

July 17, 2026

RE: Final Permit Decision on Hexagon II

Dear Sir or Madam:

Under the authority of North Dakota Century Code (NDCC) § 61-28-04, the North Dakota Department of Environmental Quality (department), has reissued State Animal Feeding Operation Permit NDAFO0711 for Hexagon II. This facility is to be located nine and a half miles east of Wolford, ND in Pierce County.

During the permit application process, the department reviewed all comments received during the 45-day public comment period. In addition to considering all comments, the department followed North Dakota Administrative Code (NDAC) § 33.1-16-03.1 and the North Dakota Livestock Program Design Manual, Revision Date December 3, 2021, in making its final decision.

The State Animal Feeding Operation Permit fact sheet has been updated as a result of public input during the public comment period.

Enclosed is a copy of the final State Animal Feeding Operation Permit, updated fact sheet, and the department's response to comments. Additional support documentation is available on the department's webpage at https://deq.nd.gov/WQ/2_NDPDES_Permits/. A set of these documents, cover letter, permit, and fact sheet, will also be provided to the Pierce County Auditor's Office.

The final decision package may also be obtained by contacting the Department at 701-328-5210 or can be viewed at:

North Dakota Department of Environmental Quality
Division of Water Quality
4201 Normandy St.
Bismarck, ND 58503

Requests for printed copies may be charged a fee.

Sincerely,



Marty Haroldson

Director

Division of Water Quality

Enc.

4201 Normandy St | Bismarck, ND 58503-1324 | Fax: 701-328-5200 | deq.nd.gov

Director's Office
701-328-5150

Division of
Air Quality
701-328-5188

Division of
Municipal Facilities
701-328-5211

Division of
Waste Management
701-328-5166

Division of
Water Quality
701-328-5210

Division of Chemistry
701-328-6140
2635 East Main Ave
Bismarck ND 58501

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State Animal Feeding Operation Permit NDAFO0711

STATE ANIMAL FEEDING OPERATION PERMIT

NDAFO0711

In compliance with North Dakota Administrative Code (NDAC) 33.1-16-03.1 of the North Dakota Department of Environmental Quality rules as promulgated under Chapters 61-28 and 23.1-06 of North Dakota Century Code (NDCC), authorization of the **Hexagon II** facility located in the SE ¼ of Section 24, Township 158 North, Range 69 West, 5th Prime Meridian, in Pierce County, North Dakota is granted provided the following conditions are met:

- 1) The application indicated the facility is a CAFO that will house **5,422 head of gestating pigs with an average weigh of 400 lbs, 1,088 head of lactating pigs with an average weigh of 450 lbs, 1,188 head of grower pigs with an average weigh of 150 lbs, 792 head of nursery pigs with an average weigh of 35 lbs, and 792 head of finisher pigs with an average weigh of 200 lbs.** The department must be notified in writing if there is an expansion in the number of livestock, change in ownership of the facility, significant changes in the physical operation of the facility or if the lot area where livestock are concentrated is expanded. Changes may require an update to the permit or issuance of a new permit.
- 2) Operation and Maintenance plans and standard operating procedures must be followed as submitted to the department. Changes to the Operation and Maintenance plan must be reviewed by the department prior to being implemented. There must be regular and adequate maintenance and upkeep to prevent degradation of the structures, to ensure the system continues to operate as designed, to ensure the manure storage does not overflow, and to ensure manure or wastewater does not discharge into waters of the state. Operation and maintenance plans shall include:
 - a. Weekly inspections of all storm water diversion devices, runoff diversion structures and devices channeling runoff to the manure storage structure;
 - b. Daily inspection of water lines, including drinking water or cooling water lines; and
 - c. Weekly inspections of the manure storage structures noting the level of liquid in the structure as indicated by the depth marker. (North Dakota Livestock Program Design manual, section 6)
- 3) The operator shall notify the department within thirty days of construction completion of the manure storage or water pollution control structures. The operator shall provide certification from the engineer or the designer that construction of manure storage and water pollution control structures was completed according to designs provided with the application or the department-approved changes. (NDAC 33.1-16-03.1-07(5))
- 4) Mortality shall be disposed of in accordance with NDCC section 36-14-19, in a manner acceptable to the North Dakota Board of Animal Health, and so they will not impact waters of the state. Composting or landfiling is the option for this facility. Mortality will be composted on the property.
- 5) Land application of manure shall be in accordance with the nutrient management plan. Manure shall be applied in a manner so it will not be washed into waters of the state. When applying manure within ½ mile of an occupied residence, building, or public area where people may be present, the operator shall review and follow the guidelines of the North Dakota Livestock Program Design Manual, 7.6, section 4 and incorporate the manure within 8 hours of land application.
- 6) The following records pertaining to nutrient management shall be maintained for a minimum of 5 years:
 - a. The crops grown and expected realistic crop yields;
 - b. The date(s) manure, litter or process wastewater is applied to each field;
 - c. Weather conditions during application, 24 hours prior and following application;
 - d. Test methods used to sample and analyze manure, litter, wastewater and soil;
 - e. Results from annual testing of manure, litter, and process wastewater, and annual soil sample results for land where manure was applied that year;
 - f. An explanation of how the application rates were determined in accordance with standards established by the department;

- g. Calculations showing nutrients applied to each field, including other nutrient sources;
 - h. Total amount of nutrients actually applied to each field, including documentation of calculations for the total amount applied, and;
 - i. Method used to apply the manure, litter or process wastewater; inspection of manure application equipment including method, frequency, dates and repairs made if leaks were found; and setbacks, vegetated buffers or other alternative practices used when land applying manure near surface water or potential conduits to surface water. (North Dakota Livestock Program Design Manual, 7.7, section 2)
- 7) If manure is transferred to other persons or entities not associated with the facility, the following conditions shall apply:
- a. Owners/operators shall provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis prior to transfer;
 - b. The analysis provided shall be consistent with the requirements of section 7.4 in design manual, and;
 - c. The owners/operators of the CAFO shall retain records for five years after the transfer date documenting the recipient's name and address, the approximate amount of manure transferred, and the date the manure was transferred. (North Dakota Livestock Program Design Manual, 7.7, section 3)
- 8) Any deficiency discovered during an inspection shall be corrected as soon as possible. Chemicals or other contaminants handled on site shall not be disposed of in a structure used for storage or treatment of manure, process wastewater or stormwater unless it is specifically designed for that purpose. The operator of a livestock facility should maintain a rain gauge at the production area and record measurable rainfall events. (North Dakota Livestock Program Design manual, 6.2)
- 9) The owner/operator of a CAFO shall make the following records available to the department for review upon request:
- a. Records documenting the visual inspections;
 - b. Weekly records of the depth of the manure and process wastewater in the liquid manure storage structure as indicated by the depth gauge in storage structure; records documenting any actions taken to correct deficiencies;
 - c. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction;
 - d. Records of management and practices used;
 - e. Record documenting current design of any manure storage structures, including solids accumulation volume, design treatment volume, total design volume and the approximate number of days of storage capacity;
 - f. Records of the date, time and estimated volume of any overflow; and records documenting the land application of manure. (North Dakota Livestock Program Design Manual, 6.5)
- 10) This permit shall in no way authorize the discharge of any objectionable odorous air contaminant which is in excess of the limits established in NDAC Chapter 33.1-15-16 of the North Dakota Air Pollution Control Rules. If the department determines odors from the facility exceed limits, steps shall be taken, within a reasonable time, to control and reduce odors from the facility site. This may include requiring other odor control measures.
- 11) There must be regular and adequate maintenance and upkeep to prevent degradation of the structures, to ensure the system continues to operate as designed, to ensure the containment system does not overflow, and to ensure manure or wastewater does not discharge into waters of the state.
- 12) The department must be notified if there is a change in address or other contact information for the facility.

Effective Date: Date of Signature
Expiration Date: May 31, 2031

The above conditions are considered part of the proper operation of the facility. If any of the above conditions are not met, the department must be notified in writing, within five (5) days. Any noncompliance with the permit conditions or with state requirements must be reported to the department as soon as possible after the facility becomes aware of the noncompliance condition. Failure to meet these requirements may result in monetary penalties and/or revocation of this permit.

Construction may begin upon signature of this permit by the department. The permit is based on construction being completed as per the design plans reviewed by the department. If any structural changes are made that are different than these design plans, the department must be notified in writing and prior approval obtained, before making these changes.

Authorized department personnel shall be permitted access to the facility to determine compliance with department rules and regulations. Department inspections will abide by all security measures implemented by the owner or operator to protect the health and safety of the workers and animals at the facility.

The owner/operator of this facility shall comply with all State and Federal environmental laws and rules, and shall also comply with all local building, fire, zoning and other applicable ordinances, codes, and rules.

Notice of Completion and results of testing completed on the clay liner or the manure storage structures shall be received by the department within 30 days of completion of construction.

I certify that I have read and understand the above information and agree to operate the facility in a manner that will meet all the conditions listed herein.

OWNER/OPERATOR CONSENT

FOR THE NORTH DAKOTA
DEPARTMENT OF ENVIRONMENTAL QUALITY

By _____
(signature)

By _____

By _____
(print name here)

By Marty Haroldson, Director
Water Quality Division

Date _____

Date _____

**Application to Obtain a State Permit Associated with Animal
Feeding Operations**



**APPLICATION TO OBTAIN A STATE PERMIT
ASSOCIATED WITH ANIMAL FEEDING OPERATIONS**
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY
SFN 8296 (08-2021)

FOR DEPT. USE ONLY

Application Number

Date Received

GENERAL INFORMATION

1. Legal Name of Organization Responsible for Facility Dakota SAO II, LLP		2. Telephone Number	
3. Mailing Address 10640 County Highway D20	4. City Alden	5. State/Province IA	6. Zip Code 50006
7. Name of Facility Hexagon II	8. Contact Person Name Eric Peterson	9. Contact Telephone Number 515-520-7181	
10. Contact Mailing Address 10640 County Highway D20	11. City Alden	12. State/Province IA	13. ZIP Code 50006
14. Contact Email Address epeterson@summitag.com			
15. Location of the facility ¼ ¼ S SEC. 24 TWP. 158 RGE. 69		16. County Pierce	

ANIMAL INFORMATION

SEE ADDENDUM FOR COMPLETE SUMMARY OF HEAD NUMBERS

17. Animal Type Pigs, Gestating	18. Max Number of Animals 5,422	19. Avg Weight of Animals 400	20. Days Animals Handled per Year 365	21. Confinement Type Under Roof
22. Animal Type Pigs Lactating	23. Max Number of Animals 1,088	24. Avg Weight of Animals 450	25. Days Animals Handled per Year 365	26. Confinement Type Under Roof
27. Animal Type Pigs, Nursery	28. Max Number of Animals 792	29. Avg Weight of Animals 30	30. Days Animals Handled per Year 365	31. Confinement Type Under Roof

WASTE CONTAINMENT AND STORAGE

SEE SECTION 2 FOR CALCULATIONS

32. Containment/Storage Type Under-Floor Pits	33. Max Capacity (indicate units) 1,072,447 Cubic Feet	34. Est. amt. Waste Generated per Year (indicate units) 1,103,885	35. Material MANURE AND WASHWATER
36. Containment/Storage Type	37. Max Capacity (indicate units)	38. Est. amt. Waste Generated per Year (indicate units)	39. Material
40. Containment/Storage Type	41. Max Capacity (indicate units)	42. Est. amt. Waste Generated per Year (indicate units)	43. Material

WASTE HANDLING

44. Total Acres Controlled and Available for Land Application	45. Est. amt. of Waste Transferred per Year (indicate units) 0	46. Material Manure
47. Total Acres Controlled and Available for Land Application	48. Est. amt. of Waste Transferred per Year (indicate units)	49. Material
50. Total Acres Controlled and Available for Land Application	51. Est. amt. of Waste Transferred per Year (indicate units)	52. Material

53. Provide a brief description of how animal mortalities will be handled Animal Mortalities will utilize a Grinder to assist with the composting operation.

The following additional attachments must be submitted at least 180 days prior to the time permit coverage is needed in addition to this application:

1. A topographic map of the area where the facility is or proposed to be located which shows the specific production area.
2. Designs, including location, for all manure storage and water pollution control structures and site-specific background information as specified in the North Dakota Livestock Program Design Manual. Design plans developed by anyone other than the facility owner must be signed by the engineer who prepared or supervised the preparation of the plans under North Dakota Administrative Code chapter 33.1-16-03.1-08.
3. Site-specific information on topography, surface water, groundwater, and soil geology.
4. A nutrient management plan or information related to a nutrient management plan as specified in subsections 4 and 5 of North Dakota Administrative Code 33.1-16-03.1-08.
5. All submitted applications where local zoning has been properly established shall contain documentation of approval from the zoning authority. If such documentation has not been provided, the application process shall be put on hold until the required approval documentation has been received by this department.

Facilities must receive department approval prior to construction.

SIGNATURE

RETURN COMPLETED APPLICATION TO: North Dakota Dept. of Env. Quality Division of Water Quality 4201 Normandy Street Bismarck, ND 58503-1324 Telephone: (701) 328-5210	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
	54. Printed Name of Applicant(s) Eric Peterson	55. Title President
	56. Signature of Applicant(s) 	57. Date 11/26/25

(Attach additional pages if needed)

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☐ Individual	☐ General	
Design	NMP	Zoning

Dakota SAO II, LLP Hexagon II Head Number Summary

Animal Type	Maximum Head #	Average Weight	AU	Days On site	Confinement Type
Gestation	5,422	400	2,169	365	Total Confinement Barn
Lactating	1,088	450	435	365	Total Confinement Barn
Growers	1,188	150	475	365	Total Confinement Barn
Nursery	792	35	79	365	Total Confinement Barn
Finishers	792	200	317	365	Total Confinement Barn
Total	9,282		3,475		

Fact Sheet for State AFO Permit NDAFO0711

**FACT SHEET FOR STATE AFO PERMIT
NDAFO0711**

**Hexagon II
Bisbee, ND**

DATE OF THIS FACT SHEET – July 17, 2026

INTRODUCTION

The North Dakota Department of Environmental Quality (department) has been designated the state water pollution control agency for all purposes of the Federal Water Pollution Control Act, as amended [33 U.S.C. 1251, et seq.], and is hereby authorized to take all action necessary or appropriate to secure to this state the benefits of the act and similar federal acts. The department's authority and obligations for the control of pollution from animal feeding operations in the North Dakota Administrative Code (NDAC) chapter 33.1-16-03.1 which was promulgated pursuant to the North Dakota Century Code (NDCC) chapter 61-28. The State of North Dakota is delegated primacy of the Animal Feeding Operation program by EPA. The Rules and Regulations for the Control of Pollution from Certain Livestock Enterprises were first issued in 1972 and updated in 1989, 2005, and 2018.

