

Permit Fact Sheet

General Information

Permit Number:	WI-0063908-03-0
Permittee Name:	UW Arlington Agricultural Research Station
Address:	N695 Hopkins Rd
City/State/Zip:	Arlington WI 53911
Discharge Location:	<p>Blaine Dairy, W6723 Badger Lane, Arlington WI 53911, Town of Leeds, Columbia County, NE-SW, Sect. 29, T10N, R10E.</p> <p>Beef Grazing, W7431 County Road K, Arlington WI 53911, Town of Arlington, Columbia County, NW-NE, Sect. 36, T10N, R09E.</p> <p>Beef Nutrition, N551 Ramsey Road, Arlington WI 53911, Town of Leeds, Columbia County, SW-SW, Sect. 30, T10N, R10E.</p> <p>Sheep South, 4857 Meek Road, Arlington WI 53911, Town of Vienna, Dane County, NW-NE, Sect. 01, T09N, R09E.</p> <p>Sheep North, 4857 Meek Road, Arlington WI 53911, Town of Arlington, Columbia County, SW-SE, Sect. 36, T10N, R09E.</p> <p>Swine Facility, N636 County Road I, Arlington WI 53911, Town of Leeds, Columbia County, NW-SW, Sect. 31, T10N, R09E.</p> <p>Bookhout Farm, W7114 Ramsey Road, Arlington WI 53911, Town of Leeds, Columbia County, SE-SW, Sect. 30, T10N, R10E</p>
Receiving Water:	Unnamed tributaries of the Headwaters Yahara River Watershed and groundwaters of the state
Stream Classification:	Yahara River 303d
Discharge Type:	Existing

Animal Units					
Animal Type	Current AU		Proposed AU (Note: If all zeroes, expansions are not expected during permit term)		
	Mixed	Individual	Mixed	Individual	Date of Proposed Expansion
Dairy Calves (under 400 lbs.)	23	0	0	0	
Milking and Dry Cows	812	829	0	0	
Steers or Cows (400 lbs. to market)	400	400	0	0	
Pigs (55 lbs. to market)	390	390	0	0	

Sows (each)	91	91	0	0	
Boars (each)	22	18	0	0	
Pigs (up to 55 lbs.)	65	65	0	0	
Sheep (each)	80	80	0	0	
Total	1883	829	0	0	

Facility Description

UW Arlington Agricultural Research Station is an existing Concentrated Animal Feeding Operation (CAFO). UW Arlington Agricultural Research Station is owned and operated by University of Wisconsin System. The farm currently has 1,883 animal units. (580 milking & dry cows, 117 calves, 653 pigs up to 55 lbs, 976 over 55 lbs, 227 sows, 44 boars, 800 sheep, & 400 beef/steers). UW-Arlington has a total of 4,779.6 acres available for land application of manure and process wastewater. Of this acreage, 1,688.7 acres are owned, and 3,087.9 acres are rented. UW-Arlington has no planned expansion during the proposed permit term. Approximately 12,654,000 gallons of manure and process wastewater and 8,000 tons of solid manure will be generated the first year of the permit term. UW-Arlington Research Station has a proposed 355 days of liquid manure storage at Blaine Dairy, 283 days of liquid manure storage at the Swine Facility, and at least 59 days of solid manure storage.

Seven facilities are currently covered under UW- Arlington Research Station WPDES Permit. Facilities are located in Columbia and Dane County. The facilities are utilized by the University of Wisconsin – Madison for the research of dairy and beef cattle, swine, and sheep. Cropland is used in a variety of agricultural research projects, utilizing different cropping practices covered with in the farm’s nutrient management plan.

UW-Arlington Research Station 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. UW-Arlington has an approved Nutrient Management Plan (NMP) that is written according to WPDES permit and Chapter NR 243 Wis. Adm. Code requirements.

Substantial Compliance Determination

Enforcement During Last Permit: Enforcement During Last Permit: The farm had no enforcement actions taken during the last permit term. The facility has completed all previously required actions as part of the permitting and / or enforcement process.

After a desk top review of all compliance schedule items and permit application materials, and a site visit on April 05, 2023, this facility has been found to be in substantial compliance with their current permit.

Compliance determination entered by [Eric J. Struck](#) on [February 13, 2024](#).

Sample Point Designation For Animal Waste		
Sample Point Number	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)	
002	Blaine Dairy WSF #730: Sample point 002 is a liquid waste storage facility located at Blaine Dairy. WSF #730 is concrete lagoon that was built in 1999. This WSF holds 400,000 gallons (MOL) and accepts manure from the dry cow barn. The waste storage facility was last evaluated in 2007 and met permit requirements.	
004	Manure Stacking/Sand & Settled Solids: Sample point 004 is a previous sand settling lane used for manure stacking since 2016. It is a concrete structure built in 2007. The facility is approximately 60' x 280' with 8' walls. The waste storage facility was last evaluated in 2008 and met permit requirements.	
006	Blaine Dairy Feed Storage Area (FSA) Collection: Sample point 006 is for first flush liquid waste storage facility located at Blaine Dairy. The first flush collection tank is a concrete storage located in the southwest corner of the bunker area of the feed storage area. This storage accepts process wastewater from feed bunkers. The system collects the first flush, and the remaining runoff flows to a VTA. The feed storage area runoff controls will require an engineering evaluation, see Schedules section for due dates.	
007	Beef Grazing WSF #895 Storage: Sample point 007 is a solid waste storage facility located at the Beef Grazing site. WSF #895 is a concrete structure that was constructed in 2012. The facility holds 49,920 cubic feet of waste. The waste storage facility was last evaluated in 2012 and met permit requirements.	
008	Beef Grazing Feed Storage: This sample point refers to low-moisture feed stored at the Beef Nutrition facility. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program if feed is stored at these facilities.	
009	Beef Nutrition WSF #967: Sample point 009 is a solid waste storage facility located at the Beef Nutrition site. WSF #967 is a concrete structure that was constructed in 2012 and holds 56,440 cubic feet of waste. The facility was last evaluated in 2012 and met permit requirements.	
010	Beef Nutrition Feed Storage: This sample point refers to low-moisture feed stored at the Beef Nutrition facility. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program, if feed is stored at these facilities.	
011	Sheep Facility South #931: Sample point 011 refers to building #931. Animals are housed under roof mainly during the fall and winter seasons before being released to pastures in the spring and summer. The bedded pack manure generated is hauled out periodically throughout the year or stored in an approved waste storage facility. Representative samples shall be taken for each manure source type.	
012	Sheep South Feedlot/Outdoor Lot & Runoff Control System: Sample point 012 is for visual monitoring and inspection of the concrete feedlot, outdoor exercise areas, and associated runoff control system located at Sheep South (#931). Feedlot runoff flows through a settling basin before discharging to a VTA. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
013	Sheep Facility North #826: Sample point 013 refers to building #826 and the concrete lot/settling basin in front of the facility. The concrete lot and settling basin were constructed in 2012 and met permit requirements.	
014	Sheep North Feedlot/Outdoor Lot & Runoff Control System: Sample point 014 is for visual monitoring and inspection of the concrete feedlot, outdoor exercise areas, and associated runoff control system located	

Sample Point Designation For Animal Waste	
Sample Point Number	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)
	at Sheep North (#826). Feedlot runoff flows through a settling basin before discharging to a VTA. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.
016	Swine Facility Liquid WSF #883: Sample point 016 refers to waste storage facility #883. Waste storage facility #883 is located at the Swine Facility and is a poly lined lagoon. The facility has a capacity of approximately 2 million gallons. The facility was constructed in 2006 and was last evaluated in 2009 and met permit requirements. The storage has an underdrain tile for leak detection. This should be added to the monitoring and inspection program and if liquid is present during inspection, it should be tested for contamination and be included with the annual reports.
017	Swine Settling Basins WSF #886: Sample point 017 is a settling basin located at the Swine Facility. WSF #886 is constructed out of watertight concrete and has 4 settling bays. The facility was constructed in 2013 and has the capacity to hold 500,000 gallons. Waste from barn #886 is transferred to the first basin, the annex, WSF 886-Annex, as it moves through each of the following basins (886-Bay 1, 886-Bay 2, and 886-Bay 3) the nutrient content changes as solids settle out. This settling has led to variable sampling results, depending on barn population, weather, etc. Each of the bays has been sampled and future sampling will be tracked and averaged for planning values. After the final basin the waste is transferred to WSF 883. At the time of construction, the waste storage facility met specifications.
021	Bookhout Farm (Vet Sciences) Solids Stacking WSF #940: Sample point 021 is for a concrete waste storage facility #940. The waste storage facility handles semi-solid manure or bedded pack from the neighboring buildings. The facility was constructed in 2012 and holds approximately 22,000 cubic feet of waste. No evaluation required for this permit term.
022	Bookhout Feedlot/Outdoor Lot & Runoff Control System: Sample point 022 is for visual monitoring and inspection of the concrete feedlot, outdoor lot areas, and associated runoff control system located at Bookhout. The buildings are used on a limited basis at various times of the year. Feedlot runoff flows through a settling basin before discharging to a VTA. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.
023	Bookhout Farm (Vet Sciences) Holding Tanks: Sample point 023 is for a concrete holding tank located at the Bookhout Farm (Vet Sciences) location. The tank capacity is 2,160 gallons. The tank handles wash water from the service building and was installed in 2012.
024	Miscellaneous Solid Sources: Sample point 024 is for any manure or solid wastes generated at UW-Arlington Research Station. This includes solid waste removed from the bottom of liquid waste storage facilities, all other solid manure sources, manure-laden sand solids, manure fiber solids, waste feed, various plant materials generated at UW, etc. Representative samples shall be taken from each source as land applied.
025	Blaine Dairy WSF #988: Sample point 025 is a liquid waste storage facility (WSF) located at Blaine Dairy. WSF# 988 is a 2.5:1 side sloped watertight concrete structure that was built in 2016 and accepts manure and process wastewater from the Sand Separation Facility. The waste storage facility holds 9.4 million gallons at maximum operating level (MOL). The waste storage facility was last evaluated in 2016 and met permit requirements.

Sample Point Designation For Animal Waste	
Sample Point Number	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)
026	Beef Grazing WSF #899: Sample point 026 is a solid waste storage facility located at the Beef Grazing site. WSF #899 is a concrete structure that was constructed in 2012. The facility holds 19,200 cubic feet of waste. The waste storage facility was last evaluated in 2012 and met permit requirements.
027	Liquid Waste from Solid Waste Storage Facility 895, 899, 967: This sample point is for liquids removed from solid waste storage facilities (WSF 895, 899, and 967) that are land applied or transferred to Blaine Dairy WSF#988. These facilities collect rainfall and run off from adjacent feed lots.
028	Sand Separation Facility: Sample point 028 is for the sand separation building liquid waste storage associated with the building located at the Blaine Dairy. The Sand Separation Facility is a liquid-tight concrete building located in the southwest corner of the production area. The facility was constructed in 2016. The facility accepts manure and process wastewater from barns 985 A & B. The Sand Separation Facility was built with plan approval and met permit requirements.
029	Feed Storage Area & Runoff Control System: Sample point 029 is for visual monitoring and inspection of the feed storage area, bagged feed area, and associated runoff control system located at Blaine Dairy. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. An engineering evaluation of the feed storage area and runoff control system shall be submitted according to the Schedules section of the permit.
030	Calf Hutch Area & Runoff Control System: Sample point 030 is for visual monitoring and inspection of the calf hutch area and associated runoff control system located at the Blaine Dairy facility. Calf Hutch area runoff flows to a VTA. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. An engineering evaluation of the calf hutch area and runoff control system shall be submitted according to the Schedules section of the permit.
031	Blaine Dairy Pasture/Outdoor Lots& Runoff Control System: Sample point 031 is for visual monitoring and inspection of the Pastures, walkways, outdoor exercise areas, and associated runoff control system located at Blaine Dairy. Feedlot runoff flows through a settling basin before discharging to a VTA. Proper operation and maintenance is required to ensure discharges meet permit requirements.
032	Beef Grazing Reception Tank WSF #900: Sample point 032 is for liquid waste storage facility #900 (WSF 900) located at the Beef Grazing facility. WSF 900 is a precast concrete storage reception tank located west of the entrance of barn #895. The facility has a capacity of 5000 gallons and was constructed in 2022. This storage accepts manure and process wastewater from the wash down area in barn #895. WSF 900 was constructed with department plan approval and met permit requirements.
033	Beef Grazing Feedlot/Outdoor Lot & Runoff Control System: Sample point 033 is for visual monitoring and inspection of the concrete feedlot, outdoor exercise areas, and associated runoff control system located at Beef Grazing (#895 and #895). Each feedlot runoff flows through its own settling basin before discharging to a VTA. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.
034	Beef Nutrition Feedlot/Outdoor Lot & Runoff Control System: Sample point 034 is for visual monitoring and inspection of the concrete feedlot, outdoor exercise areas, and associated runoff control system located at Beef Nutrition facility (#973). Feedlot runoff flows through a settling basin before discharging to a

Sample Point Designation For Animal Waste	
Sample Point Number	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)
	VTA. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.
035	Beef Nutrition Calf Hutch Area (973) & Runoff Control System: Sample point 035 is for visual monitoring and inspection of the calf hutch area and associated runoff control system located at the Beef Nutrition #973. Calf Hutch area runoff flows to a VTA. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.
036	Storm Water Runoff Control System: Sample point 036 is for visual monitoring and inspection of all production site storm water conveyance systems. This includes roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance is required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required and shall be recorded according to monitoring program.

