or process wastewater applications until they have been properly soil sampled, entered into Snap Plus, evaluated for their nutrient needs, and approved by the Department.

2. The following fields are prohibited from receiving applications of manure or process wastewater:
   - GH12 (>200 ppm P)
   - GH18 (>200 ppm P)
   - B01 (default)
   - B02 (default)
   - B03 (default)
   - **G02A (expired soil test)**
   - **G02B (expired soil test)**
   - KG01 (default)
   - KG02 (default)
   - KG03 (default)
   - KG04 (default)
   - KG05 (default)
   - REM01 (default)
   - REM02A (default)
   - REM02B (default)
   - REM03 (default)
   - REM04 (default)
   - REM 5 (default)
   - REM 6 (default)
   - RF01 (default)
   - WR01 (default)
   - WR02 (default)
   - WR03 (default)
   - WR04 (default)
   - WR05 (default)
   - **J61-64 (insufficient sample density)**

   If Highway Dairy Farms, LLC 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.

3. If existing fields yield a soil test results equal to or greater than 200 ppm P, those fields would be prohibited from receiving manure or process wastewater applications, unless you obtain Department approval in accordance with NR 243.14(5)(b)2., Wis. Adm. Code.

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

5. 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, Highway Dairy Farms, LLC may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

First-Year Available N = NH_4-N + [0.25 x (Total N – NH_4-N)]

6. Highway Dairy Farms, LLC shall record daily manure applications by using the 'Daily Log' as generated by Snap Plus. These forms shall be retained at the farm and provided to the department upon request.

7. Highway Dairy Farms, LLC shall annually submit a spreading report that summarizes the land application activities listed under NR 243.19(3)(c)5., Wis. Adm. Code by using 'CAFO Annual Spreading Reports' as generated by Snap Plus.

WINTER SPREADING

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

9. The following field(s) are approved for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure:
   - D01-02
   - D04
   - D05A
   - D06
   - D21
   - RH01

10. The following field(s) are denied for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure:
    - D05B (no spreadable area in winter)
    - D20 (no spreadable area in winter)

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. .

MANURE & PROCESS WASTEWATER IRRIGATION

15. Irrigation of manure or process wastewater is prohibited.

SUBMITAL AND RECORDKEEPING REQUIREMENTS

16. A copy of this conditional approval shall be included in all future annual Nutrient Management Plan Updates in addition to the NR 243 and NRCS 590 checklists.
17. Update soil sampling plan in accordance to the fields that are necessary to update as referenced in #2 under FIELD AND MANURE MANAGEMENT section of this approval. This is due by no later than **July 8th, 2024.**

COMPLIANCE REMINDERS

18. The farm is required to sample manure at frequency that meets permit requirements for each source. Liquid sources are to be sampled at a minimum density of two samples per source every calendar month when hauling occurs, and solid manure is to be sampled at a minimum density of once per quarter when hauling occurs.
19. Manure rates are to be planned in such a way there is room for the fluctuations that may occur in manure nutrient values during the season without causing over applications.

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 608-212-8460 or Ashley.Scheel@Wisconsin.gov.

Sincerely,

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

cc: Josie Hanrahan, WDNR Agricultural Runoff Management Specialist (Josie.Hanrahan@Wisconsin.gov)
Laura Bub, WDNR Watershed Field Supervisor (Laura.Bub@Wisconsin.gov)
Christopher Clayton, WDNR Runoff Management Section Chief (Christopherr.Clayton@Wisconsin.gov)
Tyler Dix, WDNR CAFO Program Coordinator (Tyler.Dix@Wisconsin.gov)
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Falon French, WDNR Intake Specialist (Falon.French@Wisconsin.gov)
Laney Flinkelmeyer, Lafayette County (Laney.Finkelmeyer@Lafayettecountywi.org)
Gary Brandt, Quality Crop Care (gobrandt@centurytel.net)
File

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WISCONSIN DEPT. OF NATURAL RESOURCES

March 25, 2024

FILE REF: R-2023-0136
WPDES Permit #: WI-0066222

Jay Stauffacher
Highway Dairy Farms LLC
16639 Highway 23 North
Darlington, WI 53530

Subject: Days of Storage Review for Highway Dairy Farms LLC, NE¼ of T03N, R03E, Section 15 in Willow Springs Township, Lafeyete County – NO ADDITIONAL ACTION REQUIRED

Dear Mr. Stauffacher:

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 of Andy Skwor, MSA Professional Services on May 15, 2023 on behalf of Highway Dairy Farms LLC.

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 Highway Dairy Farms LLC has **286** 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 **1919** with 1130 milking cows, 170 dry cows, and 90 heifers (800lbs -1200lbs). The liquid waste volumes are based on the NRCS spreadsheet and other estimated or calculated values for a collection period of 365 days. All runoff, up to the 25yr – 24hr storm, and leachate is captured from the outdoor feed storage area and is collected in WSF 3.

Waste Storage	Total Vol. from Settled Top to Bottom	Solids Storage	-25-yr, 24-hr Collected Runoff	25-yr, 24-hr Precip. on Storage	-Freeboard Vol.	Max. Operating Level (MOL) Vol.
WSF 1 (hp1)	1,400,682			98,995	172,310	1,129,377
WSF 2 (hp2)	3,390,489	447,743		188,723	347,586	2,406,437
WSF 4(rt1)	465,176			32,507	70,043	362,626
WSF 3(ct1)	10,763,093		488,080	319,060	678,852	9,277,101
					Total MOL Vol:	13,175,541
					Days of Storage:	**286**

Liquids Collected/Stored	Annual Gallons
Manure and Bedding	9,122,992
Parlor Wastewater	2,457,185
Feed Storage Leachate	39,270
Feed Storage Runoff Collected	2,829,061
Net Precipitation on Storage Surface(s)	2,343,727
TOTAL:	**16,792,235**

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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Watershed Management Program

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CAFO Review Engineer
Watershed Management Program

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