The following rules or regulations apply to feedlot operations permits:

- Operations requiring a permit (NDAC Section 33.1-16-03.1-05),
- Authority for issuing Feedlot Permits (NDAC Section 33.1-16-03.1-01),
The Department of Environmental Quality has been authorized to provide and administer this chapter relating to the control of pollution from animal feeding operations under the provisions of North Dakota Century Code Section 61-28-04.
- Procedures the department follows for issuing Feedlot permits (NDAC Chapter 33.1-16-03.1),
- Standards of Quality for Waters of the State (NDAC Chapter 33.1-16-02.1)

According to the NDAC section 33.1-16-03.1-13, if the department determines a significant degree of public interest exists regarding new or expanding facilities, it shall issue a public notice requesting comment on applications for both individual permits and general state animal feeding operation permits. The department shall provide a period of not less than thirty days during which time interested persons may submit comments.

For more information regarding preparing and submitting comments about the fact sheet and permit, please see **APPENDIX A – PUBLIC INVOLVEMENT INFORMATION**. Following the public comment period, the department may make changes to the draft permit. The department will summarize the responses to comments and changes to the permit in **APPENDIX D – RESPONSE TO COMMENTS**.

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BACKGROUND INFORMATION

Table 1– General Facility Information

Applicant:	Dakota SAO, LLP
Facility Name and Address:	Hexagon II 54 th Ave NE and 74 th St NE Bisbee, ND 58317
Permit Number:	NDAFO-0711
Permit Type:	CAFO
Hydrologic Code:	09020201 – Devils Lake

FACILITY DESCRIPTION

Hexagon II is located 9.5 miles east of Wolford, ND in Pierce County. The facility is located in the SE ¼ of Section 24, Township 158 North, Range 69 West, 5th Prime Meridian. The site coordinates are Latitude 48.493356°N, Longitude -99.493946°W.

An application submitted to the department on November 26th, 2025, indicates the facility will have a maximum of 9,282 head of swine, equivalent to 3,475 animal units (a.u.). This facility will have three deep pit confinement barns: one gestation barn, one farrowing barn, and one gilt development unit (GDU).

GROUNDWATER AND SURFACE WATER

Geology:

The facility lies within the Western Young Drift Section of the Central Lowlands physiographic province.

The local geology can be described as part of the McHenry End Moraine of the Coleharbor Formation consisting of a non-sorted, non-stratified mixture of boulders, cobbles, pebbles, and sand in a matrix of silt and clay. The surface geology is characterized as collapsed glacial sediment; gently undulating (1 to 2-degree maximum slope angles); Supraglacial sediment with hummocky topography.

The site can be characterized as offshore sediment of yellowish brown to dark gray silt and clayey silt with some sand in places, previously part of Glacial Lake Cando.

Slope:

The slope is 0 - 3% on-site. Slope is used to calculate the runoff quantities and design runoff velocities.

Runoff:

The proposed facility is an indoor confinement operation. Any stormwater or precipitation from the land around the barns and site buildings will be directed away from the site.

Elevation:

According to the United States Geological Survey Quadrangle maps, this facility is at an approximate elevation of 1,570 feet.

Site Drainage:

Subsurface drain tile and clean water diversions are to route stormwater to a basin south of the gestation barn. Perimeter drain tile will be heavy duty perforated corrugated agricultural drain pipe. Monitoring ports for the drain tile will be installed. This basin outlets to the south. There is no defined drainage off-site.

Water Bodies:

The nearest water body is Hurricane Lake located 1.5 miles southwest of the site.

Soils:

The primary soils at the site, as indicated by National Resource Conservation Service (NRCS) web soil survey, include Hamerly-Wyard-Tonka complex, Balaton-Souris-Svea loams, and Balaton-Souris loams. These soils consist mostly of fine-grained lean silt and sand material (ML). (See Appendix C, Table 5)

Aquifers:

The facility does not overlie a surficial aquifer or a sensitive groundwater area. The operation's location lies about 1.2 miles to the northeast of a small finger of the Spiritwood Aquifer system. The Spiritwood Aquifer System occupies buried bedrock valleys and consists of sand and gravel beds that are inter-bedded with silt, clay and till, causing the ground water to generally exist under confined conditions.

Public and Private Wells:

There are no public wells or irrigation wells located within two miles of the site. Within two miles of the site there are three private wells. Wells in the general area range from 79 feet to 174 feet deep. (See Appendix C, Table 4)

MANURE HANDLING AND DISPOSAL

Facility Operation:

The facility design incorporates ~~three~~ two deep pit and one shallow pit confinement barns with slatted floors and deep pit manure storage. Livestock resides within the facility for 365 days a year.

Manure Handling:

According to the design plan, manure will drain into the deep pits through slatted floors. These deep pits have associated pumpout ports. Manure will then be land applied seasonally as described in the nutrient management plan.

Expected Manure Quantities:

The amount of manure estimated to be produced at the facility is detailed in the table below.

Table 2 - Manure Quantities from Design Plans

Livestock Types	Number (Head)	Average Weight (lbs)	Manure Production (ft ³ /day)	Wash Water (ft ³ /day)
Pigs, Gestating	5,422	400	889	781
Pigs, Lactating	1,088	450	475	157
Pigs, Growers	1,188	150	196	171
Pigs, Nursery	792	35	39	29
Pigs, Finishers	792	200	174	114
Daily Total	9,282	3,475 a.u.	1,773	1251
270 Day Total			478,761	337,789
Manure Storage Required for Storage Period			816,550 ft ³ /year	

Mortality Disposal:

The owners have chosen composting or landfiling for the facility's disposal method, with a particle reduction system. The composting barn is to be located north of the barns at the facility site. Animal mortality shall be handled as outlined in the North Dakota Livestock Program Design Manual, Section 6.4:

“Livestock mortality shall be disposed of in a manner acceptable to the Board of Animal Health and in accordance with NDCC Section 36-14-19. Livestock mortality shall be disposed of in areas that will not discharge into waters of the state and where they will not detrimentally impact air quality. Livestock mortality shall not be disposed of in any structure used to store or treat liquid manure, process wastewater, or storm water unless the department-approved system is designed for such a purpose.”

ODOR CONTROL

Potential Sources:

A source of potential odors are the barns and containment pond. Odors from the barns may be minimized with good housekeeping practices. Land application may present a source of short-term odor events. However, land application is exempt from state odor restrictions (NDAC Section 33.1-15-16-02(3)). The county regulates the nature, scope, and location of this operation. The county setback is one mile. The facility received zoning approval from Pierce County on November 13, 2025. There are three residences in proximity to the site, ranging from 1.43 to 2 miles in distance.

CONSTRUCTION SPECIFICATIONS

Manure Storage Structures:

The proposed facility has ~~three~~ two deep pit and one shallow pit¹ storage structures that hold manure and wastewater. A pump station sits between the barns. The gestation barn has four pumpouts at each corner. The GDU/farrowing barns have two pumpouts on the south corner. A section of drain tile surrounds the barns. This serves to relieve hydrostatic pressure from the deep pits. The following table shows the dimensions of the pits and the evaluation of design capacity.

Table 3 - Required Manure Storage

Deep Pit Location	Dimensions	Storage Volume
Gestation Barn	2 cells x 544' x 101.6' x 9.7'	1,064,400 ft ³
GDU Barn	~5 cells x 108.2' x 51.3' x 9.7'	265,048 ft ³
Farrowing/Nursery	16 cells x 107.8' x ~41.8' x 1.7'	119,771 ft ³
Loadout Area	3 cells of different dimensions	5,112 ft ³
The facility has capacity to store manure generated with 1,454,331 ft ³ of storage.		

Soil Summary:

The location is suitable based on soil survey and ground water survey information. The soils borings indicate that the Unified Soil Classification for the subsoil at the site is generally lean clay (CL) to a relative depth of 36 feet. (Appendix C, Table 6)

Non-Earthen Manure Storage Structures

The deep pits under the barn floors have 4-inch floors with #4 rebar 18 inches on center. The barns will have 4-inch precast concrete slats. Pit perimeter walls are ~~8~~ 10 inches thick with #5 vertical rebar ~~18~~ 12¹ inches on center. Wall joints have keyways and water stops to prevent seepage. Concrete used on site is to be rated for 4,000 pounds per square inch (PSI) of compressive strength for walls and floors.

Manure Transfer Components:

The proposed deep pits have pumpouts at each end. A pumpstation will be located between the barns. 10" PVC crossover pipes allow drainage to gestation barn from farrowing barn. Manure line cleanouts and manholes will be installed.

Earth Fill:

The design plans indicate all organic material and topsoil is to be removed from areas with fill and replaced with compacted mineral earth fill. Organic materials or frozen soil were not used in fill material. Rock larger than 6 inches are not to be used in the fill material. Compaction is to be performed for each 8-inch lift to meet a standard of 95% Standard Proctor Density.

Groundwater Monitoring Plan:

¹ Changes made based on Comment from Nathan Pesta

Implementing ground water monitoring wells is not recommended for the operation at this time.

Operation and Maintenance Plan:

Any discharge from the waste management system or land application sites must be reported as soon as possible, but no later than twenty-four hours after the discharge was discovered. The discharge must be reported to the State of North Dakota.

All inspections should be documented on the forms included with the operations manual or other suitable forms. Documentation must be maintained on site and be made available to the department when requested.

Travel of vehicles and livestock should be confined to designated areas to prevent erosion and enhance vegetation.

Maintain grades around containment structures to assure positive surface drainage away from the structures in all directions. Fill any settled areas which may collect water.

Any damage discovered to any facility component must be repaired as soon as possible to original specifications.

Manage vegetation growth on and near facility components so that adequate component inspection is possible.

Maintain the overall system (i.e. pens, diversion channels, settling basins and risers) to ensure that all contaminated runoff enters the containment structures.

NUTRIENT MANAGEMENT PLAN AND MANURE APPLICATION

General Conditions:

Managing and applying manure to ensure surface waters are not impacted and minimize nuisance concerns for nearby residents is a requirement. Factors to consider when choosing methods of management and application include but are not limited to: the volume of manure, the topography, location of surface and ground water sources, and distance from neighboring residents. Applicable records, listed below, must be taken and be available upon request.

Application Rates:

Liquid manure and wastewater are to be pumped out of deep pits and injected into fields. Manure application on fields would be at agronomic rates. This rate is dependent on crop variety grown, crop yield goals, and soil test results. Manure is land applied at a rate not to exceed nitrogen levels recommended for the crop of the following production year.

Record Keeping:

The facility is required to make the following records available to the department for review upon request for a minimum of 5 years from the date they are created:

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HEXAGON II – BISBEE, ND

EXPIRATION DATE: May 31, 2031

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- Document routine visual inspections of the production area and containment structures.
- How, when, and where the manure, litter, or process wastewater was reused or disposed of.
- Weather conditions at the time and 24 hours prior to manure application.
- Mortalities management and practices used.
- The date, time, and estimated volume of any overflow outside of the containment area.
- Annual nutrient sampling of: manure, litter and/or process wastewater and soil samples where manure has been applied that year.
- An explanation of how the manure application rates were determined with calculations of the planned and actual total nitrogen and phosphorus to be applied to each field.
- The crops grown and crop yields for all fields where manure was applied.
- If manure, litter, or process wastewater is transferred to other persons or entities; the recipient's name and address, approximate amount transferred, and the date of the transfer should be documented.
- Any actions taken to correct deficiencies.

Land Application of Manure:

The endpoint for all manure produced at the proposed facility is land application on fields identified in the submitted nutrient management plan. The table below details the quantity of manure and nutrients estimated to be produced on the facility.

Table 4 - Expected Manure Volumes and Nutrients

	Daily	365 Days
Volume of Manure	1,773 ft ³ 13,524 gal.	1,103,855 ft ³ 8,351,911 gal.
Nitrogen (N)	800 lbs/day	292,069 lbs.
Phosphorus (P ₂ O ₅)	619 lbs/day	226,041 lbs.
Potassium (K ₂ O)	599 lbs/day	218,677 lbs.
Loss from Storage	22.5%	
Loss from Land Application Method	2%	

Estimate of land needed for manure application:

When estimating land needed for manure application, if the nutrient management plan's phosphorus risk assessment indicates a medium to low risk of movement of phosphorus, facilities are allowed to apply at agronomic nitrogen rates in accordance with the phosphorus index. If the nutrient management plan's phosphorus risk assessment indicates a high potential for movement or if a soil test shows phosphorus levels in the high range, the facility is required to apply manure at agronomic phosphorus rates.

Table 5-Nutrients and Rates

Nutrient	Rate
Phosphorus (with 20% not available)	~50.8 lbs. P ₂ O ₅ /acre
Nitrogen (with 24.5% losses)	~103 lbs. N/acre

Anticipated crops grown: barley, wheat, corn grain, soybean, edible beans

Risk assessment for phosphorus: low

Amount of land estimated for spreading at nitrogen rates: 2,154 acres

Amount of land estimated for spreading at phosphorus rates: 3,560 acres

Amount of land identified by applicant for land application: 3,596.98 acres

The department realizes that the nitrogen in manure is not all available to the crops in the first year and therefore the manure will typically be applied at rates higher than the rates listed above. However, organic nitrogen becomes available the following year(s) so the manure cannot be applied at the same rate in subsequent years. These figures are used to estimate the total acres that would be needed over several years of application using proper rotation of cropland and/or calculating nitrogen that is carried over to the following years.