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 [Enter number of months of storage](#) 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.

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 [\(580 milking & dry cows, 117 calves, 653 pigs up to 55 lbs, 976 over 55 lbs, 227 sows, 44 boars, 800 sheep, & 400 beef/steers\)](#), it is estimated that approximately [12,654,000 gallons](#) of manure and process wastewater will be produced per year. The permittee owns *approximately* [1,688.7 acres](#) of cropland and rents about [3,087.9 acres](#). Given the rotation commonly used by the permittee, [3,320 acres](#) are available (or open) to receive manure and process wastewater on an annual basis. The permit requires all landspreading of manure and process wastewater be completed in accordance with an approved nutrient management plan. The permit will require sampling and analysis of manure and process wastewater that will be landspread. Landspreading rates must be adjusted based on sample analysis. The permit requires the permittee to maintain a daily log that documents landspreading activities. The permit also requires the submittal of an annual report that summarizes all landspreading activities. Plans must be updated annually to reflect cropping plans and other operational changes. Among the requirements, the plans must include detailed landspreading information including field by field nutrient budgets.

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

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

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

Monitoring and Sampling Requirements

The permittee must submit a monitoring and inspection program that outlines how the permittee will conduct self-inspections to determine compliance with permit conditions. These self-inspections include visual inspections of water lines, diversion devices, storage and containment structures and other parts of the production area. The permit requires

periodic inspections and calibrations of landspreading equipment. The permittee must take corrective actions to problems identified inspections or otherwise notify the Department. Samples of manure, process wastewater and soils receiving land applied materials from the operation must also be collected and analyzed.

Sampling Points

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

Sample Point Number: 002- Blaine Dairy WSF #730; 006- Blaine Dairy FSA Collection ; 016- Swine Facility WSF #883; 017- Swine Settling Basins WSF #886; 023- Vet Sciences Holding Tanks; 025- Blaine Dairy WSF #988; 027- Liquid Waste - WSF 895,899,967; 028- Sand Separation Facility; 032- Beef Grazing- Tank WSF #900

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 002, 006, 016, 017, 023, 025, and 027 had the descriptions updated to better describe the facilities and current operations.

Sample point 028 was added to call out the sand separation facility separately to better describe the facilities waste handling system.

Sample point 032 was added to include the reception tank added for the addition of a wash down area at beef grazing.

1.1.2 Explanation of Operation and Management Requirements

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

Sample Point Number: 004- Manure Stacking/Sand Settling; 007- Beef Grazing WSF #895; 009- Beef Nutrition WSF #967; 011- Sheep Facility South #931; 013- Sheep Facility North #826; 021- Vet Sciences Stacking WSF #940; 024- Misc.Solid Sources; 026- Beef Grazing WSF #899

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	

1.1.3 Changes from Previous Permit

Sample points 004, 007, 009, 011, 013, 021, 024, and 026 had the descriptions updated to better describe the facilities and current operations.

1.1.4 Explanation of Operation and Management Requirements

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

Sample Point Number: 008- Beef Grazing Feed Storage; 010- Beef Nutrition Feed Storage; 012- Sheep South Outdoor Area; 014- Sheep North (826) Outdoor Lots; 022- Accessory Animal Housing; 029- Blaine DairyFSA RunoffControls; 030- Calf Hutches & Runoff Controls; 031- Blaine Dairy Outdoor Areas; 033- Beef Grazing Outdoor Areas; 034- Beef Nutrition Outdoor Areas; 035- Beef Nutrition Calf Hutch Area, and 036- Storm Water Runoff Controls

1.1.5 Changes from Previous Permit

Sample points 008, 010, 012, 014, and 022 had the descriptions updated to better describe the facilities and current operations.

Sample point 029, 030, 031, 033, 034, 035 and 036 were added to call out the runoff controls and outdoor area at the different facilities covered under the WPDES permit. The sample points better describe the operation of the facilities.

1.1.6 Explanation of Operation and Management Requirements

Runoff controls should be visually monitored per the farms monitoring and inspection program and in accordance to s. NR 243, Wis. Admin. Code.

2 Schedules

2.1 Monitoring & Inspection Program

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

Required Action	Due Date
Proposed Monitoring and Inspection Program: Consistent with the monitoring and sampling requirements subsection, the permittee shall update and submit a proposed monitoring and inspection program within 30 days of the effective date of this permit.	06/01/2024

2.2 Emergency Response Plan

Required Action	Due Date
Develop Emergency Response Plan: The permittee shall update and submit an emergency response plan within 30 days of the effective date of this permit.	06/01/2024

2.3 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
Updates to NMP: Submit any necessary updates or changes to the Nutrient Management Plan to meet the conditions outlined in this permit or conditional NMP approval letter (see conditions in the Livestock Operational and Sampling Requirements section)	06/01/2024
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 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 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 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 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 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, to include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	

2.4 Annual Reports

Submit annual reports by January 31 of each year in accordance with the annual reports subsection in standard requirements.

Required Action	Due Date
Submit Annual Report #1: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2025
Submit Annual Report #2: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2026
Submit Annual Report #3: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2027
Submit Annual Report #4: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2028
Submit Annual Report #5: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2029
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed, to include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	

2.5 FSA Runoff Control System - Engineering Evaluation

The evaluation of the feed storage area at Blaine Dairy to determine if the feed storage area runoff control's ability to meet permit requirements

Required Action	Due Date
Written Description of Existing System: Submit a written description of the existing runoff control system and its adequacy to permanently meet the conditions in the Production Area Discharge Limitations and Runoff Control subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	08/01/2025
Plans and Specifications: Submit plans and specifications for Department review and approval to permanently correct any adverse runoff control conditions in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	08/01/2026
Corrections and Post Construction Documentation: Complete construction of runoff controls that permanently correct any adverse runoff control 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.	08/01/2027

2.6 Calf Hutch Runoff Control System - Engineering Evaluation

The evaluation of the calf hutch area runoff controls at Blaine Dairy to determine the runoff control’s ability to meet permit requirements.

Required Action	Due Date
Written Description of Existing System: Submit a written description of the existing runoff control system and its adequacy to permanently meet the conditions in the Production Area Discharge Limitations and Runoff Control subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	08/01/2025
Plans and Specifications: Submit plans and specifications for Department review and approval to permanently correct any adverse runoff control conditions in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	08/01/2026
Corrections and Post Construction Documentation: Complete construction of runoff controls that permanently correct any adverse runoff control 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.	08/01/2027

2.7 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	10/01/2028

2.8 Explanation of Schedules

Schedules are included in the permit to ensure compliance with s. NR 243, Wis. Admin. Code, requirements.

Most of the Schedule items are typical for a large facility like this one. The schedules contained in 2.1, 2.2, 2.3, 2.4, and 2.7 are standard permit schedules.

Schedule sections 2.5 and 2.6 are being required to determine if these meet permit discharge limitations.

Special Reporting Requirements

None

Other Comments:

None

Attachments:

Inspection Report with Map(s)- June 16, 2023

Nutrient Plan Approval Letter- January 16, 2024

Days of Storage- No further action letter- December 13, 2023

Public Notice

Expiration Date:

March 31, 2029

Justification Of Any Waivers From Permit Application Requirements

None

Prepared By: Eric Struck Agricultural Runoff Management Specialist

Date: **February 13, 2024**

Notice of **[Enter one: issuance/reissuance/modification]** was published in the **[Enter name of publication]** ,
[Enter address of publication] .



June 16, 2023

Scott Evens
UW-Arlington Agricultural Research Farm
N695 Hopkins Road
Arlington WI 53911

WPDES Permit # WI-0063908-02
Columbia County

Subject: Reissuance Inspection Report Summary

Dear Scott Evens:

On April 5, 2023 the Wisconsin Department of Natural Resources (WDNR) conducted a site inspection for UW – Arlington Agricultural Research Farm as part of the WPDES permit reissuance process. A copy of this inspection report is attached. Based on the site visit no additional items were identified to be part of the permit application. There are several items that will be required within the next permit term.

Please review the attached site inspection report. The end of the report summarizes actions that will be necessary for the final permit application and possible schedule items for the first permit term.

The final permit application should be submitted by September 30, 2023. Permit application materials must be submitted through the ePermitting System located at <http://dnr.wi.gov/permits/water/>. The following is required for a complete permit application:

Permit Application Materials Required for All Operations:

- 3400-025 form (Livestock/Poultry Operation WPDES Permit Application)
- 3400-025A form (Animal Units Calculation Worksheet)
- 3400-025B form (Nutrient Management Plan Checklist)
- 3400-025C form (Reviewable Facilities of Systems Checklist)
- Soil survey map(s) for each site managed by your operation
- Labeled aerial map(s) showing the features and structures located at each site managed by your operation (clearly delineate what is existing and proposed)
- Calculations documenting a minimum of 180 days liquid manure (and process wastewater) storage
- Supporting documentation for 180-day storage calculations
- A complete 5-year Nutrient Management Plan (NMP). If necessary, include a description of permanent spray irrigation systems and any other landspreading or treatment systems (proposed or active)
- *Plans and specifications for reviewable facilities (if proposed)

***Note: Plans and specifications must be submitted through the ePermitting system as a separate submittal**

Several action items were identified during the inspection.

- Finish repairing VTA at Sheep North
- VTA repair at Bookhout Farm prior to populating lots
- Locate as built plans for Swine Facility for WSF #863 under drains

If improvements are made and vegetation is established, please notify Eric Struck of these changes prior to permit reissuance. If the plans are located please send a copy to Eric Struck.

If you have any questions regarding this letter, inspection report, or permit requirements, please contact me at (608) 422-1512 or eric.struck@wisconsin.gov. If you have any questions on the ePermitting submittal process, please contact Tony Salituro at (608) 267-7150 or Anthony.salituro@wisconsin.gov.

Sincerely,

A handwritten signature in black ink that reads "Eric J. Struck". The signature is written in a cursive style with a loop at the end of the last name.

Eric J. Struck

Agricultural Runoff Management Specialist – Bureau of Watershed Management
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road, Fitchburg, WI 53711
Cell: (608)-422-1512
eric.struck@wisconsin.gov

Attachments: Inspection report April 05, 2023

CC: Laura Bub, Falon French, Rob Davis, and Josie Hanrahan (WDNR)
Mike Bertram (UW Arlington)
Kaesey Glaess and Andrew Skwor (MSA- Engineer),
Todd Rietmann (Columbia County)



CAFO Compliance Report: June 16, 2023

Inspection Date: April 5, 2023

Inspection Type: Permit Reissuance – Complete Production Area(s)

Operation Name: UW – Arlington Agricultural Research Farm

WPDES Permit No. WI-0063908-02

Operation Address: N695 Hopkins Road, Arlington, WI 53911

County: Columbia

On-Site representatives: UW Arlington: Mike Bertram & Scott Evans (also farms NMP Planner)
MSA- Engineering: Kaesey Glaess

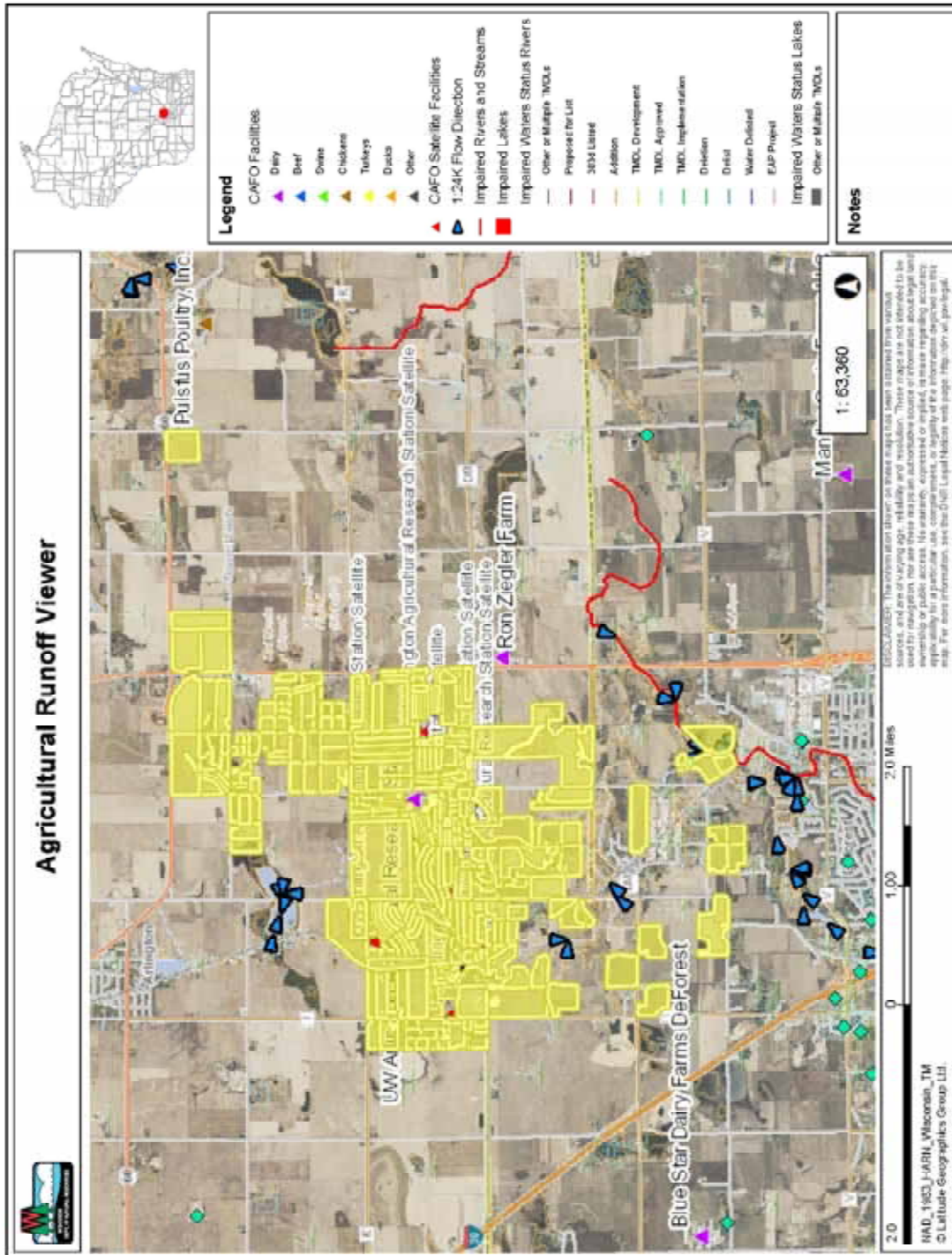
DNR Staff / Report Writers: Eric Struck (writer), Josie Hanrahan, Laura Bub, and Rob Davis

On April 05, 2023, Eric Struck, Josie Hanrahan, Laura Bub, and Rob Davis met with representatives of UW-Arlington Research Farm to conduct a complete production area inspection for the reissuance of the WPDES permit held by UW- Arlington Research Farm. The operation's permit expires on March 31, 2024 with a reissuance application due on September 30, 2023. Mike Bertram and Scott Evens from UW, and Kaesey Glaess from MSA were present for the inspection on behalf of the farm. The inspection began around 9 am and concluded at around 12:45 pm. The weather the day of the inspection was overcast and rainy with temps in the 50's. Little rain or snow had fallen in the week prior to the inspection and no water samples were taken.

Please see the final section of the inspection report for a list of action items, areas of concern, and any additional application materials required for the final WPDES permit application.

Brief Facility Description

UW Arlington Agricultural Research Station is an existing Concentrated Animal Feeding Operation (CAFO). UW Arlington Agricultural Research Station is owned and operated by the University of Wisconsin. It currently has 1910 animal units (44 boars, 227 sows, 653 small pigs, 976 market pigs, 117 dairy calves, 580 milking cows, 20 large dairy heifers, 400 steers or cows, and 850 sheep) with no planned expansion. UW Arlington Agricultural Research Station has a total of 4,776 acres (1,641 owned and 3,135 controlled through contracts, rental agreements, or leases, or under manure agreements) of which 4,776 are spreadable acres available for land application of manure and process wastewater. Manure generation and spreading records indicate the UW Arlington herd will annually generate approximately 14,096,649 gallons of manure and process wastewater and 7,228 tons of solid manure in the last year. A total of 1,110 acres were used for land application last year.



Map 1. UW-Arlington Research Farm land base and facility locations.

1. Blaine Dairy



Map 2. Labeled map of Blaine Dairy from previous application.

SITE OBSERVATIONS

Animal Housing

All milking cows are housed under roof. An outdoor vegetated area located on the eastern edge of the site. The outdoor vegetated area is used to pasture a limited number of dry cows or heifers. The area exhibited ample vegetative cover and appeared to meet requirements. Current and past operation appears to meet permit requirements and no evaluation is required.



Photo #	1
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: South end of freestall barn 985 facing north. All dairy milking cows at Blaine Dairy are housed under roof.



Photo #	2
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Dry Cow Barn at Blaine Dairy, facing north northwest from WSF 730.



Photo #	3
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Pasture walkway from Dry Cow Barn. Used for certain projects. Pastures were well maintained. Facing southeast from west side



Photo #	4
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Pasture walkway from Dry Cow Barn, facing northeast.



Photo #	5
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Pasture walkway facing east at one of the entrances to the paddock. Only area needing some maintenance or gravel/limestone to stabilize the walkway.

Calf hutch area

A calf hutch area exists on the north end of the site. Runoff would flow to the north into a vegetated buffer and then into a ditch line to the east. Runoff would then travel east until it reaches the edge of the property and then is directed to the south. The nearest stream is approximately one-half mile from the calf hutch area. An engineering evaluation of this system may be required in the next permit term to determine if runoff can reach surface or ground water.



Photo #	6
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Calf Hutches outside the old dairy barn at Blaine Dairy. Facing south from the driveway area.



Photo #	7
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing west from the east side of the calf hutch area, on west end is a staging area for manure and bedding that is land applied or taken to approved storage structure.



Photo #	8
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Enclosed feed bin in the calf hutch area at Blaine Dairy. Facing southwest from the southern end of the main calf hutch area.



Photo #	9
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing west from the northeast corner of the calf hutch area at Blaine Dairy. Flow towards photographer.



Photo #	10
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing to the northwest corner of the calf hutch area at Blaine Dairy.



Photo #	11
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing north from the north end of the calf hutch area to the VTA area.



Photo #	12
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: North of the calf hutch area facing west to field and part of the VTA area.



Photo #	13
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Ditch that runs along the east side of the calf hutch area. Facing south, flow is to the north.



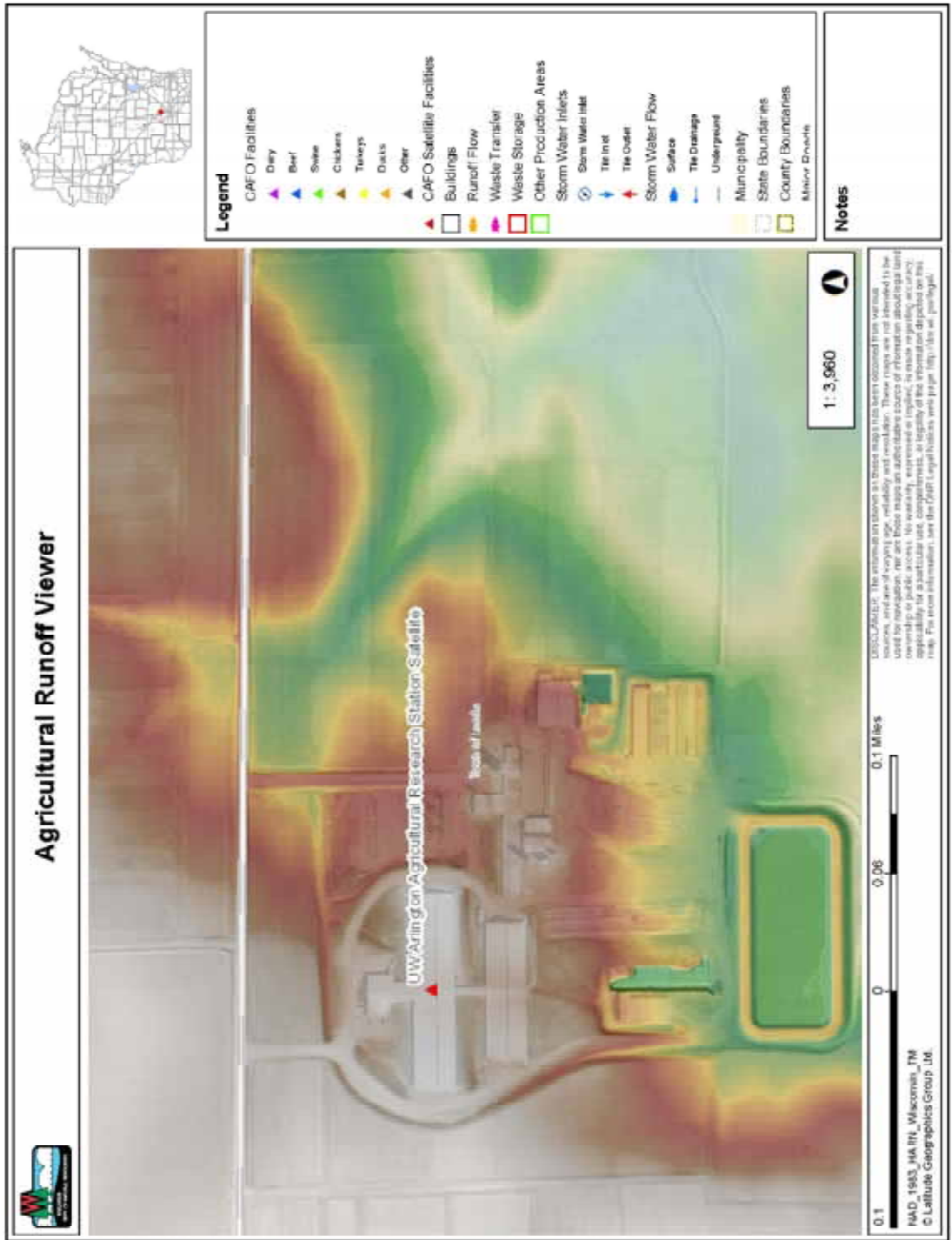
Photo #	14
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing north from the edge of the ditch along the east side of the calf hutch area.