Disclaimer:

This design review is intended to assess a livestock facility's ability to contain, divert, store, and properly apply manure and/or runoff water to meet department requirements, to prevent detrimental impacts on the quality of waters of the state, and to minimize the potential for odor concerns from livestock facilities. It does not include an assessment of the structural integrity of livestock facilities or manure handling structures such as those made of concrete, metal, wood, plastic, or other material.

PERMIT ISSUANCE PROCEDURES

Permit Actions:

This permit may be modified, revoked and reissued, or terminated for cause. This includes the establishment of limitations or prohibitions based on changes to Water Quality Standards, the development and approval of waste load allocation plans, the development or revision to water quality management plans. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Proposed Permit Issuance:

This proposed permit application meets all statutory requirements for the department to authorize a State Animal Feeding Operation Permit. The permit application includes limits and conditions to protect human health and aquatic life, and the beneficial uses of waters of the State of North Dakota. The department proposes to issue this permit for a term of five (5) years.

APPENDIX A – PUBLIC INVOLVEMENT INFORMATION

The department proposes to issue a permit to **Hexagon II**. This fact sheet describes the facility and the department's rationale for requiring permit conditions.

The department will place a Public Notice of Draft on **March 21, 2026**, in the **Rugby, Pierce County Tribune** to inform the public and to invite comment on the proposed draft North Dakota State AFO Permit and fact sheet.

The Notice;

- Indicates where copies of the draft Permit and Fact Sheet are available for public evaluation.
- Offers to provide assistance to accommodate special needs.
- Urges individuals to submit their comments before the end of the comment period.
- Informs the public of the location and time of the scheduled public hearing.

You may obtain further information from the department by telephone, 701.328.5210, or by writing to the address listed below.

North Dakota Department of Environmental Quality
Division of Water Quality
4201 Normandy Street, 3rd Floor
Bismarck, ND 58503

The primary author of this permit and fact sheet is Cameron Gilley.

FACT SHEET FOR STATE AFO PERMIT NDAFO-0711

HEXAGON II – BISBEE, ND

EXPIRATION DATE: May 31, 2031

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**North Dakota Department of Environmental Quality Public Notice
Issue of a State Animal Feeding Operation Permit**

Public Notice Date: 3/21/2026

Public Notice Number: ND-2026-008

Purpose of Public Notice

The Department intends to take public comments to ensure the following State Animal Feeding Operation Permit follows the authority of Section 61-28-04 of the North Dakota Century Code.

Permit Information

Site Name: Hexagon 2

Application Date: 11/26/2025 Application Number: NDAFO0711

Applicant Name: Dakota SAO II, LLP

Mailing Address: 10640 County Highway D20 Alden IA 50006

Telephone Number: (515) 520-7181

Proposed Permit Expiration Date: March 31, 2031

Facility Description

The permit application is for a proposed swine barn located 9.5 miles east of Welford, ND in Pierce County. The site is in the SE ¼ of Section 24, Township 158 North, Range 69 West, 5th Prime Meridian. The application indicates the facility would have a maximum of 9,282 head of swine, equivalent to 3,475 animal units.

Public Hearing

A public hearing will be held to take comments and record oral comments regarding the proposed permit. The public hearing will be held **April 20, 2026**, from 5:00 p.m. to 8:00 p.m. at the following location

Pierce County Courthouse
240 2nd St SE
Rugby, ND 58368

Tentative Determinations

The submitted application and supporting documentation have been reviewed by the Department. They assure that State Water Quality Standards will be protected, and the system will be constructed and can be operated in compliance with the North Dakota state requirements for storage and handling of manure and wastewater for an Animal Feeding Operation.

Information Requests and Public Comments

Copies of the application, draft permit, and related documents are available for review. Comments or requests should be directed to the ND Department of Environmental Quality, Division of Water Quality, 4201 Normandy Street, 3rd Floor; Bismarck, ND 58503-1324 or by calling 701.328.5210.

All comments received by **May 5, 2026**, will be considered prior to finalizing the permit.

The NDDEQ will consider every request for reasonable accommodation to provide an accessible meeting facility or other accommodation for people with disabilities, language interpretation for people with limited English proficiency (LEP), and translations of written material necessary to access programs and information. Language assistance services are available free of charge to you.

To request accommodations, contact NDDEQ Non-discrimination Coordinator at 701-328-5210 or deqEJ@nd.gov. TTY users may use Relay North Dakota at 711 or 1-800-366-6888.

APPENDIX B – DEFINITIONS

DEFINITIONS Standard Permit (BP 2019.09.23)

1. “Animal feeding operation” means a lot or facility, other than an aquatic animal production facility, where the following conditions are met:
 - a. Animals, other than aquatic animals, have been, are, or will be stabled or confined and fed or maintained for a total of forty-five days or more in any twelve-month period; and
 - b. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.
2. “Bedding material” means an absorbent substance applied to dirt or concrete flooring systems, including wood shavings, wood chips, sawdust, shredded paper, cardboard, hay, straw, hulls, sand, and other similar, locally available materials.
3. “Best management practices” means schedules of activities, prohibitions of practices, conservation practices, maintenance procedures, and other management strategies to prevent or reduce the pollution of waters of the state. Best management practices also include treatment requirements, operating procedures, and practices to control production area and land application area runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
4. “Concentrated animal feeding operation” means an animal feeding operation that is defined as a large, medium, or small concentrated animal feeding operation or any animal feeding operation designated as a concentrated animal feeding operation under section 33.1-16-03.1-04. For purposes of determining animal numbers, two or more feeding operations under common ownership are considered to be a single animal feeding operation if they adjoin each other or if they use a common area or system for the disposal of wastes.
5. “Earthen storage pond” or “pond” means a topographic depression either below or above ground level, manmade excavation, or diked area formed primarily of earthen materials, although it may be lined with man-made materials or other seepage control materials, and used to store manure, process wastewater and runoff from the production area of a facility.
6. “Engineer” means a professional engineer registered to practice in the state of North Dakota.
7. “Facility” is an animal feeding operation.
8. “General permit” means a general state animal feeding operation permit. This is a permit issued to cover multiple facilities of the same or similar type, without requiring each facility to be covered under an individual permit.
9. “Large concentrated animal feeding operation” means any animal feeding operation that stables or confines as many as or more than the numbers of animals, not including unweaned young, specified in any of the following categories:
 - a. Seven hundred mature dairy cows, whether milked or dry;
 - b. One thousand veal calves;

- c. One thousand cattle other than mature dairy cows or veal calves. “Cattle” includes, but is not limited to, heifers, steers, bulls, and cow/calf pairs;
 - d. Two thousand five hundred swine, each weighing 55 pounds or more;
 - e. Ten thousand swine, each weighing less than 55 pounds;
 - f. Five hundred horses;
 - g. Ten thousand sheep or lambs;
 - h. Fifty-five thousand turkeys;
 - i. Thirty thousand laying hens or broilers, if the animal feeding operation uses a liquid manure handling system;
 - j. One hundred twenty-five thousand chickens (other than laying hens), if the animal feeding operation uses other than a liquid manure handling system;
 - k. Eighty-two thousand laying hens, if the animal feeding operation uses other than a liquid manure handling system;
 - l. Thirty thousand ducks, if the animal feeding operation uses other than a liquid manure handling system; or
 - m. Five thousand ducks, if the animal feeding operation uses a liquid manure handling system.
- 10. “Litter” means a mixture of fecal material, urine, animal bedding material, and sometimes waste feed.
- 11. “Manure” means fecal material and urine, animal-housing wash water, bedding material, litter, compost, rainwater, or snow melt that comes in contact with fecal material and urine, and raw or other materials commingled with fecal material and urine or set aside for disposal.
- 12. “Manure handling system” means all of the water pollution control structures used at the production area of a facility.
- 13. “Manure storage pond” means an earthen storage pond that stores liquid manure and process wastewater from indoor confined animal feeding operations.
- 14. “Manure storage structure” means any water pollution control structure used to contain or store manure or process wastewater. It includes earthen manure storage ponds; runoff ponds; concrete, metal, plastic, or other tanks; and stacking facilities.
- 15. “Medium animal feeding operation” means any animal feeding operation that stables or confines the numbers of animals, not including unweaned young, specified within any of the following ranges:
 - a. Two hundred to six hundred ninety-nine mature dairy cows, whether milked or dry;
 - b. Three hundred to nine hundred ninety-nine veal calves;
 - c. Three hundred to nine hundred ninety-nine cattle other than mature dairy cows or veal calves. “Cattle” includes, but is not limited to, heifers, steers, bulls, and cow/calf pairs;
 - d. Seven hundred fifty to two thousand four hundred ninety-nine swine, each

- weighing 55 pounds or more;
 - e. Three thousand to nine thousand nine hundred ninety-nine swine, each weighing less than 55 pounds;
 - f. One hundred fifty to four hundred ninety-nine horses;
 - g. Three thousand to nine thousand nine hundred ninety-nine sheep or lambs;
 - h. Sixteen thousand five hundred to fifty-four thousand nine hundred ninety-nine turkeys;
 - i. Nine thousand to twenty-nine thousand nine hundred ninety-nine laying hens or broilers, if the animal feeding operation uses a liquid manure handling system;
 - j. Thirty-seven thousand five hundred to one hundred twenty-four thousand nine hundred ninety-nine chickens (other than laying hens), if the animal feeding operation uses other than a liquid manure handling system;
 - k. Twenty-five thousand to eighty-one thousand nine hundred ninety-nine laying hens, if the animal feeding operation uses other than a liquid manure handling system;
 - l. Ten thousand to twenty-nine thousand nine hundred ninety-nine ducks, if the animal feeding operation uses other than a liquid manure handling system; or
 - m. One thousand five hundred to four thousand nine hundred ninety-nine ducks, if the animal feeding operation uses a liquid manure handling system.
16. "Medium concentrated animal feeding operation" means a medium animal feeding operation that meets either one of the following conditions:
- a. Pollutants are discharged into waters of the state through a manmade ditch, flushing system, or other similar manmade device; or
 - b. Pollutants are discharged directly into waters of the state which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.
17. "North Dakota Livestock Program Design Manual" means the guidelines established for use by the department in the review and permitting process for animal feeding operations.
18. "Nutrient management plan" means a written description of the equipment, methods and schedules by which:
- a. Manure, litter, and process wastewater is beneficially reused in an environmentally safe manner such as being applied to land at appropriate agronomic rates as nutrients or fertilizers; and
 - b. Water pollution and air pollution, including odors, are controlled sufficiently to protect the environment and public health.
19. "Open lot" means livestock pens, feeding or holding areas at the production area of an animal feeding operation which are outside and not under roof, and where rain can fall directly on the lot area.
20. "Open manure storage structure" means an earthen pond or storage tank for holding liquid manure which is not covered so rainfall can fall directly into the pond or tank.

21. "Operation and maintenance plan" means a written description of the equipment, methods, and schedules for:
 - a. Inspection, monitoring, operation, and maintenance of the animal feeding operation, including manure storage structures, water pollution control structures, and the production area; and
 - b. Controlling water pollution and air pollution, including odors sufficient to protect the environment and public health. It includes emergency response actions for spills, discharges or failure of a collection, storage, treatment, or transfer component.
22. "Operator" means an individual or group of individuals, partnership, corporation, joint venture, or any other entity owning or controlling, in whole or in part, one or more animal feeding operations.
23. "Overflow" means the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structure.
24. "Pollutant" means "wastes" as defined in North Dakota Century Code section 61-28-02, including dredged spoil, solid waste, incinerator residue, garbage, sewage, sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.
25. "Process wastewater" means water directly or indirectly used in the operation of the animal feeding operation for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other animal feeding operation facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts, including manure, litter, feed, milk, eggs, or bedding material.
26. "Production area" means those areas of an animal feeding operation used for animal confinement, manure storage, raw materials storage, and waste containment. The animal confinement area includes open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milking rooms, milking centers, cattle yards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes lagoons, runoff ponds, storage sheds, stockpiles, under-house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes feed silos, silage bunkers, and bedding materials. The waste containment area includes settling basins, areas within berms, and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility and any area used in the storage, handling, treatment, or disposal of mortalities.
27. "Runoff" means rainwater or snow melt that comes in contact with manure at an open lot or open manure storage area and, therefore, is defined as manure.
28. "Runoff pond" means an earthen storage pond that is used to collect and store runoff from an open lot or from a manure storage area.
29. "Seepage" means the volume of flow through a manure storage structure.
30. "Sensitive groundwater area" means vulnerable hydrogeologic settings as determined by

the department such as glacial outwash deposits or alluvial or aeolian sand deposits that are critical to protecting current or future underground sources of drinking water. Areas designated as sensitive groundwater areas by the department include alluvial or aeolian sand deposits shown on Geologic Map of North Dakota (Clayton, 1980, North Dakota geological survey) and glacial drift aquifers listed in North Dakota Geographic Targeting System for Groundwater Monitoring (Radig, 1997, North Dakota department of health), or most recent editions of these publications, with DRASTIC scores greater than or equal to 100 based on methodology described in DRASTIC: A Standardized System For Evaluating Groundwater Pollution Potential (Aller et al, 1987, United States environmental protection agency).

31. “Small animal feeding operation” means any animal feeding operation that stables or confines less than the numbers of animals specified for a medium animal feeding operation.
32. “Small concentrated animal feeding operation” means a small animal feeding operation designated as a concentrated animal feeding operation under section 33.1-16-03.1-04.
33. “State animal feeding operation permit” means a permit issued by the department under this chapter to an animal feeding operation.
34. “Surface water” means waters of the state that are located on the ground surface, including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, and all other bodies or accumulations of water on the surface of the earth, natural or artificial, public or private.
35. “Unconfined glacial drift aquifer” means a glacial drift aquifer that does not have an impervious soil layer which acts to prevent or minimize movement of water into, through, or out of the aquifer.
36. “Water pollution control structure” means a structure built or used for handling, holding, transferring, or treating manure or process wastewater, so as to prevent it from entering the waters of the state. The term also includes berms, ditches, or other structures used to prevent clean water from coming in contact with manure.
37. “Water quality standards” means the water quality standards contained in chapter 33.1-16-02.1.