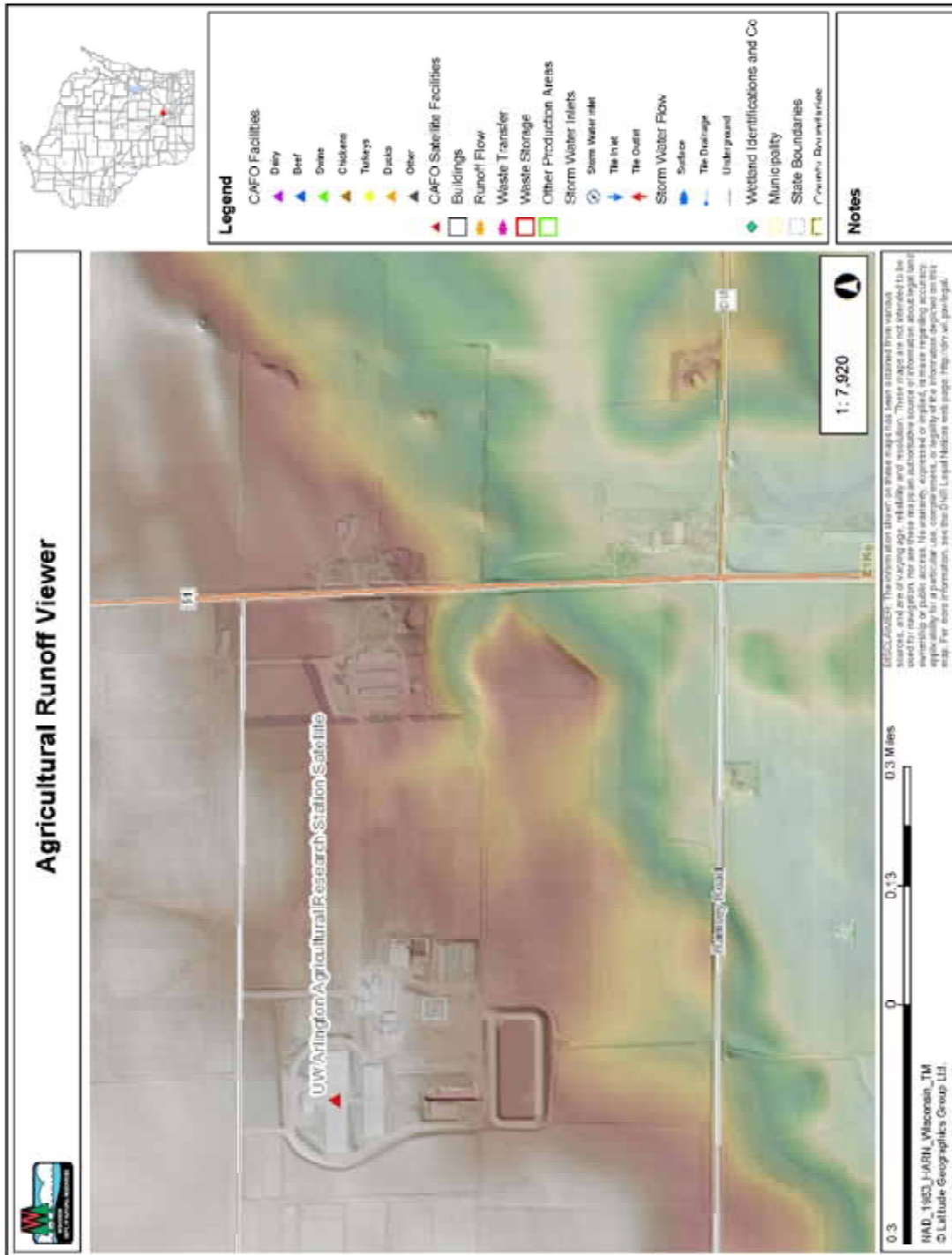


Photo #	15
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

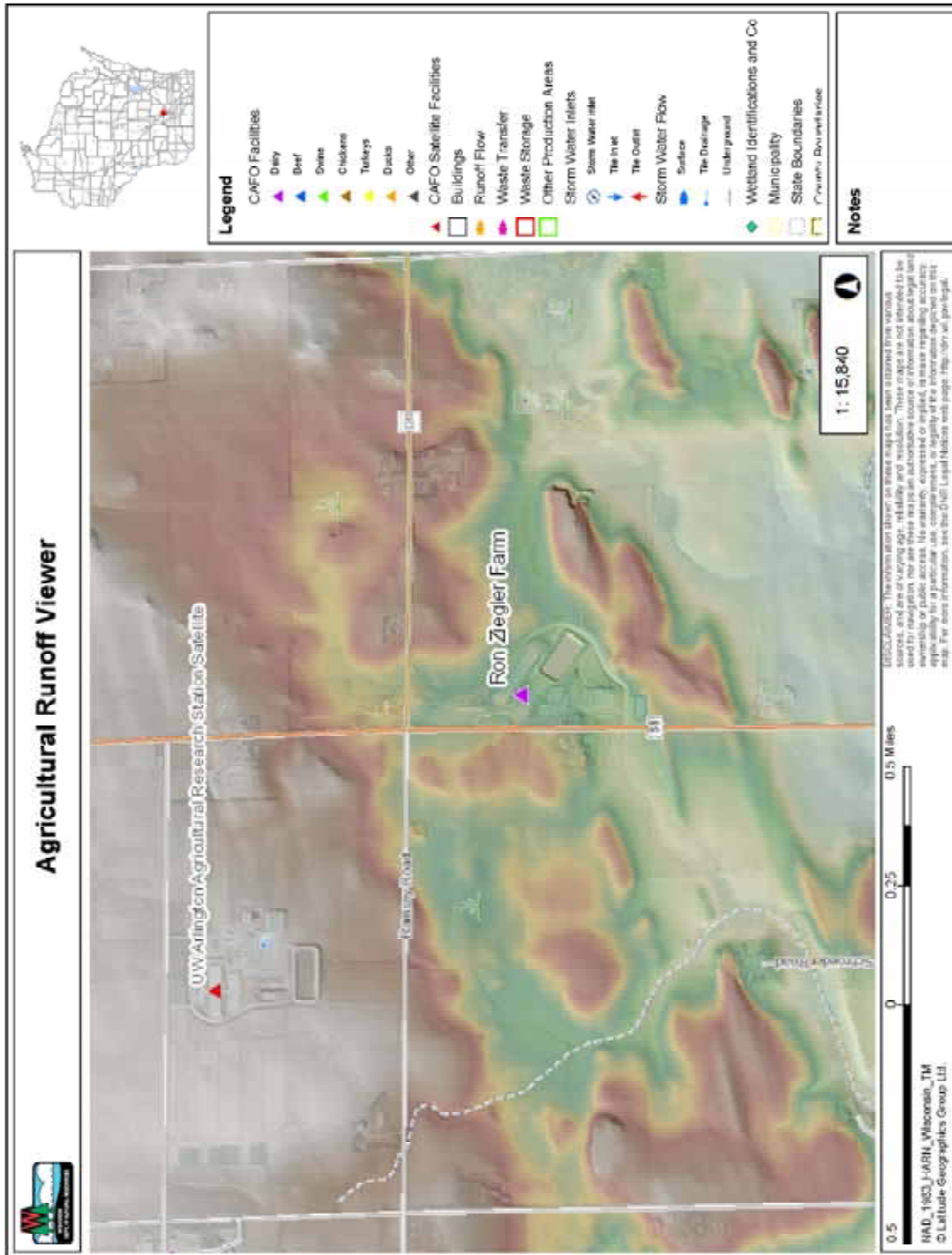
Description: Culvert along driveway and ditch along the east side of the calf hutch area. Facing east towards flow direction.



Map 3. WDNR Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area. Potential flow path flowing north along ditch to culvert and then to the east.



Map 4. WDNR Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area of Blaine Dairy. Both the feed storage area and calf hutch area. Potential flow path flowing south from the feed storage area and east southeast from the calf hutch area.



Map 5. WDNR Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area of Blaine Dairy. Flow path from calf hutches area could potentially reach the flow path that circles Ron Ziegler Farm and reach a tributary of the Yahara River.

Waste Storage Facilities

Solid and liquid waste storage facilities (WSF) are managed to not have current or past indicators of discharges. Solid and liquid waste storage structures are well-maintained and in good repair. All WSF had appropriate markers installed at the time of the inspection. Sand was stored in appropriate locations. Manure from the freestall barns #985A and #985B is transferred to the sand separation building. Sand is separated and stored indoors or is stacked in the old sand land area. Manure is then pumped WSF #988. The former sand lane (sample point 004) is also used to stack solid manure and waste feed prior to land application. The former sand land has complete collection and is pumped to WSF #988. The Dry Cow barn has an adjoining waste storage facility #730 manure is pushed into the storage is land applied.



Photo #	16
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing northeast at the sand separation building at Blain Dairy. Located on the west side of the production area north of the main WSF



Photo #	17
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Inside the sand separation building. Separated sand is stored inside to dry further before it is reused.



Photo #	18
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing west at old sand land now used to store solid manure and separated sand. Old sand lane has complete collection of runoffs.



Photo #	19
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Transfer tank from the old sand land and sand separation building. Pumps manure and wastewater to the main manure storage. Reception tank has a level monitor to automatically run the pump to transfer.



Photo #	20
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: West side of the main WSF at Blaine Dairy facing southeast. Fence installed around storage.



Photo #	21
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing south from the north side of the main WSF at Blaine Dairy.



Photo #	22
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Markers in the main WSF at Blaine Dairy, located on the access ramp in northeast corner.



Photo #	23
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Clean sand stored on former feed lot south of the old dairy barn.



Photo #	24
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Bunkers south of the old dairy barn used to store manure and bedding temporarily.



Photo #	25
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Southeast corner of the WSF 730 south of the Dry Cow barn.



Photo #	26
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing north to dry cow barn from south side of WSF 730. White markers on the wall of the storage.

Feed Storage Area Runoff

There are two feed storage areas located at Blaine Dairy. The first is a series of five concrete bunkers located on the southeast corner of the production area. Runoff from the bunkers drain to a first-flush collection system and then to a vegetated treatment area. An evaluation of the feed bunkers will be included in the proposed permit. The first flush collection does not have the ability to capture a 25-year 24-hour storm event. A discussion was had about the concerns about surface and ground water in the area of the VTA and how it relates to permit conditions. Feed had been stacked outside the bunkers on the east side for the bunker area. The feed and leachate were outside the collection and some leachate was leaving the feed storage area causing channelization and vegetation burn out. Solutions to the storage such as a larger apron or berm were discussed, along with the overall management of the bunkers. The VTA appeared to be in good condition, it had been harvested last year. Corn silage and haylage is stored within silage bags to the west of the bunkers. The bags are located on a gravel pad. The bag pad was clean and did not have any signs of runoff. The bagged feed area maybe included in the evaluation of the feed storage area in the next permit term.



Photo #	27
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan
Description: West end of the bunkers, flow from the bunkers flows west and then south to collection point.	



Photo #	28
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Drive over grate on the southwest end of the feed storage area to collect runoff form the feed storage area.



Photo #	29
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: First flush collection in the southwest corner of the bunker feed storage area.



Photo #	30
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing south at the VTA from the northern end of the VTA. Some ponding and debris from winter snow removal. No channelized flow visible.



Photo #	31
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing west at the southern end of the VTA for the feed storage area. Area is well vegetated and well maintained.



Photo #	32
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Facing north northeast from the southwest corner of the VTA for the feed storage area.



Photo #	33
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: East side for the feed storage area bunker silos. Feed stacked beyond the floor of the bunkers.



Photo #	34
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Leachate flow from the northeast corner of the feed storage area bunkers.



Photo #	35
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Leachate flow path from the west end of the feed bunkers.



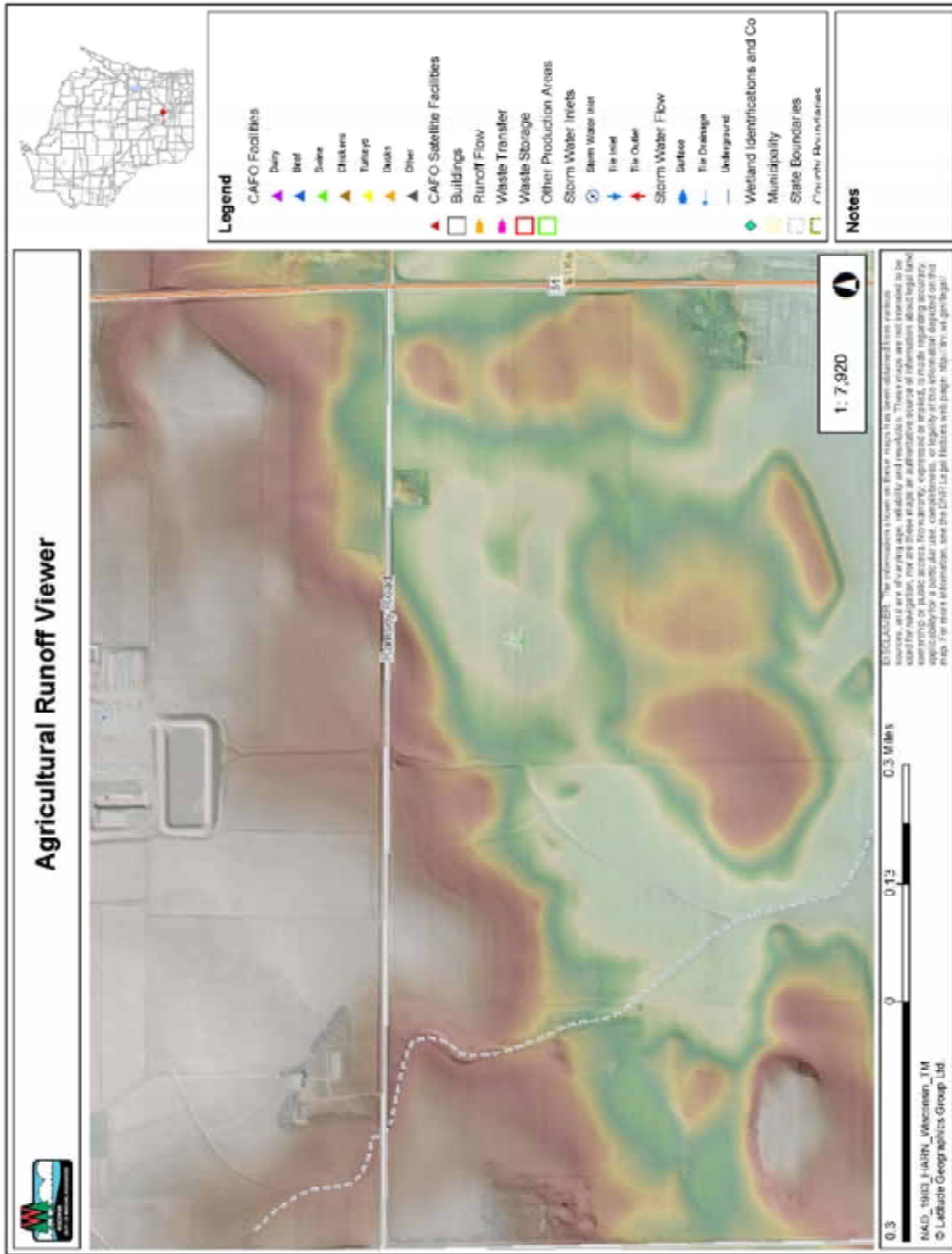
Photo #	36
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Leachate and runoff from the west end of the bunkers not being collected by the first flush collection.



Photo #	37
Date/Time:	April 5, 2023
Location	UW- Arlington- Blain Dairy
Photo taken by:	J. Hanrahan

Description: Gravel area of the feed storage are used to store bagged feed. This area is not part of the first flush collection and is operated to not have runoff.



Map 6. WDNR Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area. Potential flow path flowing south to a possible ditch to an intermittent stream that is a tributary to the Yaraha River.

Ancillary Service Areas

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

Management practices are implemented to sustain sufficient vegetative cover on CAFO outdoor vegetated areas.

2. Beef Grazing



Map 7. Beef Grazing map provided with last permit application.

SITE OBSERVATIONS

Feed Lots

At the time of the inspection the Beef Grazing Facility was depopulated. A reception tank was installed in the northwest corner of barn #895. The tank will be used to collect wash wastewater from the facility. The long-term plan is to house calves at the facility requiring the wash area and collection. The lots and pastures around the facility were vacant and vegetated. Some of the pastures are now cropped. The VTA and settling basins were in good condition.



Photo #	38
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: Inside barn #895 at Beef Grazing, barn being remodeled and repurposed for future research.



Photo #	39
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: Lots outside Barns 894 currently empty, used to house horses.



Photo #	40
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: Lots outside barn 899 and 897 runoff flows to a settling basin before entering VTA. Some runoff collected by WSF 899.



Photo #	41
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: VTA for Lot 899. Was vegetated but mowing and harvesting was not recent as the site has been depopulated.



Photo #	42
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: Facing west at barn 896. No animals or waste present, runoff flows east then south to WSF 895.