ML - silt and fine sand, CL - Lean Clay, OL - Organic Layer

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Table 6 - Soil Boring Information:

Depth	SB 1	SB 2	SB 3	SB 4	SB 5	SB 6	SB 7	SB 8	SB 9	SB10	SB11	SB12
Elev.	498.5	500.25	499	496.75	500	499	498	498.5	498.5	498	496.75	497.25
0 - 1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
1 - 2	OL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
2 - 3	OL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
3 - 4	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
4 - 5	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
5 - 6	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
6 - 7	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
7 - 8	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
8 - 9	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
9 - 10	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
10 - 11	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
11 - 12	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
12 - 13	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
13 - 14	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
14 - 15	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
15 - 16	CL	CL	CL	CL-ML	CL	CL	CL	CL	-	-	-	-
16 - 17	CL	CL	CL	CL-ML	CL	CL	CL	CL	-	-	-	-
17 - 18	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
18 - 19	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
19 - 20	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
20 - 21	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
21 - 22	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
22 - 23	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
23 - 24	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
24 - 25	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
25 - 26	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
26 - 27	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
27 - 28	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
28 - 29	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
29 - 30	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
30 - 31	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
31 - 32	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-
32 - 33	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-
33 - 34	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-
34 - 35	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-
35 - 36	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-

FACT SHEET FOR STATE AFO PERMIT NDAFO-0711

HEXAGON II – BISBEE, ND

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APPENDIX D – RESPONSE TO COMMENTS

Comments received during a public comment period will be placed here.

Department Response to Public Comments

TO: File
FROM: Division of Water Quality
DATE: July 17, 2026
SUBJECT: Response to Public Comments for Proposed State Animal Feeding Operation Permit – NDAFO0711 “Hexagon II”

This memorandum is in response to comments received by the North Dakota Department of Environmental Quality, Division of Water Quality (department) regarding the facility proposed by Dakota SAO II, LLP, Hexagon 2 (completed application received December 16, 2025).

Facility:

The proposed facility, Hexagon II, is a proposed concentrated animal feeding operation (CAFO) located 9.5 miles east of Wolford, ND in Pierce County. The site is in the SE $\frac{1}{4}$ of Section 24, Township 158 North, Range 69 West, 5th Prime Meridian. When the draft fact sheet and permit were completed, the department issued a public notice that was published in the Pierce County Tribune and posted to the department’s webpage: <https://deq.nd.gov/PublicNotice.aspx>. This public notice introduced a 45-day public comment period which ran from March 21, 2026, to May 5, 2026. A list of federal, state, and international government offices along with private entities were also notified of the webpage posting. The department maintains a list of mailing addresses to which letters of notification were sent. In addition, the department sent the public notice information to be posted by the U.S. Postal Service located in Bisbee, ND and the Pierce County Auditor’s office.

Public Hearing:

As part of the public comment period, the department held a public hearing. The hearing was held on April 20, 2026, from 5:00 PM to 8:00 PM at the Pierce County Courthouse, 240 2nd St. SE, Rugby, ND 58368. Its purpose was to offer an opportunity for interested parties to submit a verbal comment on record as part of the review process of the proposed facility.

Scope of Permit:

State water quality regulations require operators of Animal Feeding Operations (AFOs) to take adequate steps to prevent adverse impacts to waters of the state by obtaining a State Animal Feeding Operation Permit in accordance with North Dakota Administrative Code (NDAC) Ch. 33.1-16-03.1. The requirements developed for a facility are specific to site conditions. The department has the sole authority to address environmental issues, such as protecting water quality (NDAC 33.1-16-02.1) and air quality (NDAC 33.1-15-16) in accordance with North Dakota Century Code (NDCC) Ch. 23.1-01. Addressing zoning, land use, road use, water appropriations, social and economic issues is the responsibility of the local zoning board or other authorities and will not be addressed in this response as they are outside of the department’s authority and outside of the scope of the proposed permit.

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Glossary

Air Toxics Policy	Policy for the Control of Hazardous Air Pollutant Emissions in North Dakota
AFO	Animal Feeding Operation
ATTAINS	Assessment Total Maximum Daily Load Tracking and Implementation System
BMP	Best Management Practice
CAFO	Concentrated Animal Feeding Operation
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
LLP	Limited Liability Partnership
LWCF	Land and Water Conservation Fund
N	Nitrogen
NDAC	North Dakota Administrative Code
NDCC	North Dakota Century Code
NDDEQ	North Dakota Department of Environmental Quality
NDPRD	North Dakota Parks and Recreation Department
NDSU	North Dakota State University
NMP	Nutrient Management Plan
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint Source Program
NRCS	Natural Resources Conservation Service
O&M	Operations and Maintenance
P	Phosphorus
PI	Phosphorus Index
ppb	parts per billion
ppm	parts per million
USDA	U.S. Department of Agriculture
WQS	Standards of Quality for Waters of the State

Below are summaries of the written and oral comments received during the public comment period. The full comments in their entirety are included in Section 7. Although there are specific responses to each comment, the document should be read in its entirety with the understanding that a response to one comment may be applicable to additional comments. The department has updated the fact sheet and permit to provide clarification and address comments received during the comment period. Substantive changes are discussed in the responses.

Commenter 1- John Nelson

Comment 1(A)

I've been following this project for quite some time now and I believe that they followed every step of the law to make this as safe an operation and as an environmentally conscious operation as can be done in North Dakota. I think with the closed lagoon and the injection of the fertilizer, and the timeliness of when it will be applied will ensure that the water quality will not be affected. And I think from a wider view of the situation, animal agriculture is needed in North Dakota.

I attended a soybean workshop. Soybean processors, to make their operations competitive, they need a local, rather, than shipping all their product out of state like we've done for years in agriculture. We need to start processing the agricultural products that we grow more locally. This will ensure a beneficial use of, from a local standpoint, for the community in the region and for the entire state.

I wholeheartedly support this operation to go forward as long as they meet the components of what the DEQ provides as, as restrictions. I know a little bit about your process and I think that they've been good stewards in the processing that are the operations that they have currently in in the Cando area and I expect nothing less in Pierce County. So, I wholeheartedly support the application.

Department Response: Thank you for your comment.

Commenter 2 - Tom Bodine

Comment 2(A)

I'm here on behalf of Ag Commissioner Doug Goehring from Bismarck. The Commissioner would love to be here and he applauds these types of businesses being able to look at North Dakota. I guess it matches a lot with what the Commissioner's vision statement is. We support agriculture by embracing diversity, innovation, research and trade.

As you look at North Dakota and the Ag department and Ag Commissioner, it doesn't matter if you have one cow or 10,000. As long as you meet the standards, what is required in state law, in which I would say our state law when it comes to CAFOs and animal feeding operations are some of the most stringent in the nation, we would love to continue to see our animals be developed in our state. We are definitely heavy on the grain production side as we look at

animal agriculture and these types of operations being able to diversify our industry even more to make it more stronger.

So with that, the Commissioner's in whole full support, as long as it meets all the environmental conditions as well, this should be a permitted facility.

Department Response: Thank you for your comment.

Commenter 3 - Paul Overby

Comment 3(A)

I'm in support of animal agriculture. This one I find to be problematic. If I were going to site a livestock operation, I probably wouldn't put it on the shores of the lake. There are so many good places in North Dakota that can support livestock facilities, even CAFO's. Putting it right on the shores of Hurricane Lake North Dakota is not one of them.

Department Response: Thank you for your comment. Local zoning addresses site, scope, and nature of the facility. Zoning is outside of the scope of this permit.

Comment 3(B)

In the sustainability lingo, there's a phrase – people, planet, profits. And basically, what that means is it's important to balance those out the people, the planet or the environment, and the profits and what is going to have the highest priority? Part of the concern I have is that the organization that's Summit AG that's involved in this is coming out of state of Iowa and state of Iowa has some of the worst pollution, polluted waters in, in the entire country and also has some of the highest cancer rates in, in the country. And Doctor Chris Jones wrote a book that he called The Swine Republic and he noted that animal agriculture in Iowa has created a culture of basically, animal agriculture dominance, where people's concerns are being pushed off to the side by their equivalent of the North Dakota Department of Agriculture, by state regulators and the DNR, and it eventually ended up in him getting fired, because he was too outspoken in bringing environmental concerns to the public.

Department Response: Thank you for your comment.

Comment 3(C)

In the North Dakota Nutrient Reduction Strategy for Surface Water published by the North Dakota DEQ, one of the things that notes that 69% of the perennial streams in the state are impaired due to excessive P and 57% due to excessive N. In addition, a growing number of lakes and reservoirs in the state are experiencing harmful blue-green algae or cyanobacteria blooms caused by these excessive N and P loadings. And I contend that locating this facility so close to Hurricane Lake is going to increase that potential problem for the lake. I'm not going to read all of the things that are included in the DEQ guideline. I'm actually going to submit this as

written testimony. My printer didn't work very well. But one of the things in the manual, it talks about preventing interaction between precipitation and pollutants. And so it's very important that water that runs off of these fields not interact with the pollutants. And I've made this statement previously, I'll reiterate it that these fields... The notice says reissue, but a lot has changed in twenty years. Twenty years ago, I was here too and when that permit was issued, that land was not drained. Today it is. Every acre that the manure application is for has been drained and there are, are numerous drainage ditches that cross this land, providing just exactly that interaction between precipitation and pollutants that the North Dakota DEQ says is a priority to not let happen. And so that's one of my concerns for, for this is the amount of drainage has been added to this.

Department Response: Thank you for your comment. Refer to response to *Comment 3(N) Harmful Algal Blooms*, and *Comment 3(T) Stormwater Discharges*

Currently, there is no policy regarding the land application of manure on drain tiled fields within the department. The nutrient management plan (NMP) requires the submittal of precautions used to prevent manure from reaching waters of the state. The proposed NMP has 3,596.98 spreadable acres. Section 7 of the North Dakota Livestock Program Design Manual (design manual), as required by NDAC 33-16-03.1-08, provides the authority to ensure the waters of the state are protected. Manure shall be land applied in accordance with Section 7.6 of the design manual.

Under NDAC 33.1-16-03.1-07(2)(k) and NDAC 33.1-16-03.1-08(3), the department requires NMPs for regulated livestock facilities in the state. According to NDAC 33.1-16- 03.1-03(18), the definition of a "nutrient management plan" means a written description of the equipment, methods, and schedules by which:

- a. Manure, litter, and process wastewater is beneficially reused in an environmentally safe manner such as being applied to land at appropriate agronomic rates as nutrients or fertilizers; and
- b. Water pollution and air pollution, including odors, are controlled sufficiently to protect the environment and public health.

An NMP is upheld by NDAC 33.1-16-03.1-10 - Enforcement and compliance. The application rate of manure and nutrients will be monitored to ensure nutrients are applied in a manner so as not to impact waters of the state. Soils will be tested annually so that nutrients are applied at agronomic rates. The use of buffer strips can reduce loading into rivers and streams. The use of a toolbar to inject manure directly into the soil reduces the potential for nutrients to reach waters of the state. Manure must be incorporated such that an odor reading with a field olfactometer does not exceed a reading of 7 or greater odor concentration units for two or more days in a ten-day period if within 100 feet of an occupied residence, building, or public area. As stated in the *North Dakota Livestock Program Design Manual* Section 7.5:

1. The manure application rate shall not exceed the recommendations for nitrogen and phosphorous based on either the North Dakota Phosphorous Index (PI), as developed by the Natural Resources Conservation Service (NRCS), or North Dakota State University (NDSU) Extension Service recommendations based on soil testing.

2. The PI allows manure and other sources of nutrients to be applied at rates to meet the nitrogen needs of a crop if the PI rating is low or medium. If the PI is high, it allows manure and other sources of nutrients to be applied at rates to meet the phosphorous removal in the crop biomass. If the PI is very high, it requires that no manure be applied to that field. Manure shall not be applied to fields where the soil test phosphorous exceeds 125 parts per million (ppm) (250 lbs per acre).
3. Manure and other sources of nitrogen must not be applied at rates that exceed:
 - a. The recommended nitrogen application rate during the year of application; or
 - b. The estimated nitrogen removal in harvested plant biomass for legumes during the year of application.
4. NMPs shall contain a field-specific assessment of the potential for nitrogen and phosphorous transport from the field. The assessment for phosphorous can be done using the phosphorous screening tool and soil tests, or the PI assessment.

Comment 3(D)

Also from the 2026-2031 nonpoint source pollution management program, a priority is that water bodies that are fully supporting all beneficial uses but threatened by potential nonpoint source pollutants should be a priority for them. And I suggest that if this permit is going to be approved that you all should add Urban Lake to your list immediately. OK, because it's now going to be one of those lakes that is potentially threatened by non-point source pollution. I don't say that lightly.

Vandenberg et al., the paper published in the Environmental Monitor Assessment state that their study of water quality in the Lake Alice Basin, including in and around the swine barns, now operated by Summit Ag, shows a positive correlation between the nutrients, nitrate, nitrite, and, and TKN, another nitrogen measurement, and the percentage of CAFO nutrient management areas within the sub watersheds and suggests that the ag operations in these areas may have potential impact on the area. So, the same operator is now going to move and operate in Hurricane Lake Basin. So, they, they state that higher total organic carbon of pollutant concentrates are correlated with the distance to the CAFO facilities. It concluded this, the greatest threats to water quality of the Lake Alice Natural Wildlife Refuge appear to be a high nutrient and E coli concentrations within the aquatic system.

Department Response: Thank you for your comment. The department's Watershed Management Program is primarily responsible for the monitoring and assessment of water quality in streams, rivers, lakes and wetlands across North Dakota. This is done in cooperation with many local, state and federal partners. The department address water quality concerns by developing Total Maximum Daily Loads (TMDLs), Ambient Monitoring Network, Lake water Quality Assessments, Biological Monitoring and providing technical assistance for watershed projects.