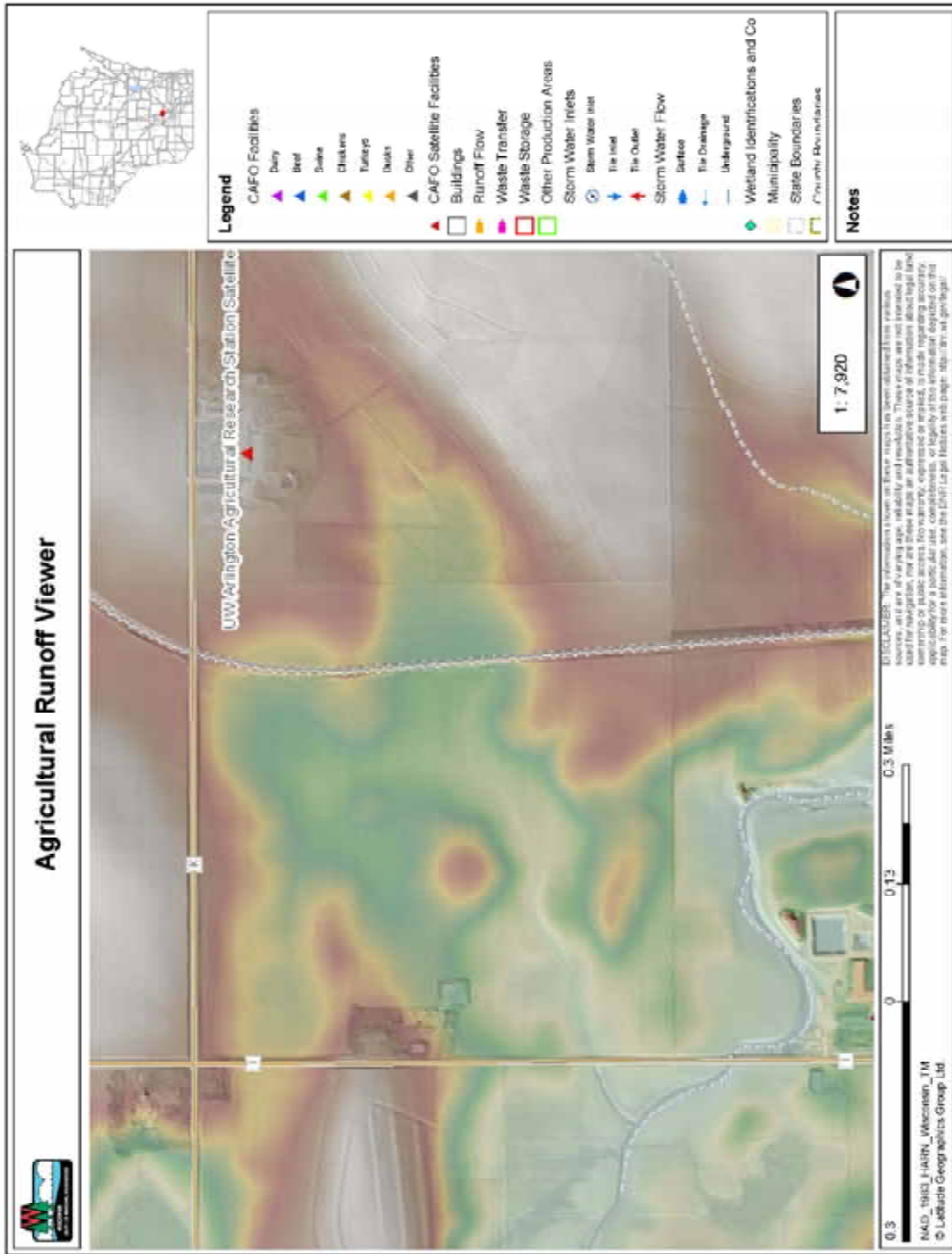
Photo #	43
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: Facing northeast from the center of the west side of the VTA for Lot 895. VTA was vegetated and in good condition.



Photo #	44
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: Facing south from the settling basin and spreader bar for Lot 895 and the associated VTA.



Map 8. WDR Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area and nearest surface water. Flow would have to flow south and then to the east to reach surface water.

Waste Storage Facilities

WSF #895 and WSF #899 are solid waste storage facilities that are managed to not have current or past indicators of discharges. Some liquids accumulate in WSF #895. These are pumped and hauled to the main WSF at Blaine Dairy. Solid waste storage structures are well-maintained, in good repair, and in compliance with permit requirements. An engineering evaluation is not required at this time. The waste storage did have markers installed and do have the capacity to capture a 25-year 24-hour rain event.

A collection tank was installed in 2022. The tank will collect process wastewater from a wash center being installed in barn #895. The facility is be repropoed and will begin to house calves. A sample point will be added to the permit for the installation of the tank. The process wastewater will be land applied or taken to the main storage at Blain Dairy.



Photo #	45
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan
Description: WSF 895 facing South.	



Photo #	46
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan
Description: Markers located in WSF 895 east wall.	



Photo #	47
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan
Description: Markers in WSF 899 east wall.	



Photo #	48
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: West wall of WSF 899.



Photo #	49
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Grazing
Photo taken by:	J. Hanrahan

Description: Wash water reception tank installed in 2022 with approved plans and specifications, located northwest of the entrance of barn 895.

3. Beef Nutrition



Map 9. Map of Beef Nutrition provided with previous application.

SITE OBSERVATIONS

Feed Lots

All barns at Beef nutrition had animals at the time of the inspection. Barn #967 was only partial populated at the time the time of the inspection. All animals in barn #967 were under roof at the time of the inspection.

Barn #973 was fully populated and lot #973 was also in use during the inspection. Runoff from the barn feed lot flows south southeast to a settling basin then to a VTA. The settling basin was in good condition. The VTA was also in good condition at the time of the inspection. Since the last inspection a calf hutch area was constructed on the north side of Barn #973. Runoff from the calf hutch area #973 was designed to flow to the settling basin and to the current VTA. MSA did the plans for the calf hutch area. This calf hutch area may be added as a sample point to the permit, the design plans maybe requested, and an evaluation maybe required in the next permit term for review of the runoff controls.



Photo #	50
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Barn 967 all animals under roof. Facing east from the center of the barn.



Photo #	51
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Barn 967 all animals under roof. Facing west from the center of the barn.



Photo #	52
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Calf hutch area 973, located north of Barn 973. Facing east from the northwest side for barn 973.



Photo #	53
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Facing north to barn 973 from the settling basin. Animals have access to lot 973.



Photo #	54
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Settling basin for lot 973. Facing east.



Photo #	55
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan
Description: slots in the settling basin acting as a spreader bar.	



Photo #	56
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan
Description: VTA for lot 973 at Beef Nutrition.	



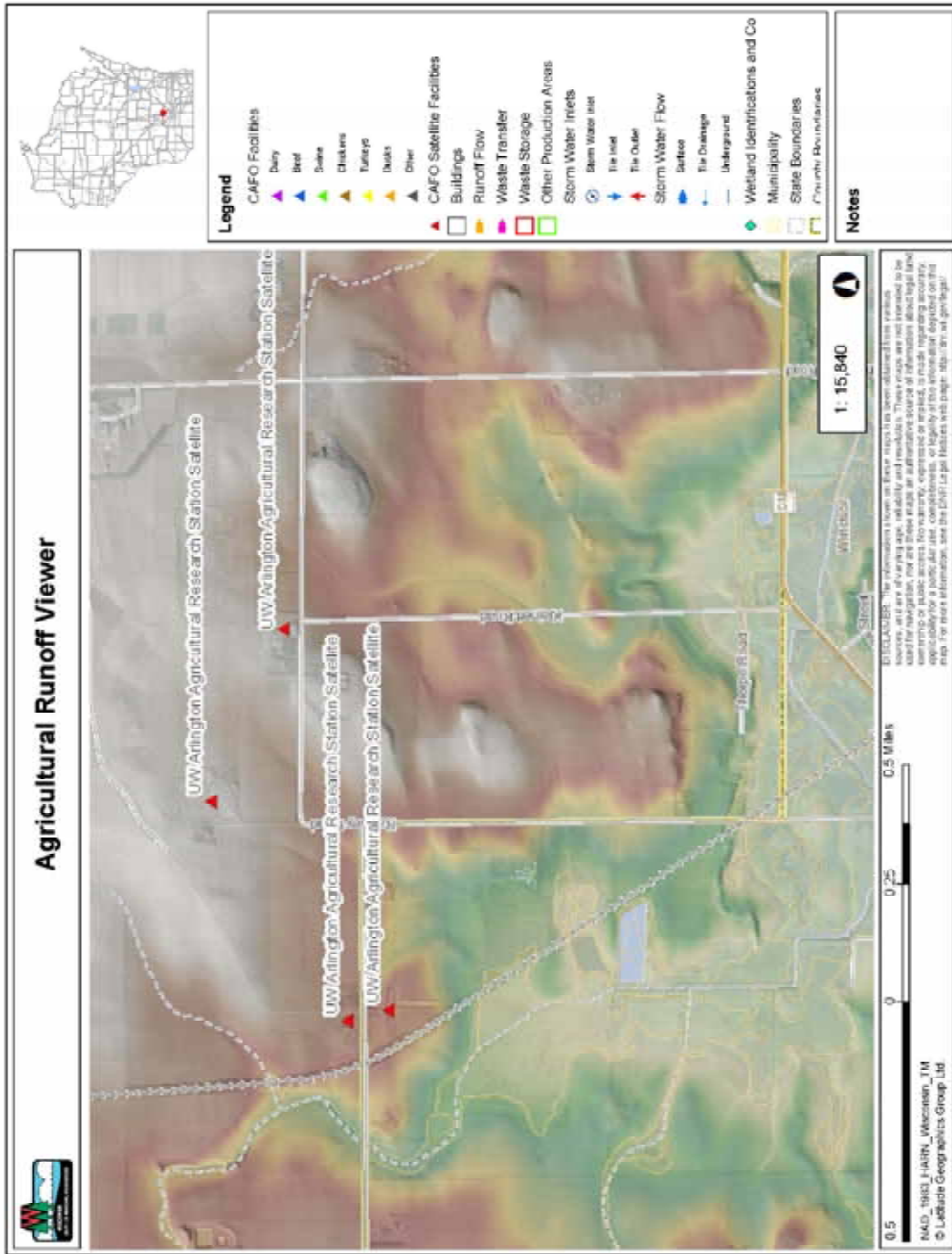
Photo #	57
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Facing north to barn 973 from the southern end of the associated VTA. Mowing and harvesting is needed to maintain the proper operation of a VTA.



Photo #	58
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Facing east at the lot 973 VTA. Overgrown vegetation but no signs of runoff or channelization.



Map 10. WDNR Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area and nearest surface water. East locations are Sheep North and South, North location is Beef Nutrition facility and east location is Bookhout facility.

Waste Storage Facilities

WSF #967 is a solid stacking area that collects some runoff, plans and specifications were submitted for permeant markers. This storage has the capability of containing a 25-year 24-hour storm event. The storage was constructed in 2012, was in good repair, no indicators, or discharges, and appears to meet permit requirements.



Photo #	59
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Markers on the west wall of WSF 967



Photo #	60
Date/Time:	April 5, 2023
Location	UW- Arlington- Beef Nutrition
Photo taken by:	J. Hanrahan

Description: Manure stacked in WSF 967 and collected rainwater.

4. Swine Facility



Map 11. Swine Facility map included with previous permit application.

SITE OBSERVATIONS

Animal Housing

All swine are housed under roof within three barns. Waste is transferred via a flush flume system. Water for the transfer system is pumped from WSF #863. Animal housing areas are managed to not have current or past indicators of discharges. The inspection was limited to the viewing area because of biosecurity concerns.



Photo #	61
Date/Time:	April 5, 2023
Location	UW- Arlington- Swine Facility
Photo taken by:	J. Hanrahan

Description: Viewing area at entrance of the Swine facility. Piglet using a waterer and slatted floor for waste to drop through for collection.

Waste Storage Facilities

Liquid manure is stored within WSF #863 and WSF #886. WSF #886 has a four-stage system. WSF #886 acts as settling basins. As the waste flows through the system solids settle out before overflowing into the next of the four basins before entering WSF #863 via pump. WSF#863 is a poly lined storage last evaluated in 2009. Permanent markers were observed. Liquid waste storage facilities are managed to not have current or past indicators of discharges. Liquid waste storage structures are well-maintained, in good repair, and appear to be in compliance with permit requirements. During the inspection it was said that WSF#863 has under drain tile or lysimeter installed. The sampling and testing of the drain system will be added to the next permit term. The drain system is a good indication of leak detection.



Photo #	62
Date/Time:	April 5, 2023
Location	UW- Arlington- Swine Facility
Photo taken by:	J. Hanrahan

Description: WSF 886 facing southeast.



Photo #	63
Date/Time:	April 5, 2023
Location	UW- Arlington- Swine Facility
Photo taken by:	J. Hanrahan

Description: Facing east at the WSF 886, the storage acts as a solid settling lane as the flow moves through the four basins.



Photo #	64
Date/Time:	April 5, 2023
Location	UW- Arlington- Swine Facility
Photo taken by:	J. Hanrahan

Description: Sump/reception tank located on the west side of WSF 863. Waste from WSF 886 collects here and is pumped to WSF 863.



Photo #	65
Date/Time:	April 5, 2023
Location	UW- Arlington- Swine Facility
Photo taken by:	J. Hanrahan

Description: Access ramp and markers on the west side of WSF 863.



Photo #	66
Date/Time:	April 5, 2023
Location	UW- Arlington- Swine Facility
Photo taken by:	J. Hanrahan

Description: Facing north at the access ramp on the west side of WSF 863 and pump station.



Photo #	67
Date/Time:	April 5, 2023
Location	UW- Arlington- Swine Facility
Photo taken by:	J. Hanrahan

Description: Pump and sump for the under-drain system for WSF 863. Located on the east side of the storage.



Photo #	68
Date/Time:	April 5, 2023
Location	UW- Arlington- Swine Facility
Photo taken by:	J. Hanrahan

Description: Manhole for sump and pump for the underdrain system for WSF 863, sampled for leak detection.

5. Sheep North



Map 12. Sheep North production area map from previous permit application.

SITE OBSERVATIONS

Feed Lots

The Sheep North site houses animals in a single barn with an adjacent outdoor lot. Runoff from the lot flows to the south and into a settling basin. The settling basin contains a screen that captures solids and liquids. The runoff is then directed to the vegetated treatment area to the west. The VTA has a berm around the east and west side. From the spreader bar the runoff flows to the north. At the time of the inspection the spreader bar was in the middle of a repair. Some pooling of liquids was occurring near the beginning of the treatment area. The farm stated that the maintenance would be complete once field conditions allow. Pictures of the complete work on the VTA should be provided to the department. Feedlot areas are managed to not have current or past indicators of discharges. Feedlot runoff control systems are well-maintained, in good repair. An engineering evaluation maybe required on the runoff control system to determine if it meets permit conditions.



Photo #	69
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: Facing northwest at barn 826. Left of picture is Meek Road ditch.



Photo #	70
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: Facing west at pasture walkway area between Meek Road and feed lot for barn 826.



Photo #	71
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: Facing west at feed lot and barn 826.



Photo #	72
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: Facing northeast at barn and lot 826, flow is coming towards photographer.



Photo #	73
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: Settling basin for lot 826, screens in place and appear to be in good condition.



Photo #	74
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: Facing west towards VTA. Settling basin drains underground to VTA.



Photo #	75
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: Discharge point of settling basin from Lot 826. Facing west, ponded runoff present in the first part of the VTA.



Photo #	76
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: West side of the VTA facing north, ponded runoff in beginning area of VTA. Maintenance started and some of the spreader bar has been removed.



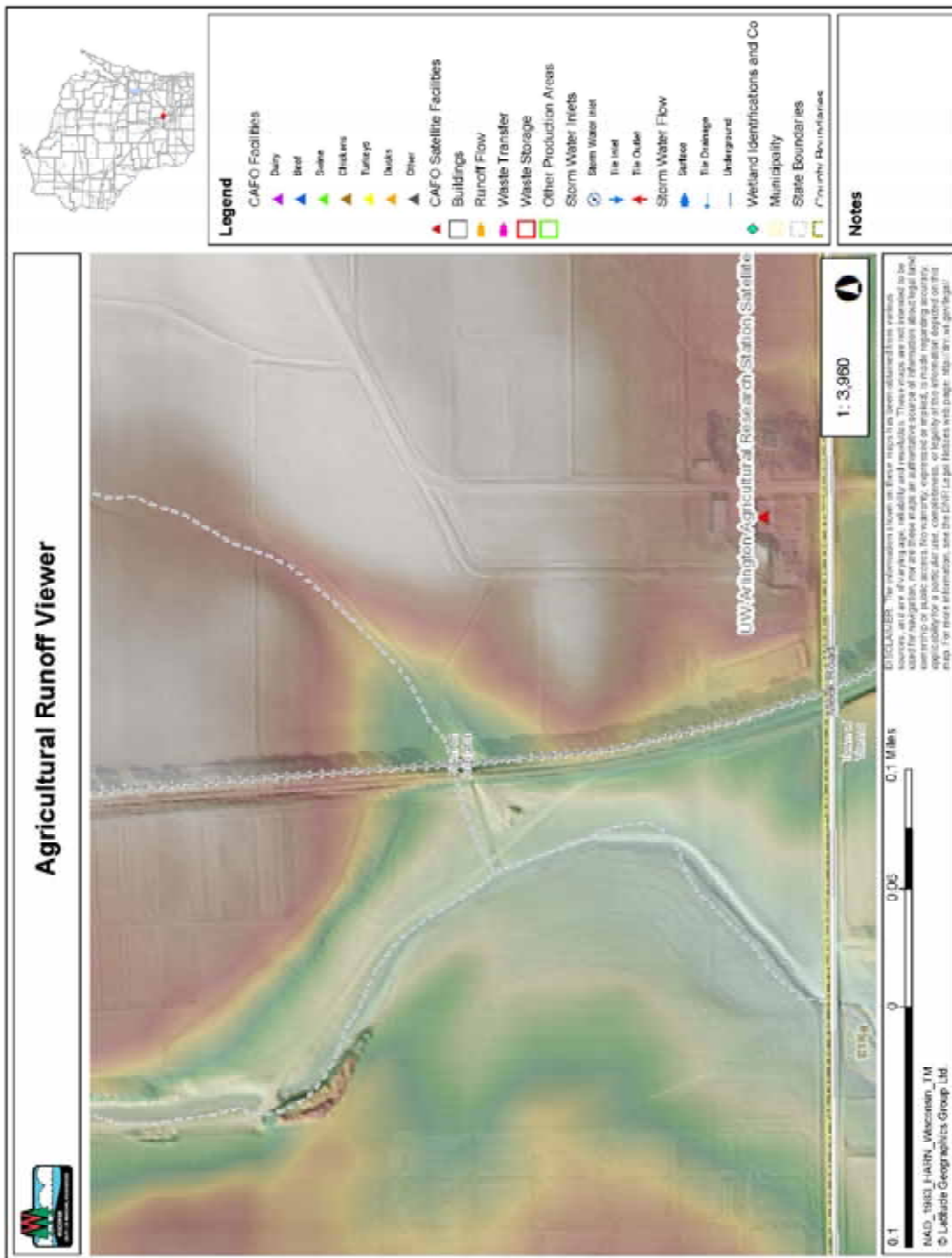
Photo #	77
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: West side of VTA facing north on the outside of berm. No runoff observed outside of the VTA at the south end and west side at the time of the inspection.



Photo #	78
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep North
Photo taken by:	J. Hanrahan

Description: Facing northwest from the east side of the VTA. No flow paths identified in the VTA; vegetation well maintained.



Map 13. WDNR Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area. Possible flow path north of the facility reaching intermittent stream and culvert under railroad grade.

Waste Storage

Waste from this site is either land applied according to the farms nutrient management plan or is taken to an approved WSF for long-term storage. No waste was observed being stored at the site and the lots appeared to be in good condition.

6. Sheep South



Map 14. Map of Sheep South production area from previous application submitted to the department.

SITE OBSERVATIONS

Feed Lots

Animals at Sheep South are housed in Barn #931 which contains an adjacent outdoor lot, south of the barn. Runoff from this lot is treated by a vegetated treatment area which directs runoff to the south. Runoff flows to the south and center of lot to settling basin prior to the VTA.

Feedlot areas are managed to not have current or past indicators of discharges. Feedlot runoff control systems are well-maintained and in good repair. An evaluation maybe required for the runoff controls to determine if they meet permit requirements.

Areas around the facility have been used as pasture depending on the current projects at UW-Madison. A small outdoor vegetated area is located on the west side of the building #931. At the time of the inspection all outdoor areas appear well vegetated or were being cropped by the farm.



Photo #	79
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep South
Photo taken by:	J. Hanrahan

Description: Facing east at barn and lots 931. Runoff flow from the lots travels to the middle of the barn lots and then south.



Photo #	80
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep South
Photo taken by:	J. Hanrahan

Description: Facing north at barn 931, midpoint of barn where flow meets and begins to flow south.



Photo #	81
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep South
Photo taken by:	J. Hanrahan

Description: Collection settling area at the beginning of VTA. Some water standing before gravel spreader bar. No concentrated flow paths and good vegetation present.



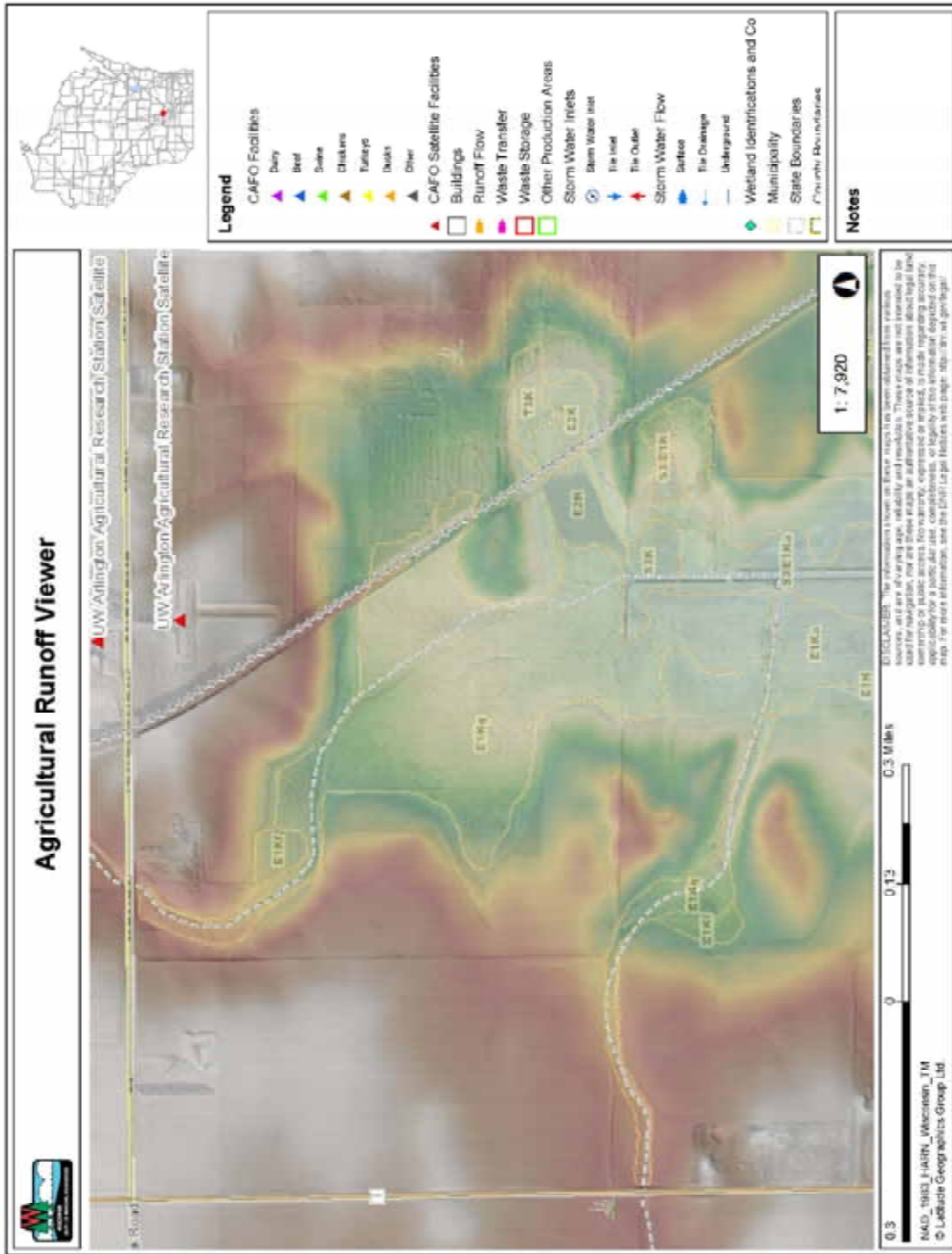
Photo #	82
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep South
Photo taken by:	J. Hanrahan

Description: First half of the VTA facing west. Good vegetation and proper maintenance has been preformed prior to the inspection.



Photo #	83
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep South
Photo taken by:	J. Hanrahan

Description: Facing south southwest, towards the end of the VTA. Good vegetation present throughout VTA. VTA ends at cropped field followed by tree line and railroad grade.



Map 15. WDNr Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area. Possible flow path off end of VTA is along the railroad grade to a culvert area reaching a wetland complex with an intermittent stream flow path ultimately reaching the Yaraha River tributaries.

Waste Storage

Waste from this site is either land applied according to the farms nutrient management plan or is taken to an approved WSF for long-term storage. No waste was observed being stored at the site and the lots appeared to be in good condition.

7. Bookhout Farm



Map 16. Map of Bookhout Production area provided with last permit application.

SITE OBSERVATIONS

Feed Lots

At the time of inspection all buildings were empty at Bookhout Farm. The long-term plan for this site is unknown at this time. Recently it has been used for short term storage and quarantine situations. The facility will remain in the permit, a project could come up during the permit term and part of the facility maybe populated. The location has two outdoor lots, #945 and #940. Each lot has a VTA associated with it. Runoff from Lot #940 is directed to a settling basin and flows east to the VTA. Runoff from Lot #945 is also directed to a settling basin. Solids are captured in this basin and liquids continue to flow to the vegetated treatment area to the east. Feedlot areas were cleaned up and managed to not have current or past indicators of discharges. Feedlot runoff control systems are well-maintained, in good repair and appear to be in compliance with permit requirements. Some maintenance should be done before the site is populated. Some areas of the VTA have become uneven allowing for ponding and concentrated flow paths just past the spreader bar. Engineering evaluations of each feedlot runoff controls system may be required for this permit term if population is planned in the next five years.



Photo #	84
Date/Time:	April 5, 2023
Location	UW- Arlington- Sheep South
Photo taken by:	J. Hanrahan
Description: Barn and lot 945, facing northwest.	



Photo #	85
Date/Time:	April 5, 2023
Location	UW- Arlington- Bookhout
Photo taken by:	J. Hanrahan

Description: Settling basin for runoff from lot 945.



Photo #	86
Date/Time:	April 5, 2023
Location	UW- Arlington- Bookhout
Photo taken by:	J. Hanrahan

Description: Back side of settling basin for lot 945. Solid build up behind spreader bar has occurred along with some overgrown vegetation.



Photo #	87
Date/Time:	April 5, 2023
Location	UW- Arlington- Bookhout
Photo taken by:	J. Hanrahan

Description: Facing east at VTA for lot 945. The walkway had some overgrown vegetation but remainder of VTA was in good condition.



Photo #	88
Date/Time:	April 5, 2023
Location	UW- Arlington- Bookhout
Photo taken by:	J. Hanrahan

Description: Settling basin and spreader bar for lots 940 and 844. Facing South from north end of basin.