The Watershed Management Program utilizes the publications “North Dakota’s Water Quality Monitoring Strategy for Surface Waters” and “Water Quality Assessment Methodology for North Dakota’s Surface Waters” to plan, monitor, and assess its surface water resources, including rivers and streams, lakes and reservoirs, and wetlands. The multi-year water quality monitoring strategy for surface waters describes the goals, objectives, scope, and plan for surface water quality monitoring conducted by the department. The purpose of the water quality assessment methodology publication is to describe the assessment methodology used in the state’s biennial integrated report. Water quality standards (WQS) are utilized to provide the fundamental benchmarks by which the quality of all surface waters is measured. It is the WQS that are used to determine impairment and placement of those waters into one of five assessment categories. The categories represent varying levels of WQS attainment, ranging from Category 1, where all of a waterbody’s designated uses are fully supporting, to Category 5, where a pollutant impairs a waterbody and a TMDL is required. This information, which is summarized by specific lake, reservoir, river reach or sub-watershed, is integrated as beneficial use assessments that are entered into a water quality assessment database management system termed the Assessment Total Maximum Daily Load Tracking and Implementation System (ATTAINS). The water quality integrated report requirements under Sections 305(b) and 303(d) of the Clean Water Act require states to assess the extent to which their lakes, reservoirs, rivers, and streams are meeting water quality standards applicable to their waters, including beneficial uses as defined in their state water quality standards. North Dakota’s biennial integrated report fulfills this requirement by identifying and listing those individual waterbodies that do not meet applicable water quality standards and to develop TMDLs for those waters. More information regarding the water quality monitoring strategy, assessment methodology, and impaired waterbodies can be found at the below links:

- https://deq.nd.gov/publications/WQ/3_WM/MonitoringStrategy/2020-2030_North_Dakota_Monitoring_Strategy_Final.pdf
- https://deq.nd.gov/publications/WQ/3_WM/AssessmentMethodology/Final_ND_AssessmentMethodology_20180223.pdf
- <https://ndlegis.gov/information/acdata/pdf/33.1-16-02.1.pdf>
- https://deq.nd.gov/publications/WQ/3_WM/TMDL/1_IntegratedReports/2020_2022_Final_ND_Integrated_Report_20230824.pdf

The department has conducted a comprehensive review of the submission package for a state animal feeding operation (AFO) permit for the proposed facility, Hexagon 2. The submission package included all documents as required by NDAC 33.1-16-03.1-07 and NDAC 33.1-16-03.1-07(2) lays out state AFO permit submission requirements. This includes but is not limited

to site designs, engineered design plans, an operations & maintenance plan (O&M), construction specifications, and a NMP. All requirements laid out in the North Dakota Livestock Program Design Manual were met.

All structures on the proposed facility are up to or exceed the standards required by North Dakota state regulations. These include impermeable construction under barns, piping and pumping equipment, grading and earthwork to control water flow, and sufficient storage volume to contain manure, in exceedance of the 270 days of storage required by state regulations. Clean water diversions and a stormwater/drain tile basin are present in the design to prevent contamination with manure.

Comment 3(E)

I want to pick up on. I want to pick up on something that Lonnie [Commenter 16] was talking about regarding the, the legality of the corporation, not because you can do anything about it, but because what it brings up is 4 words to me, integrity, trust, honesty and character. What we are left with, when this permit is issued is those four things are dependent on DEQ. We have no say in that. We are dependent on those things happening. They've already breached that in my personal opinion by how they carried out this permitting process and the legal process of application, if in fact this 18 versus 10 is true. I'm hearing a lot of scuttlebutt. I don't know. I'd like to hear the answers to it, but it really brings into question all of the things, all of the commitments and signed documents, etcetera, etcetera, of, of this permit, this manure application.

Department Response: Thank you for your comment. The structure of the corporation is outside the authority of the department. Please refer to the North Dakota Secretary of State and the North Dakota Department of Agriculture.

Comment 3(F)

If we end up with manure issues as far as Hurricane Lake go are primarily those applications that are in Union Township. All of the applications in Zion Township go through a coulee and go through multiple stages before they end up in Devils Lake. Not that they can't end up in Devils Lake, but the application grounds in Blooming Township are, in fact, one of them is like right there on the shore of the lake.

Department Response: Thank you for your comment. Please refer to response to *Comment 3(C) NMP*.

Comment 3(G)

And the problem is that cyanobacteria. So right now, Hurricane Lake does not have a cyanobacteria problem, but overload of nutrients will create that. Hunting dogs get killed from cyanobacteria. There's been lots of cases of that. Hurricane Lake is a hunting lake. People use that. They use it for water. They use it for recreation.

Department Response: Refer to response to *Comment 3(N) Harmful Algal Blooms*.

Comment 3(H)

North Dakota Trust Lands has a pasture right adjacent to the floodplain of Hurricane Lane. Located adjacent to the coulee channel on the northern most end of Hurricane Lake, on the south side of Highway 17, is a cattle watering dugout that gets flooded by the coulee inflows both during spring run off and during large spring or summer rain events. This dugout is located on ND School Trust Land, and as such deserves consideration in approving this plan. Will the presence of manure applications within less than 1,000 feet of this dugout affect the future value of this ND Trust Land?. Are you confident that in the future we're not going to have dead cattle from livestock drinking that water?

Department Response: Thank you for your comment. As livestock producers maintain the health and safety of their herds, they can refer to NDSU Extension Livestock Water Quality AS1764 for guidance on livestock water quality. Please refer to response to *Comment 3(C) NMP*.

Comment 3(I)

I have completed an analysis of all the fields that were on the map here and I'll be submitting that in written testimony. There are some things that are better than what was applied before. A lot of the areas have been buffered. I notice there's some land that's been removed. Good. There's more that should be removed. The coulees are better buffered, but I could not understand if the 100-foot buffer was coming from the center line of the coulee or from the grass edge of the coulee. It should be from the grass edge of the coulee, not from the center line of the coulee, because you're trying to stop water from into that grass buffer, which is part of the channel itself. The channel is wider than the center line, so if it's 100 feet from the center line, that's kind of a putsy thing, and I haven't studied your regs enough to know that.

Department Response: The 100-foot setback is measured from the edge of where the wetland area or water body was mapped, unless there is another BMP in place. Please refer to Section 7.6 of the design manual and response to *Comment 3(V) Land Application Sites*.

Comment 3(J)

The other thing that's, I know it's been talked about for an injected system, I did not see where it was specifically described. Are we talking injecting two inches deep, three inches deep, two feet deep? What's the injecting system? There's a very interesting video on the dairy from Carrington that shows an injection system, which is probably the one that would be used. Very common use got a lead coulter. It's got an injection knife that's about that deep. And the interesting thing is watching the manure ooze back to the surface, because it can't handle the total volume of liquid and keep it in the slot. So, we're kind of again back to integrity, trust, character, all those things dependent on the applicator and the operator having a system that

injects them deep enough, closes the slot, tighten up to keep the manure from floating back to the surface where rain and snow melt can carry it into the water stream.

Department Response: Thank you for your comment. Please refer to response to *Comment 3(C) Nutrient Management Plan*.

Comment 3(K)

Within the concept of sustainability, the phrase “People, Planet, Profit” evokes the need to properly balance these three resources. And often that creates a conflict. But to be sustainable, for long-term viability for all three, there needs to be a concerted effort at balancing them out.

When it comes to the ag industry, one state NOT to emulate is Iowa. They do not even pretend to balance these three resources. "Interested in the truth about Iowa's water quality? You won't get it from Iowa's agricultural and political leaders. The state is first in egg and pork production and fifth in the number of feedlot cattle. But this production has come at a cost: soil erosion, the loss of wildlife habitat, a lack of public parks and recreation areas, foul air from animal waste, and especially degraded water. Iowa has over 70,000 miles of streams, and only 15 segments of these meet all the designated uses outlined under the Clean Water Act. In politics, culture, and economics of Iowa agriculture and the state's degraded waters and connects the dots for everyone who wonders why progress toward improvement is so maddeningly slow." Excerpts from the inside cover flap of *The Swine Republic* (2023), a book written by Dr. Chris Jones from Iowa.

Dr. Jones has a doctorate in analytical chemistry, was a manager of a testing laboratory, an environmental scientist with the Iowa Soybean Association, the lab supervisor at the Des Moines Water Works, and most recently a research engineer at the University of Iowa. And he is a critic of both the ag industry and the Iowa regulatory agencies for their lackadaisical concern about Iowa water quality and their efforts to address it. He knows what he is talking about. But because of his criticism, Iowa ag leaders and Republican officials forced him out of his job.

We do not want to replicate the Iowa experience in North Dakota.

Yet here we are today with North Dakota following the “Iowa plan” to increase the presence of CAFOs in ND, pushed by the same Farm Bureau efforts as took the lead in Iowa. The first effort in both states was for the state legislature to strip away as much local control as possible. The second effort was to consolidate control in the state agency, the Department of Natural Resources in Iowa, the Department of Environmental Quality (DEQ) in ND, and then use political pressure to write rules that were more permissive than regulatory. To wit, only reviewing 5% of CAFO manure application plans per year by the ND DEQ. On paper, the ND DEQ recognizes the problems of pollution from ag runoff, both from synthetic fertilizers and chemicals as well as from livestock manure. From the:

“Many of North Dakota’s waterbodies are affected by nutrient pollution. It is estimated that 69% of perennial streams in the State are impaired due to excessive P and 57% due to excessive N (NDDEQ, 2015a). Furthermore, more than 24% of the State’s lakes and reservoirs are listed as impaired for fishing and water-based recreation due to excessive nutrients (NDDEQ, 2015b). In addition, a growing number of lakes and reservoirs in the State are experiencing harmful blue-green algae (i.e., cyanobacteria) blooms caused by excessive N and P loadings. These blue-green algae blooms can produce harmful toxins, referred to as cyanotoxins, in the water which can pose a risk to human health in drinking water supplies and by primary contact recreational activities such as swimming, skiing, and boating.

“Nutrients originate from a variety of sources including nonpoint sources, such as agriculture and urban runoff, and point sources, such as municipal and industrial wastewater discharges. Once these nutrients enter our rivers and streams, they may be transported far downstream where they may impact other rivers, streams, lakes, and reservoirs both in and outside the State, and internationally. In addition to direct nutrient contributions as the result of runoff, nutrients may enter our groundwater through infiltration where they can contaminate our public and private drinking water supplies.

“In North Dakota, the leading sources of nutrients include industrial and municipal point sources, storm water runoff, and nonpoint sources such as failing septic systems, erosion and runoff from cropland, runoff from animal feeding operations, and hydrologic modification (e.g., historic wetland drainage and stream channelization). Other sources of nutrients include poorly managed pastures and rangeland, riparian grazing, and tile drainage.

“To effectively reduce or eliminate the transport of NPS pollutants, including nutrients, to surface and/or groundwater resources, various “source control” measures are implemented within the watershed projects. These source control measures or BMPs are designed to 1) prevent pollutants from leaving a specific area, 2) reduce/eliminate the introduction of pollutants, 3) protect sensitive areas, and/or 4) prevent interaction between precipitation and pollutants.”

And from the proposed 2026-2030 Non-Point Source Pollution Management Program: A priority is “Waterbodies that are fully supporting all beneficial uses but are threatened by potential NPS pollutants.”

Department Response: Thank you for your comment.

Comment 3(L)

I suggest that if the ND DEQ grants this permit, you should add Hurricane Lake to that list of threatened waterbodies ASAP.

I do not say this lightly.

Department Response: The North Dakota Department of Environmental Quality (NDDEQ) watershed management program follows the publication “Water Quality Assessment Methodology for North Dakota’s Surface Waters” to determine levels of threat to waterbodies of concern. Please refer to response to *Comment 3(D) Surface Water Quality*.

Comment 3(M)

Vandeberg, et al. (2015) In their paper *Spatial assessment of water quality in the vicinity of Lake Alice National Wildlife Refuge, Upper Devils Lake Basin, North Dakota* published in the Environmental Monitor Assessment Journal state that their study of water quality in the Lake Alice Basin, including in around the original Hexagon I swine barns now operated by Summit Ag “shows a strong positive correlation between the nutrients NO₃–NO₂ and TKN (nitrogen) and the percentage of CAFO nutrient management areas within the sub-watersheds and suggests that agricultural operations in these areas may have a potential impact on area.” Further the conclusion states that higher Total Organic Carbon concentrations are correlated with decreasing distance to the CAFO facilities. It concluded: **The greatest threats to the water quality of the Lake Alice National Wildlife Refuge appear to be the high nutrient (NO₃–NO₂ and P) and E. coli concentrations within the aquatic system.** The CAFO nutrient applications are an identified water quality problem causing NPS pollution to Lake Alice which then flows into Devils Lake.

The ND DEQ NPS Pollution Management Program clearly states in its 2025 Annual Report that its goal is to reduce or eliminate NPS pollution.

The Nonpoint Source Pollution Management Program 2025 Annual Report
NDDEQ Account, January 27, 2026

Our Vision

The North Dakota NPS Program vision is to abate all NPS pollution threats and impairments to the beneficial uses of the waters of the state.

Our Mission

The North Dakota NPS Management Program mission is to implement a voluntary, incentive-based program that restores and protects the chemical, physical, and biological integrity of waters where the beneficial uses are threatened or impaired due to nonpoint sources of pollution.

Our Goals

- Coordinate with the Total Maximum Daily Load Program (TMDL Program) and local partners to assess 15 priority watersheds to document the beneficial use conditions as well as the sources and causes of NPS pollutants impairing beneficial uses of the waterbodies within the watersheds.

- In cooperation with local partners, develop and implement watershed restoration or protection plans for 15 priority sub-watersheds. Success of these projects will be defined by restoration of impaired uses; applied best management practices (BMPs) and progress toward pollutant load reductions described in the approved watershed-based plans.
- Through multiple forms of media at the state and local level, increase public awareness and understanding of water quality and beneficial use impairments associated with NPS pollution as well as the sources and causes of NPS pollution in the state.