Photo #	89 & 90
Date/Time:	April 5, 2023
Location	UW- Arlington- Bookhout
Photo taken by:	J. Hanrahan

Description: Facing north from the south side of the settling basin for lot 940 and 844. Some channelization and vegetation build up has occurred.



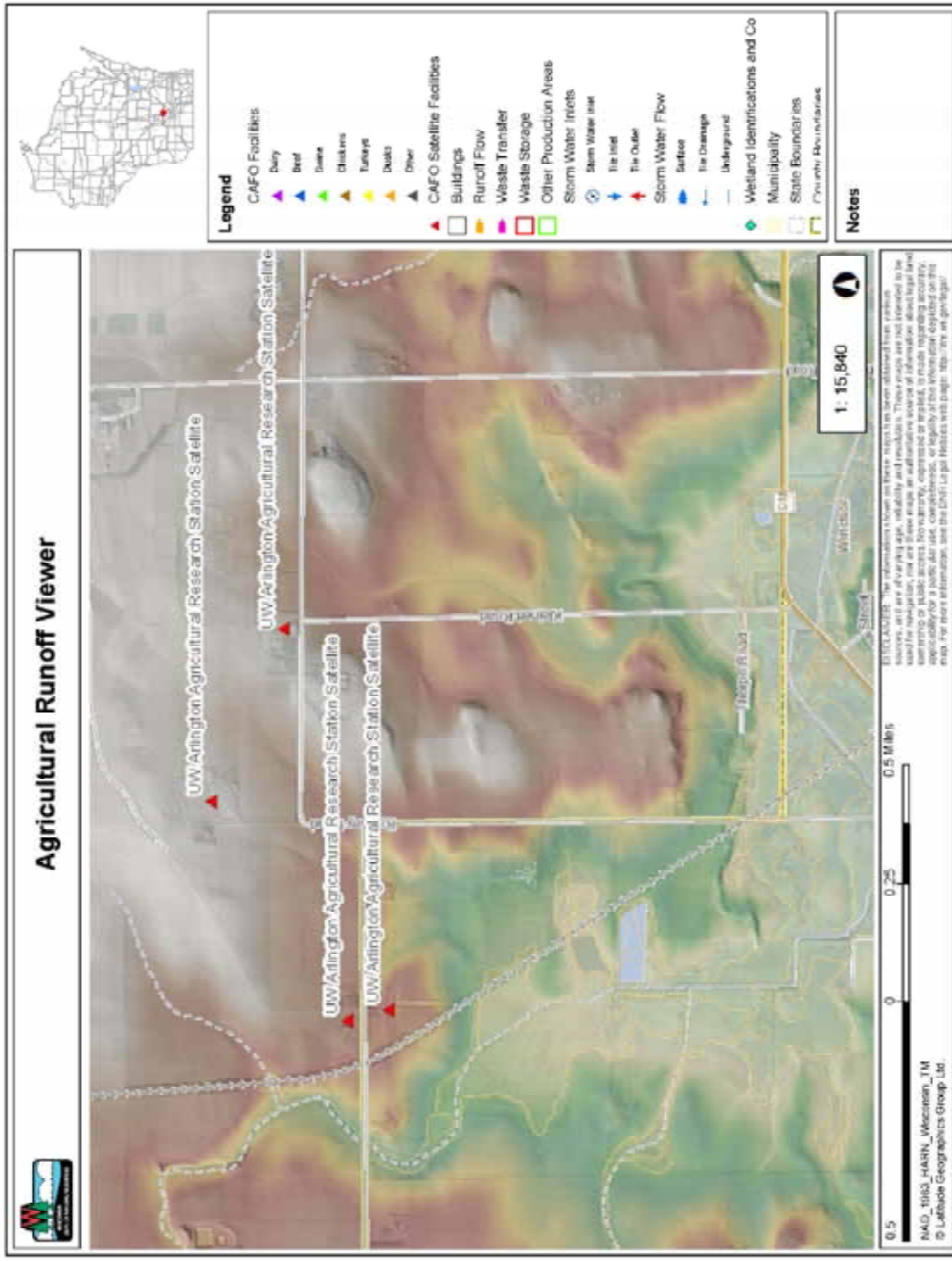
Photo #	91
Date/Time:	April 5, 2023
Location	UW- Arlington- Bookhout
Photo taken by:	J. Hanrahan

Description: Area of concentrated flow paths developing in the beginning of the VTA for Lot 940.



Photo #	92
Date/Time:	April 5, 2023
Location	UW- Arlington- Bookhout
Photo taken by:	E. Struck

Description: Facing east down the VTA for lot 940. Remainder of VTA was in good condition and well maintained.



Map 17. WDNR Surface Water Data Viewer Lidar Layer with air photo overlay showing elevation hill shading revealing potential flow paths around the production area. Possible flow path would be to the south for Bookhout facility around Kleinet Road.

Waste Storage Facilities

Solids from each of the barns is stored in WSF #940. The solid waste storage facility is managed to not have current or past indicators of discharges. The solid waste storage structure is well-maintained, in good repair, and appear to be in compliance with permit requirements. At the time of the inspection a small amount of solid manure was stored in the storage.



Photo #	93
Date/Time:	April 5, 2023
Location	UW- Arlington- Bookhout
Photo taken by:	J. Hanrahan
Description: Facing northeast at WSF 940	

Ancillary Service Areas

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

Management practices are implemented to sustain sufficient vegetative cover on CAFO outdoor vegetated areas.

All facilities ancillary service areas appear to be in good condition and meet permit requirements.

8. RECORDS REVIEW

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

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

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

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

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

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

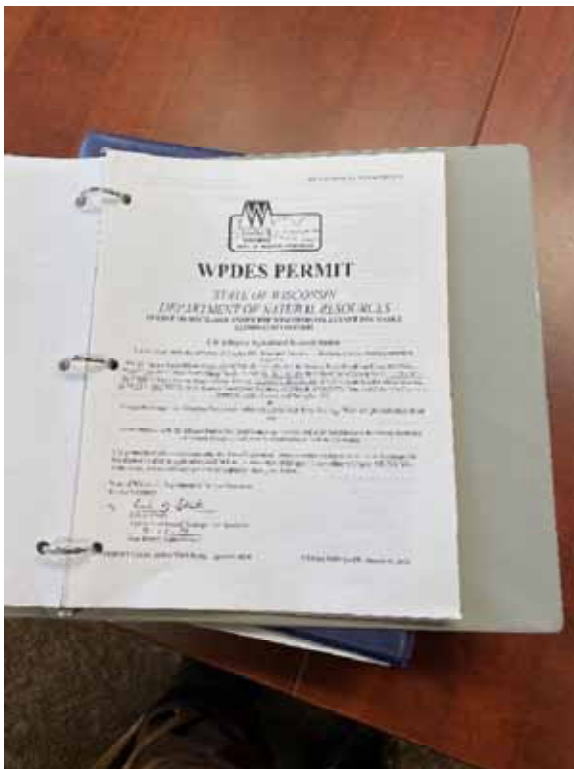


Photo #	94
Date/Time:	April 5, 2023
Location	UW- Arlington -Main Office
Photo taken by:	E. Struck
Description: Copy of WPDES Permit	



Photo #	95
Date/Time:	April 5, 2023
Location	UW- Arlington -Main Office
Photo taken by:	E. Struck

Description: Paper copy of 2022 CAFO calendar used to record inspections.

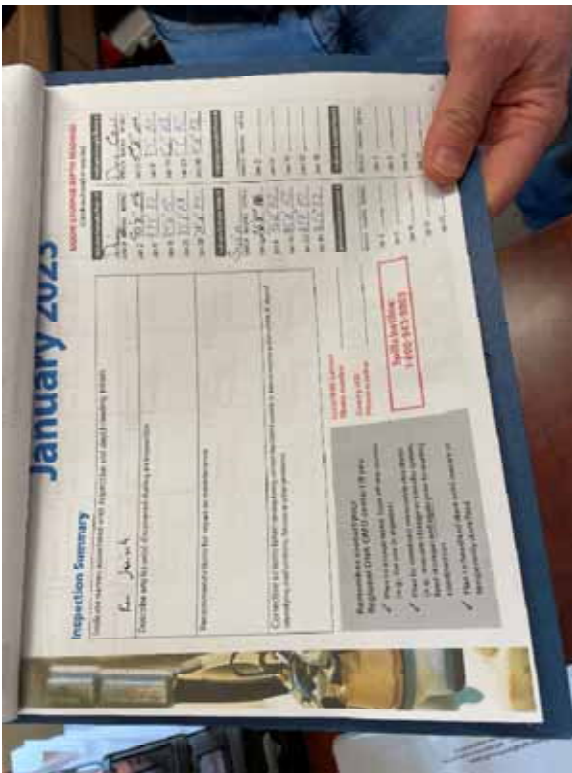


Photo #	96
Date/Time:	April 5, 2023
Location	UW- Arlington -Main Office
Photo taken by:	E. Struck

Description: 2023 CAFO calendar used to record inspection.

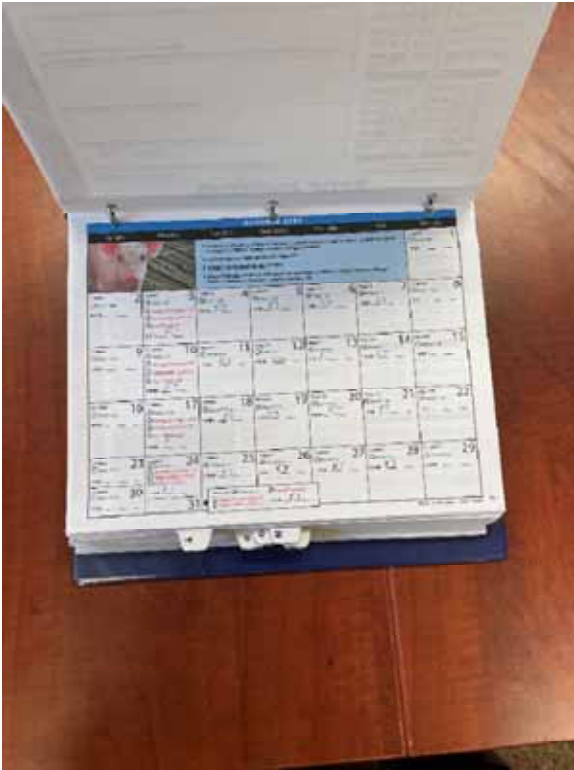


Photo #	97
Date/Time:	April 5, 2023
Location	UW- Arlington -Main Office
Photo taken by:	E. Struck

Description: 2023 CAFO calendar used to record inspection.



Photo #	98
Date/Time:	April 5, 2023
Location	UW- Arlington -Main Office
Photo taken by:	E. Struck

Description: Recent hauling log entry.

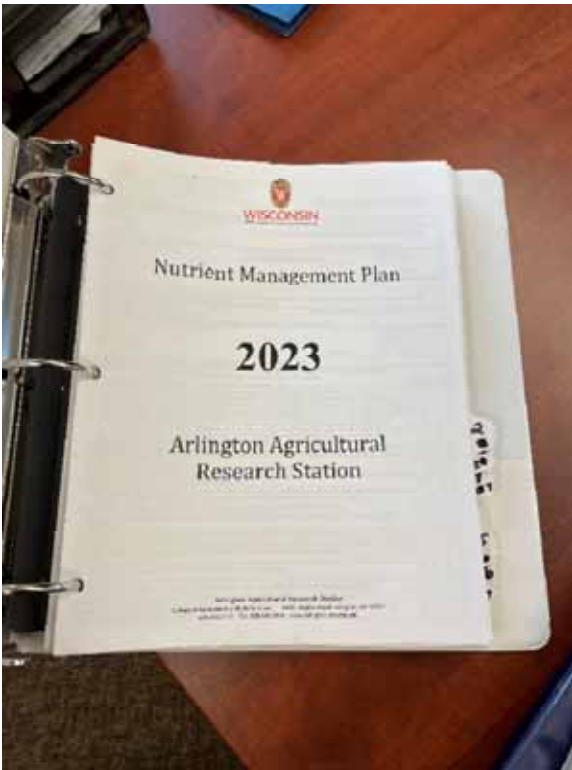


Photo #	99
Date/Time:	April 5, 2023
Location	UW- Arlington -Main Office
Photo taken by:	E. Struck

Description: Copy of UW-Arlington's nutrient management plan.

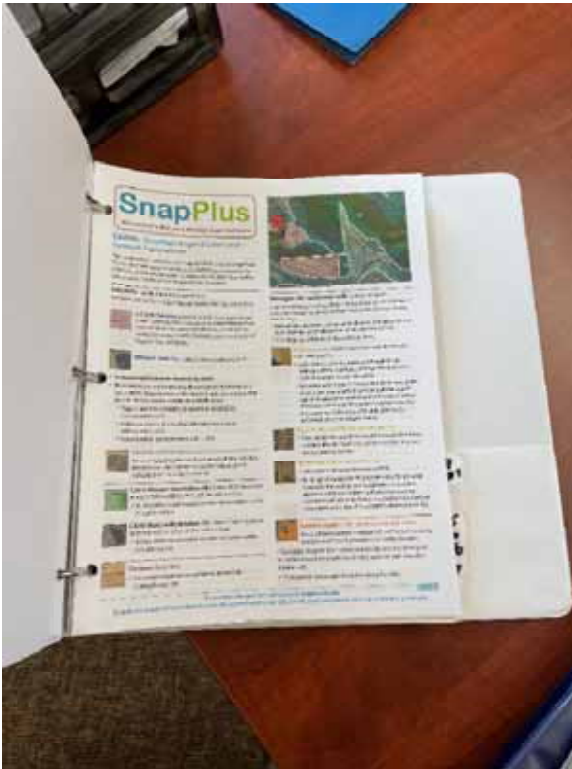


Photo #	100
Date/Time:	April 5, 2023
Location	UW- Arlington -Main Office
Photo taken by:	E. Struck

Description: Copy of UW-Arlington's nutrient management plan.



Photo #	101
Date/Time:	April 5, 2023
Location	UW- Arlington -Main Office
Photo taken by:	E. Struck
Description: Overall Field map of the UW-Arlington's operations.	

❖ SUMMARY

Areas of Concern

- Feed Storage area at Blain Dairy
- Calf Hutch Area at Blain Dairy
- VTA at Sheep North

Permit Violations Alleged Noncompliance

- None identified during the inspection
-

Action Items

- Finish repairing VTA at Sheep North
- VTA repair at Bookhout Farm prior to populating lots
- Locate as built plans for Swine Facility for WSF #863 under drains
- Prepare of submittal of Reissuance Application

Items for Next Permit Term

- Evaluation of Feed Storage Area Runoff Controls at Blain Dairy
- Evaluation of Calf Hutch Area Runoff Controls at Blain Dairy
- Possible evaluations for other VTAs after further review of the structures and plans.
- Sampling requirement for WSF #863 at Swine Facility



January 16th, 2024

Columbia County
Approval

Scott Evans
UW-Arlington Agricultural Research Station
N695 Hopkins Rd
Arlington, WI 539117

SUBJECT: Conditional Approval of UW-Arlington Agricultural Research Station Nutrient Management Plan, WPDES Permit No. 0063908-03-0

Dear Mr. Evans:

After completing a review of UW-Arlington Agricultural Research Station 2024-2028 Nutrient Management Plan (NMP) the Wisconsin Department of Natural Resources (Department) is providing conditional approval that it is consistent with s. NR 243.14, 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 UW-Arlington Agricultural Research Station 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 UW-Arlington Agricultural Research Station 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 UW-Arlington Agricultural Research Station maintain compliance with their WPDES permit and Ch. NR 243 requirements.

FINDINGS OF FACT

The Department confirms that:

1. A current mixed animal herd size of 1,883 animal units (580 milking & dry cows, 117 calves, 653 pigs up to 55 lbs, 976 over 55 lbs, 227 sows, 44 boars, 800 sheep, & 400 beef/steers). Currently there are no planned expansions in the next permit term.
2. Manure generation and spreading records indicate your herd will annually generate approximately 12,654,000 gallons of manure and process wastewater and 8,000 tons of solid manure in the first year of the permit term. Approximately 200 tons of the 8,000 tons of solid manure projected comes from planned grazing applications on an annual basis.
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 UW-Arlington Agricultural Research Station currently has 4,776.6 acres (1,688.7 owned and 3,087.9 controlled through contracts, rental agreements or leases, or under manure agreements) of which 3,320 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 the Yahara River (listed 303(d) impaired water by 'total phosphorus').
7. That no fields are directly adjacent to or have high potential to deliver nutrients and sediment to outstanding/exceptional waters.
8. That the following fields included in the NMP are located within the well head protection area for the Village of Windsor: Jensen Danielson 1
9. That 11 fields are tiled.

- 025S	- 026S	- 027SC
- 135	- Kelley Caldwell	- Kelly Caldwell Erstad KE1
- Kelly Erstad KE2	- Kelly Klahn KK1	- Midthun DF 1
- Midthun Middle Farm	- Midthun West Farm	
10. That all fields will be checked for the following features prior to/during manure or process wastewater applications: soil areas with possible shallow groundwater (i.e., within 24 inches of surface) at the time of manure application; required setbacks associated with wells, navigable waters, conduits to navigable waters, grassed waterways, wetlands, possible soil erosion/flow channels.
11. That surface applications of manure will not be completed when precipitation capable of producing runoff is forecasted within 24 hours of the time of planned application.

CONDITIONAL NUTRIENT MANAGEMENT PLAN APPROVAL

The Department hereby approves the 2024-2028 UW-Arlington Agricultural Research Station 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:

- 258NW (>200 ppm P)	- 440-HDPRAIRIE (expired soil test)	- 440-LCPRAIRIE (expired soil test)
- 440-SWITCH (expired soil test)	- 582 (no lab/#)	- 622 (expired soil test)
- Jensen Home 8	- Jensen Danielson 1 (expired soil test)	- Jensen Home 5 (expired soil test)
- Jensen Home 8 (expired soil test)	- Jensen JC1 (expired soil test)	- Jensen RJ01 (expired soil test)
- Jensen Smith 1 (expired soil test)	- Jensen Smith 2 (expired soil test)	- Jensen Smith 4 (expired soil test)
- Jensen Smith 5 (expired soil test)	- Kelly Schroeder 1 (expired soil test)	- Kelly Schroeder 2 (expired soil test)

- Midthun DF 1 (expired soil test)
- Midthun Middle Farm (expired soil test)
- Midthun West Farm (expired soil test)

If UW-Arlington Agricultural Research Station 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 ≥ 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 $\text{NH}_4\text{-N}$, percent $\text{NO}_3\text{-N}$, 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, UW-Arlington Agricultural Research Station may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

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

6. UW-Arlington Agricultural Research Station shall record daily manure applications by using the 'AARS Manure Applications' form. These forms shall be retained at the farm and provided to the department upon request.
7. UW-Arlington Agricultural Research Station 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 Report' 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:

- 001	- 002	- 004	- 005
- 007	- 008	- 009	- 012
- 345	- 346S	- 346C	- 413
- 421N	- 447B	- 505	- 520
- 555	- 591	- 593	- 605
- 606	- 618	- 619	- 621
- Sutcliffe	- Herschleb	- Herschleb	- Herschleb
	Wendt 1-4	Wendt 5-6	Wendt 7-10
- Herschleb	- Herschleb		
Wendt 11-14	Wendt 15-18		
10. Winter spreading of solid and liquid manure may not occur during the "high risk runoff period" pursuant to s. NR 243.14(6)(c) and NR 243.14(7)(c), respectively.

11. Winter applications of liquid manure shall only occur under emergency situations, after notifying the Department and receiving verbal approval.
12. Liquid applications shall be limited to 3,500 gallons per acre or 30 lbs. P per acre, whichever is less, on slopes 2-6% and 7,000 gallons per acre or 60 lbs. P per acre, whichever is less, on slopes 0-2%. Winter applications of solid manure shall be limited to 60 lbs. P per acre. wastewater production.

HEADLAND STACKING

13. No headland stacking sites are approved, this is not a utilized practice at this time.

MANURE & PROCESS WASTEWATER IRRIGATION

14. Irrigation of manure or process wastewater is prohibited.

SUBMITAL AND RECORDKEEPING REQUIREMENTS

15. A copy of this conditional approval shall be included in all future annual Nutrient Management Plan Updates in addition to the NR 243 and NRCS 590 checklists.

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

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

Sincerely,



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

cc: Eric Struck, WDNR Agricultural Runoff Specialist (Eric.Struck@Wisconsin.gov)
Laura Bub, WDNR Watershed Field Supervisor (Laura.Bub@Wisconsin.gov)
Christopher Clayton, WDNR Runoff Management Section Chief (Christopherr.Clayton@Wisconsin.gov)
Aaron O'Rourke, WDNR Nutrient Management Program Coordinator (Aaron.Orourke@Wisconsin.gov)
Falon French, WDNR Intake Specialist (Falon.French@Wisconsin.gov)
Rob Davis, WDNR CAFO Engineer (Robert.Davis@Wisconsin.gov)
Kurt Calkins, Columbia County (Kurt.Calkins@Co.Columbia.Wi.Us)
Amy Piaget, Dane County (Piaget.Amy@Countyofdane.com)
Scott Evans, UW Arlington (Scott.Evans@Wisc.edu)
File



December 13, 2023

FILE REF: R-2023-0222
 WPDES Permit #: WI-0063908

Scott Evans
 UW Arlington Ag Research Station
 N695 Hopkins Road
 Arlington, WI 53911

Subject: Days of Storage Review for UW Arlington Ag Research Station in T10N, R10E, Section 29 (Blaine Dairy), and T10N, R09E, Section 36 (Swine Facility), Arlington Township, Columbia County – NO ADDITIONAL ACTION REQUIRED

Dear Mr. Evans:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has completed its review of the calculation of days of storage submitted by Kaesey Glaess, P.E., MSA Professional Services on September 29, 2023 with revisions received on December 7, 2023 on behalf of UW Arlington Ag Research Station.

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 UW Arlington Ag Research Station has 355 days of liquid waste storage at Blaine Dairy and 283 days of liquid waste storage at the Swine Farm based for 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 835 for Blaine Dairy and 568 at the Swine Farm. The liquid waste volumes are based on the NRCS spreadsheet and other estimated or calculated values. The liquid waste volumes are based upon a collection period of 365 days. Blaine Dairy has full collection of runoff from the sand lane/sand stacking area and first flush collection of the first 0.2” of rain from the feed storage bunker areas and apron. The Swine Farm has no feed storages or runoff that needs to be collected, but the waste storage facilities are outdoors (not underbarn) and therefore as a swine facility, the 100-yr, 24-hr storm event is used for the precipitation directly on storages.

Blaine Dairy (835 AU) – 355 Days of Storage

Total Liquid Waste Storage:	11,848,592 gallons
Total Solids Storage:	397,257 gallons
Total 25-yr, 24-hr Precipitation on Storage:	443,364 gallons
Total 25-yr, 24-hr Collected Runoff:	215,068 gallons
Total Freeboard Volume:	1,045,393 gallons
Total MOL Liquid Waste Storage:	9,747,510 gallons

Manure and Bedding:	4,315,415 gallons
Parlor Wastewater:	1,481,295 gallons
Total Feed Storage Leachate:	109,750 gallons
Total Feed Storage Runoff Collected:	694,935 Gallons
Net Precipitation on Storage Surfaces:	2,429,745 gallons
Sand Separation Water Used:	1,000,000 gallons
Total Liquid Waste Stored Below the MOL:	10,031,140 gallons

Swine Farm (568 AU) – 283 Days of Storage

Total Liquid Waste Storage:	3,006,340 gallons
Total Solids Storage:	327,004 gallons
Total 100-yr, 24-hr Precipitation on Storage:	255,884 gallons
Total 100-yr, 24-hr Collected Runoff:	0 gallons
Total Freeboard Volume:	432,794 gallons
Total MOL Liquid Waste Storage:	1,990,658 gallons

Manure and Bedding:	1,003,420 gallons
Waterers, Wash Water, and Flushing:	730,000 gallons
Total Feed Storage Leachate:	0 gallons
Total Feed Storage Runoff Collected:	0 gallons
Net Precipitation on Storage Surfaces:	837,882 gallons
Total Liquid Waste Stored Below the MOL:	2,571,302 gallons

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

NOTICE OF APPEAL RIGHTS

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

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

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES



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Watershed Management Program



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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-0063908-03-0

Permittee: UW Arlington Agricultural Research Station, N695 Hopkins Rd, Arlington, WI, 53911

Facility Where Discharge Occurs: **Blaine Dairy**, W6723 Badger Lane, Arlington WI 5391, **Beef Grazing**, W7431 County Road K, Arlington WI 53911, **Beef Nutrition**, N551 Ramsey Road, Arlington WI 53911, **Sheep South**, 4857 Meek Road, Arlington WI 53911, **Sheep North**, 4857 Meek Road, Arlington WI 53911, **Swine Facility**, N636 County Road I, Arlington WI 53911, **Bookhout Farm**, W7114 Ramsey Road, Arlington WI 53911

Receiving Water And Location: Surface water and groundwater within the **Headwaters Yahara River** Watersheds

Brief Facility Description : UW Arlington Agricultural Research Station is an existing Concentrated Animal Feeding Operation (CAFO). UW Arlington Agricultural Research Station is owned and operated by University of Wisconsin System. The farm currently has 1,883 animal units. (580 milking & dry cows, 117 calves, 653 pigs up to 55 lbs, 976 over 55 lbs, 227 sows, 44 boars, 800 sheep, & 400 beef/steers). UW-Arlington has a total of 4,779.6 acres available for land application of manure and process wastewater. Of this acreage, 1,688.7 acres are owned, and 3,087.9 acres are rented. UW-Arlington has no planned expansion during the proposed permit term. Approximately 12,654,000 gallons of manure and process wastewater and 8,000 tons of solid manure will be generated the first year of the permit term. UW-Arlington Research Station has a proposed 355 days of liquid manure storage at Blaine Dairy, 283 days of liquid manure storage at the Swine Facility, and at least 59 days of solid manure storage.

Seven facilities are currently covered under UW- Arlington Research Station WPDES Permit. Facilities are located in Columbia and Dane County. The facilities are utilized by the University of Wisconsin – Madison for the research of dairy and beef cattle, swine, and sheep. Cropland is used in a variety of agricultural research projects, utilizing different cropping practices covered with in the farm’s nutrient management plan.

UW-Arlington Research Station 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. UW-Arlington has an approved Nutrient Management Plan (NMP) that is written according to WPDES permit and Chapter NR 243 Wis. Adm. Code requirements.

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

Permit Drafter’s Name, Address, Phone and Email: Eric Struck, DNR, 141 NW Bartow Street, Waukesha, WI, 53188-3789, (608) 422-1512, Eric.Struck@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) 422-1512 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.

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