The challenge in ND is that we do not have many (if any?) active watershed districts that develop and maintain plans for water quality. As a result, all the focus is on Bismarck and the ND DEQ. And frankly ND DEQ does not have the resources to accomplish the important goals it has set.

What research has found is that creating a watershed plan should start with grandpas and grandmoms, moms, dads, and children having a multigenerational discussion of “What makes this place and the people where you live unique” and “how does the watershed play a role in this?” This question is an excellent starting point to lead a community discussion on water quality!

Church leaders, school leaders and teachers, county commissioners, city councils, and others in the community should be a part of this. Whether the watershed is considered a resource issue, an environmental concern, or an issue of stewardship and the sacred, adaptive management and collaborative stakeholder involvement is the best way to successfully reduce nutrient pollution in the watershed.

Sadly, our conversation about the quality of the Hurricane Lake Watershed basin was only initiated after being threatened with the building of a 9,000+ head swine barn and the subsequent manure management plan for 3,000+ acres to dispose of the swine manure from this concentrated animal operation (CAFO). And what we heard in public testimony during the Pierce County Planning and Zoning Committee hearing, the Pierce County Commissioner hearing, and the ND DEQ Air and Water Quality hearing is that this proposed swine operation is a threat to Hurricane Lake, Lake Irvine, and to Devils Lake.

Department Response: Thank you for your comment. Please refer to response to *Comment 3(D) Surface Water Quality*.

Comment 3(N)

One of the real dangers from the potential NPS pollution caused by this facility is Cyanobacteria. From the ND DEQ report: Increased cyanobacteria (also known as blue-green algae) production can lead to an increased level of cyanotoxins in the water column, causing illness and/or death in wildlife, livestock, and humans. Nearly 30 percent of North Dakota lakes

(1,198 lakes) were considered high risk for cyanobacteria densities which could cause health problems (i.e., poor condition), while only approximately 17 percent of lakes (693 lakes) were considered to be low risk (i.e., good condition) (Figure V-31). Fifty-two (52) percent of lakes assessed in 2012 (2,085 lakes) were considered at moderate risk for cyanobacteria blooms (i.e., fair condition).

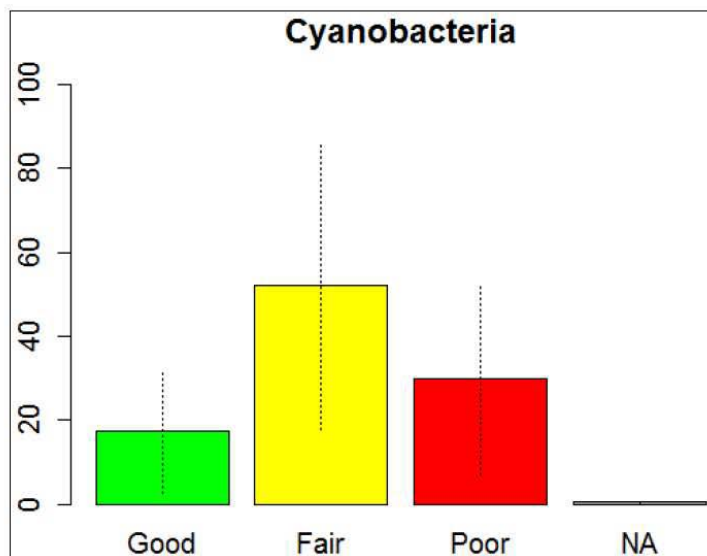


Figure V-31. Cyanobacteria Condition Category Estimates for Lakes in North Dakota.
(Lakes designated as Not Assessed (NA) were not sampled for cyanobacteria.)

Department Response: Thank you for your comment. Refer to response to *Comment 3(C) NMP*. Excess nutrients do show environmental impacts to waters across North Dakota. The department responds to reported harmful algal blooms (HABs) across the state and tests the waters for toxins. If toxins are present at an unsafe level, the department issues waterbody advisories and warnings for the public. Information on HABs monitoring and reporting can be found on the department website at:
[https://deq.nd.gov/WQ/3 Watershed Mgmt/8 HABS/Habs.aspx](https://deq.nd.gov/WQ/3_Watershed_Mgmt/8_HABS/Habs.aspx).

The department has reviewed the North Dakota 2020-2022 Integrated Section 305(b) Water Quality Assessment Report. Hurricane Lake was not listed as impaired for nutrients. The Integrated Report can be found on the department's webpage:
[https://deq.nd.gov/WQ/3 Watershed Mgmt/2 TMDLs/TMDLs IR.aspx](https://deq.nd.gov/WQ/3_Watershed_Mgmt/2_TMDLs/TMDLs_IR.aspx)

The proposed facility is regulated by state rules, which place requirements to protect the environment and human health.

Comment 3(O)

Most of my comments are focused on Hurricane Lake as it faces the most imminent threat from NPS pollution as the land selected for manure management in Pierce County encompasses several waterways flowing directly into the Hurricane Lake. Depending on the yearly weather

and the total water inflows, Hurricane Lake can be endorheic if inflows are short. This is problematic for the lake in that NPS pollution has the potential to build up rather than continue to flow through. Is DEQ confident that the environmental risks due to the CAFO's manure management are mitigated sufficiently by these plans to prevent a cyanobacteria bloom in Hurricane Lake? The lake is frequented by waterfowl hunters and cyanobacteria has been known to kill waterfowl hunting dogs in ND already.

Department Response: Refer to responses to *Comment 3(N) Harmful Algal Blooms* and *Comment 3(C) NMP*.

Comment 3(P)

But the focus on Hurricane Lake does not minimize the longer-term potential impact as Hurricane Lake is a part of the Devils Lake Basin. Depending on the inflows, when it spills over it continues to flow south and east through a coulee and eventually into Devils Lake. This flow then transfers pollution into Devils Lake, which is considered endorheic.

Runoff from the land selected for manure management in Towner County flows into a coulee that flows to the south and east, eventually ending up in Lake Irvine. This also then flows into Devils Lake, further contributing nutrient pollution in the lake.

Department Response: Refer to response to *Comment 3(C) Nutrient Management Plan* and *Comment 3(D) Surface Water Quality*.

Comment 3(Q)

As DEQ considers this CAFO permit application, another consideration must be made: If more and more CAFOs are approved in the Devils Lake Basin when will the Manitoba and Canadian governments begin to raise more concerns about poor water quality when Devils Lake is pumped into the Sheyenne/Red River system?

Department Response: Thank you for your comment. This is beyond the scope of this permit.

Comment 3(R)

And it bears noting that we have already heard from Spirit Lake Nation that they are deeply concerned about the pollution of the waters of Devils Lake, which is such an integral part of their spiritual and historical legacy.

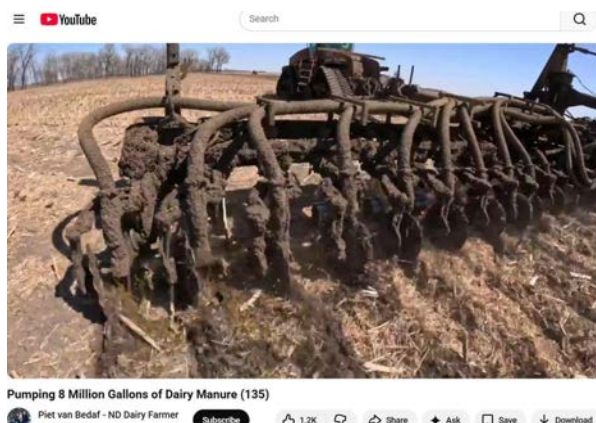
As permit from Dakota SAO II CAFO is evaluated, ND DEQ needs to be confident that it will meet all the very real concerns about NPS pollution that are contained in its own documents. Further, it needs to be confident that the implementation of the plan will not create an NPS pollution problem, which DEQ documents clearly state as a priority, for Hurricane Lake, Lake Irvine, and Devils Lake.

Department Response: Thank you for your comment. See responses to *Comment 3(C)* and *Comment 3(L) NPS*

Comment 3(S)

I have real concerns that the plan submitted by Dakota SAO, LLP is capable of preventing NPS pollution of this watershed. The first concern is the towed-hose manure injection system. To my knowledge there is no DEQ regulation stipulating the depth, manner, or mode of the manure injection system. Nor did I see any specifications in the manure management plan. Perhaps I have overlooked the documentation.

In the picture below, which is taken from a video clip of manure application on a dairy farm using a quite common towed-hose manure injection system, you can clearly see manure (greenish brown liquid) leaking out of the injection slot and only being partially covered up by the closing disks. Though some of the manure is injected, some of it ends up on the surface. That it does not all go into the ground is also evident by the caked up manure on the applicator. Because a towed-hose system is not easily shut off, the applicator must either make a generous turn when approaching the end of the field or lift the implement out of the ground, applying liquid manure to the surface.



<https://youtu.be/Oz6glXLsa08?t=652>

Department Response: Thank you for your comment. Refer to response to *Comment 3(C) NMP* and *Comment 3(L) NPS*. The operator is responsible for manure applications and must maintain setback distances and prevent ponding on the field during application.

Comment 3(T)

The second concern are the extensive drainage ditches, or water conduits, on the land. Almost all of the wetlands in the fields selected for manure management are drained. This has been a significant land management change in the past 20 years and is easily observable on any Google earth or USDA FSA map. It is also a clear indicator that the land operators value Profit over Planet, as wetlands serve valuable ecosystem services above and beyond just holding

water. What types of future actions by the CAFO and the land operators will there be if there is a needed choice between Profit or Planet?

Extensive drainage creates two other problems. The small depressions, which are likely already loaded with nutrients, which would normally hold water and allow sediments, including nutrients and manure organic matter, to settle out have been deliberately eliminated, reducing the holding capacity of water and increasing both the volume and velocity of run off. Volume and velocity increase the chance of soil, nutrients, and manure being carried off the targeted locations.

The second problem is the drainage ditches themselves. Based on personal observation, these ditches range from shallow 1-2 foot cuts to cuts that may be as much as 4 feet deep. In either case, the bottom of the drain is firm clay subsoil. The manure injection system will likely not penetrate the subsoil, or the applicator in order to reduce pull through the ditch, may lift the injection implement entirely out of the ground, applying the manure directly in the drainage ditch.

Because these ditches are highly engineered, rainfall or snowmelt will carry the manure directly into the coulees that drain the surface runoff to the watershed. One landowner suggested that the preferred management practice is to run a vertical till coulters in the ditches after application to work the manure into the soil. This now loosened soil means that not only the manure, but also the soil and attached nutrients would be at risk of flowing through these conduits directly into the watershed. This is especially where the increased volume and velocity of runoff due to the loss of the wetlands becomes even more problematic in transferring pollution.

My solution is a towed-tank application system that allows the operator to either shut off the applicator when going through the drainage ditch conduits, or to avoid them entirely. A towed-tank system can also be used for variable rate manure application, which I will address later in this document.

Department Response: Land application sites from a CAFO are not subject to discharge requirements if the NMP is followed as specified in 40 CFR (Code of Federal Regulations) 122.42(e)(1)(vi)-(ix). Agricultural storm water discharges are exempt from the National Pollutant Discharge Elimination System as provided in 33 U.S.C. 1362(14). Manure shall not be applied to drainage ditches. A 35-foot-wide vegetated buffer must separate the application area from any conduit to surface water. Refer to responses to *Comment 3(C) NMP*.

Comment 3(U)

The easiest way to achieve the DEQ goals and mandates regarding NPS pollution is to reject the Dakota SAO II CAFO Permit in its entirety. This would clearly put the Planet, and the People who live on or near, or use these lakes for their livelihoods or for recreation, in first place.

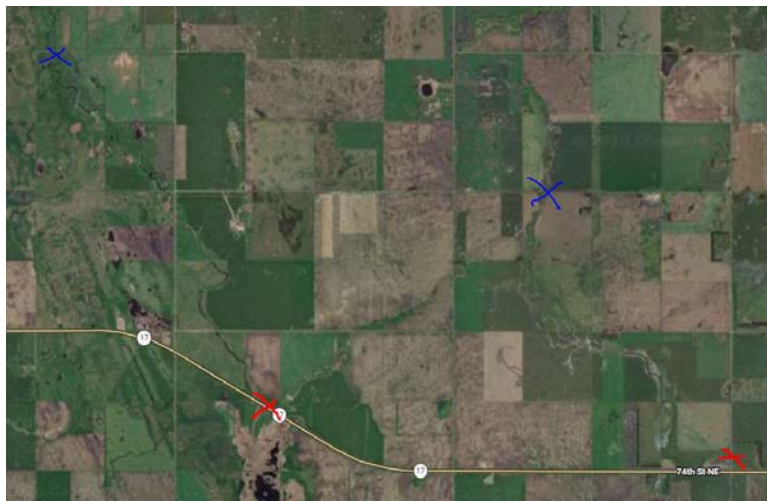
If Profit is allowed to be a motive in this permit application, then DEQ should require a water quality monitoring program, beginning now, to assess if any pollutants are moving off the land

and into the greater Devils Lake Basin watershed, such as we know is already happening in the Lake Alice watershed. Ironically, if this were a system where NPS pollution was suspected, the first thing that DEQ would authorize before implementing an EPA 319 watershed pollution abatement plan is a water quality study.

I suggest that if you approve this permit application you include a stipulation that water quality be continuously monitored and paid for by the CAFO operator and/or landowners. This could potentially be contracted with either or both the Pierce County Soil Conservation District and/or Towner County Conservation District, under the guidance of the DEQ NPS Pollution program.

The map below shows where the coulees flowing into the CAFOs manure management areas could be sampled, as marked in blue. The coulee outflow from the manure management area could also be easily sampled at the two locations marked in red.

Further, the results of these samples should be made publicly available as soon as they are released by the lab.



Department Response: All sample results received by the department are public records and are publicly available. Please refer to response to *Comment 3(D) Surface Water Quality*.

Comment 3(V)

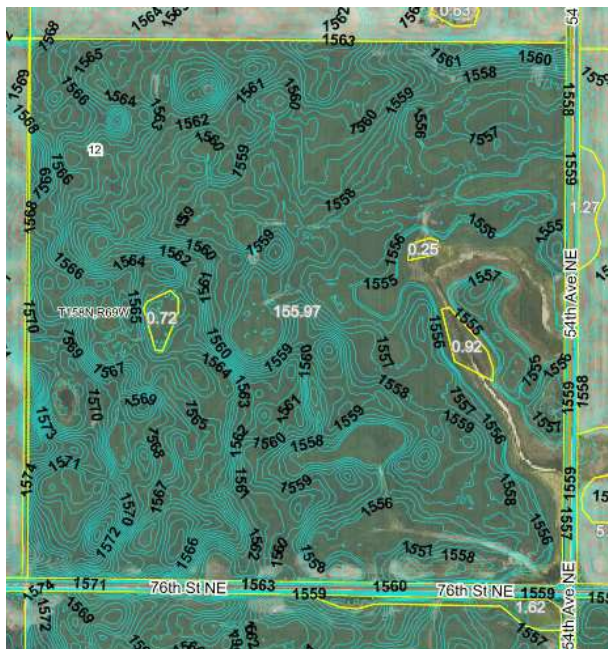
I completed an analysis of the fields included in the plan. Overall, I am pleased to see a much better effort to buffer water ways, especially the drainage ditches which serve as aggregators or conduits of surface water into the coulees than in the original proposal. There are some mistakes with permanent wetlands not excluded from application, and those have been noted. And there are some other areas of land that are low/nonproductive soil that should be excluded from manure application because no crops are growing there to use the nutrients leaving it an elevated risk from moving off the field.

The maps are screen shots of presentations on AgriData/Surety Maps.

Field by Field Analysis for Buffers and Setbacks

#5 Union Township W ½ Section 11 – Setbacks look good. Remove the “At Discretion of applicator.” This may need additional buffer in the SW corner as the field is drained in that direction using road ditches and flows through the culvert to the SW and into the coulee.

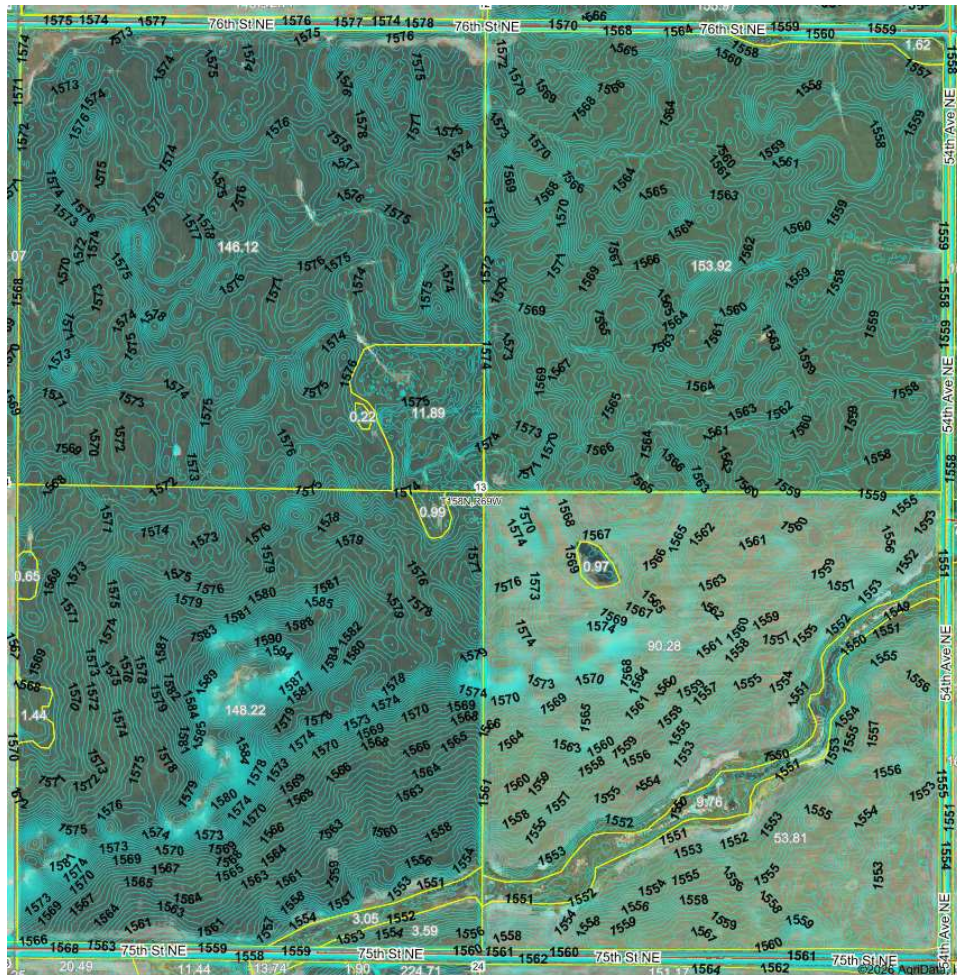
#10 Union 12 SE ¼. I am glad to see recognition of the drainage ditch in the SE corner and the wetland along the road. That drainage ditch reaches further to the west than what is shown as being buffered, so that should be extended. And in reality that wetland along the road is much larger than what is shown as exclusion. Below is the topographic map showing the size based on elevation is much larger than the exclusion zone. It is a large wetland somewhat concentrated by a large drainage ditch.



#14 Union Twshp W ½ and NE ¼ Section 13 – Setbacks look mostly good. Make sure the buffer on the coulee channel on the south side is a full 100 feet from the vegetated channel (not the centerline of the coulee) on both sides.

The road ditch along 54th Avenue on the NE ¼ has a drainage ditch cut into it and should be buffered as well. Actually, due to the salinity along the ditch, it should probably have permanent vegetative buffer.

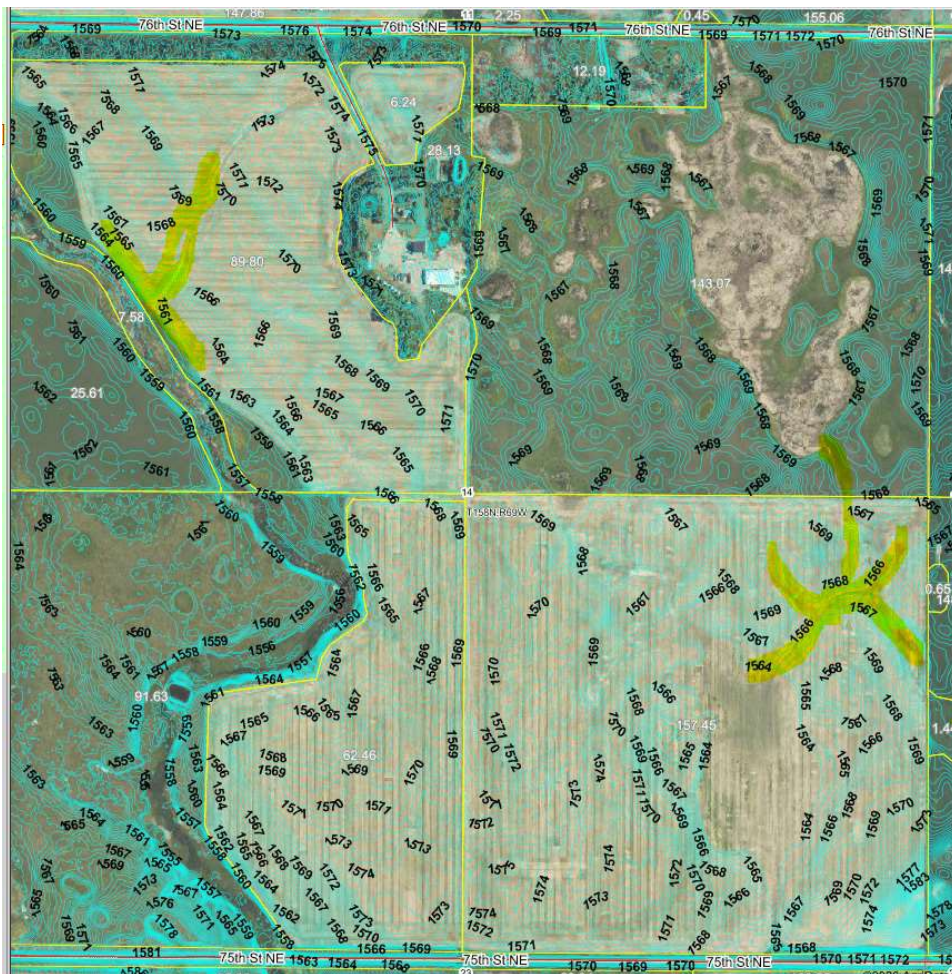
The SW corner has a steep hill that could erode carrying nutrients downhill and into the coulee. The application plan should perhaps include that manure needs to be applied on the contour of the hill. It also has subsurface drainage. Was this accounted for in the N and P application rates?



#1 and #11 Union 14 NW and S ½: There is a drainage ditch in the NW Qtr that should be buffered at least somewhat up from the coulee where it discharges into it.

#13 Grandpas should be fine as long as the buffers are expanded. The idea is that the buffer keeps nutrient away from the normal channel. And the channel includes the grass parts – the 100' buffers need to extend beyond that! Or he can add an additional 35 feet of vegetation.

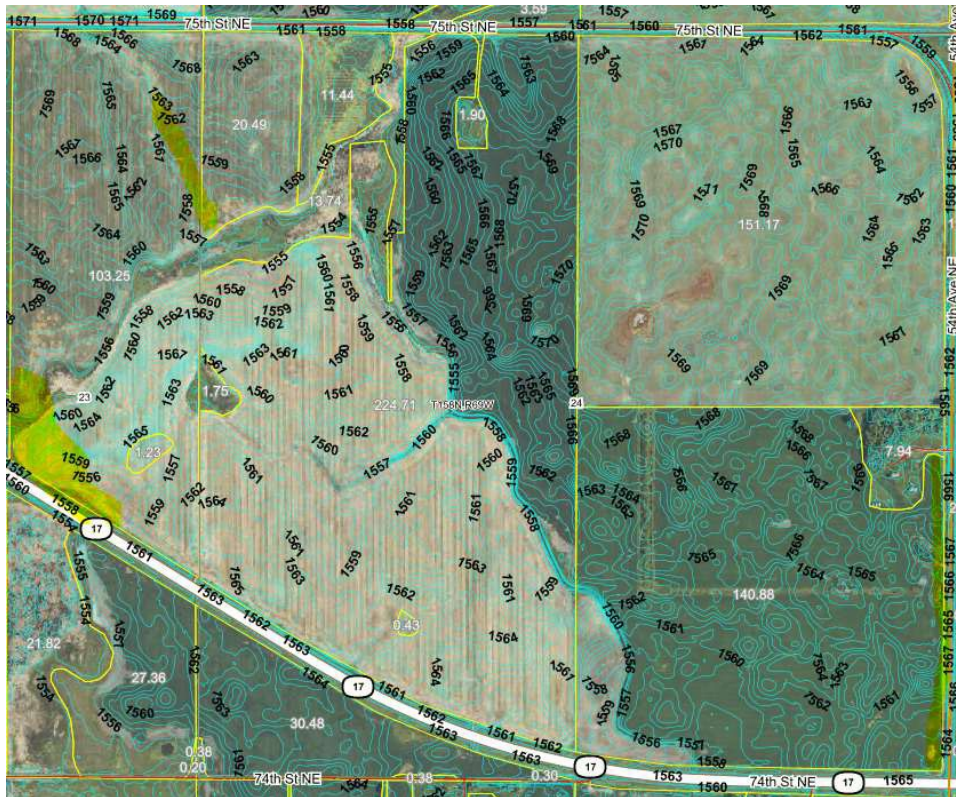
#9 Union 14 SE: Those setbacks from PEM1 Wetlands need to be mandatory not optional. Based on the topo maps, these are clearly areas where water during spring runoff or heavy rains is likely to pound. This is made even more likely by several drainage ditches in the NE corner of the quarter that drain into the largest wetland. It appears that there may also be drainage water coming from a wetland in the NE Qtr that has a US Fish and Wildlife easement on it.



#6A & B Union 23: This is a problematic field. It sits right at the discharge of the coulee into Hurricane Lake. As such, the buffers need to be robust. It appears on the plan that they are not bad, but I would suggest the entire area where the coulee meets the road be excluded from manure application. The soil is very poor and there is often no vegetation growing there, so it would be a wasted application. This area should be put into permanent vegetation, as highlighted on the map below. There is also a fairly major drainage ditch in the northeast portion of this field that should be buffered at least in the area where it enters the coulee.

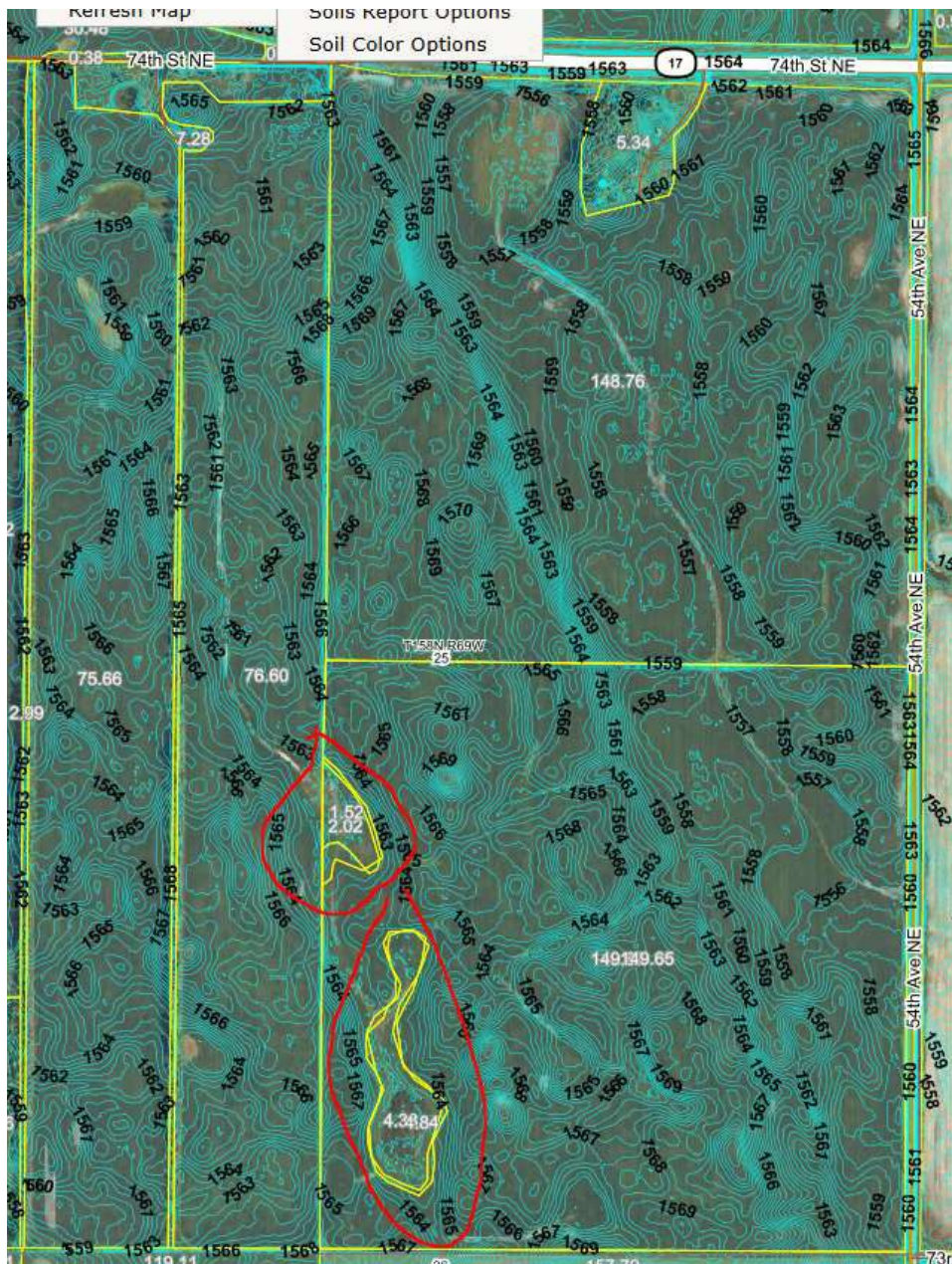
#1 Union 24 NW, #12 Union 24 S ½, and #1 and #2 Union 24 SE: I am very pleased to see the improvement of the buffer being added to the major drainage ditch running from the SE Qtr NW to the coulee as well as a join drainage ditch. Again, the buffers along the coulee need to be robust, and in several areas should be planted to permanent vegetation due to poor quality land. Note that there is also a drainage ditch cut into the road ditch on the west side of 54th Avenue that needs to be buffered. Further, this ditch is problematic as it would be the overflow outlet from the proposed retention pond in an existing wetland. The ditch empties into the Highway 17 road ditch, which is also problematic.

It is interesting that the operators did not deem the immediately adjacent NE Qtr of Section 24 to be worthy of their manure management program. These fields in the south half of Section 24 are the most at risk of transferring pollution to Hurricane Lake due to their adjacent location. It would make a lot more sense, from an environmental standpoint to approach Mr. Je□ Morrow, the owner of the NE Qtr of Section 24 and the SE Qtr of Section 113 and ask if his land can be used for manure application and remove an equivalent amount from the south and west of Section 24. From a land form perspective, these two quarters are also superior, with better natural drainage and a large coulee buffer in the SE Qtr of 13.



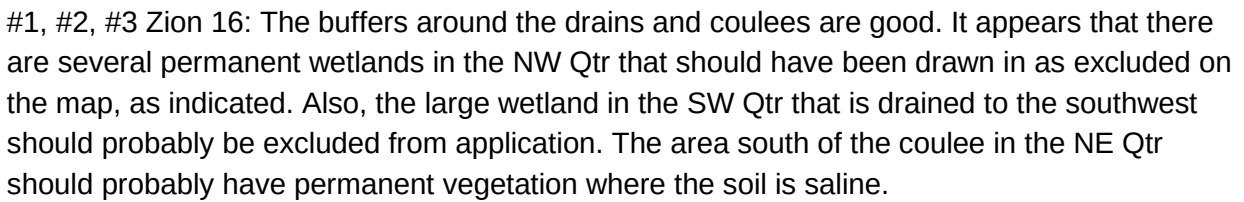
#1 and #4 Union 25 NE and SE: I am pleased to see that the major drainage ditch has a buffer requirement. It should also have a wetland exclusion as it ponds in a significant area right south of the highway. This ponding takes place in the spring and during any significant rainfall, largely because the size of the drainage area being dumped into it.

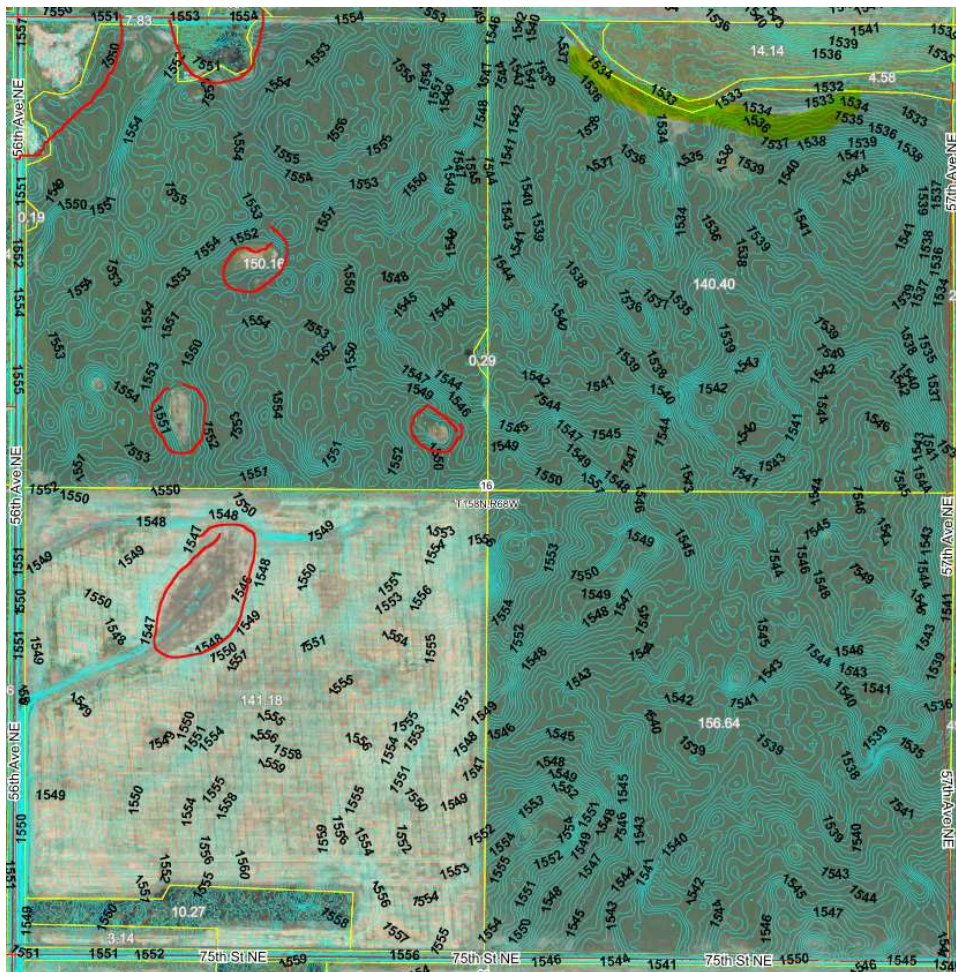
There is also a mistake in that there are two major wetlands along the west edge of the SE Quarter that need to be excluded from any manure application and buffered appropriately. I do not believe they are farmable, even though they have been drained, but they still need to be buffered.



#1 Zion 18: There is a ditch in the road ditch on the north edge of this that carries water that drains in from Section 12 & 13 in Union Twshp. This should be buffered. There is also a permanent wetland in the middle of this field that should be excluded and buffered.

#1 Zion 18 S ½: The buffer on the coulee on the west edge needs to extend farther south, greater than the 100 feet. There is a large area of poor soil where nothing grows. It should be planted with permanent vegetation. See map. The drainage ditch flowing into the coulee from the south should be buffered for at least 300 feet south of the coulee buffer. The coulee on the south edge may have an alternative channel going to the east and then south.





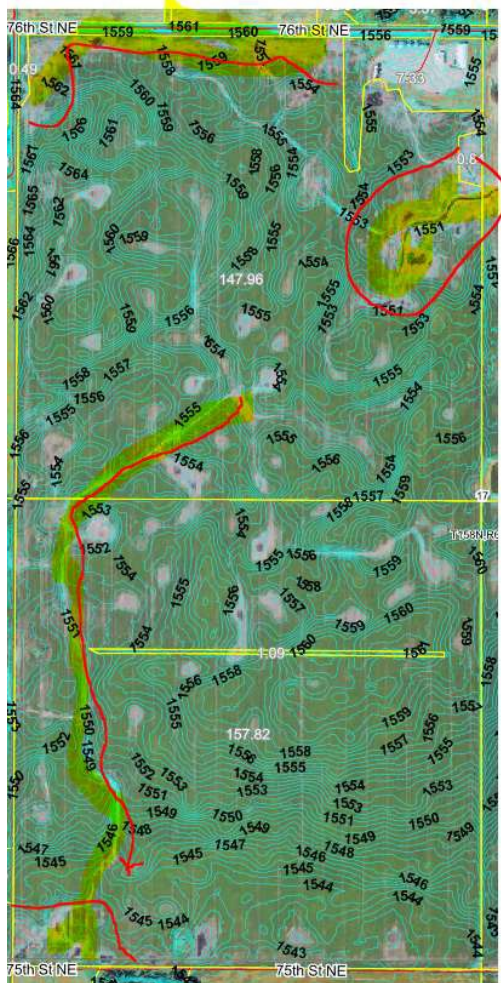
#1 and #2 Zion 21 NW and NE. The buffer on this looks good as it will also cover much of the drained wetlands. I think it should continue to extend to the east as it picks up a lot of field drainage east of where it is cut off on the proposed map.



#1 Zion 8 SW: There are some drainage ditches, but they are relatively small and scattered.

#1 and #2 Zion 17 NW and SW: There are no indicated buffers or exclusions on this map. But a closer look at a map from 2024 shows there likely should be (see below). There is extensive drainage on this half section, and a major conduit going down the west edge of the fields. It discharges across 75th Street NE and flows about 500 feet into the coulee.

There is an area south of the farmstead where there are drained wetlands and little crop growth. Additionally, there are areas on the north edge of the field where it appears that the vegetation is poor, indicating no crop growth to use applied nutrients, so this should also be buffered/excluded.



Department Response: Thank you for your comment. Refer to responses to *Comment 3(C) NMP* and *Comment 3(I) Spreading Setback*. The NMP is a living document that is reviewed by the department. Setbacks are set in accordance with Section 7.6 of the design manual. Setbacks were determined using US Fish and Wildlife Service's wetland mapper and Google Earth aerial maps. Changes in setback distances are reviewed as needed and operators shall

use reasonable judgement and take adequate precautions to prevent surface water impacts. The NW quarter of Zion Section 16, Township 158, Range 68 is not being spread on by Hexagon II and not part of the NMP.

Fields	Departments Final Determination
#5 Union 11	No additional setbacks required.
#1 Union 11	No additional setbacks required.
#10 Union 12	No additional setbacks required. Spreading near seasonal ponding requires 100-foot setback at discretion of the applicator.
#14 Union 13	No additional setbacks required.
#4 Union 13	No additional setbacks required.
#1 & #11 Union 14 NW	No additional setbacks required. 100-foot setback in place in locations where grass buffer is less than 35 feet across.
#9 Union 14 SE	No additional setbacks required. Spreading near seasonal ponding requires 100-foot setback at discretion of the applicator.
#13 Grandpas	No additional setbacks required. 100-foot setback in place in locations where grass buffer is less than 35 feet across.
#6A & #6B Union 23 Mom + Dad	No additional setbacks required. Spreading near seasonal ponding requires 100-foot setback at discretion of the applicator.
#1 Union 24 NW Corner	No additional setbacks required. 100-foot setback in place in locations where grass buffer is less than 35 feet across.
#3 Union 24 NE Corner	No additional setbacks required.
#12 Union 24 Shelf	No additional setbacks required.
#2 Union 24	No additional setbacks required.
#3 Union 24	No additional setbacks required.
#1 Union 24 SE	No additional setbacks required.
#1 Union 25 NE	No additional setbacks required.
#4 Union 25 SE	Additional setbacks were added to map.
#1 Zion 18	Additional setbacks were added to map.
#2 Zion 18 Shelf East Coulee	No additional setbacks required.
#1 Zion 18 Shelf West Coulee	No additional setbacks required.
#1 Zion 19 NW	No additional setbacks required.
#1 Zion 16 NE	No additional setbacks required.
#2 Zion 16 SE	No additional setbacks required.
#3 Zion 16 SW	No additional setbacks required.
#1 Zion 21 NW	No additional setbacks required.
#2 Zion 21 NE	Additional setbacks were added to map.
#1 Zion 8 SW	No additional setbacks required.
#1 Zion 17 NW	No additional setbacks required. Spreading near seasonal ponding requires 100-foot setback at discretion of the applicator.

#2 Zion 17 SW	No additional setbacks required. Spreading near seasonal ponding requires 100-foot setback at discretion of the applicator.
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Comment 3(W)

Discussion of Nitrogen and Phosphorus Application Rate Plans

The manure application plan really concerns me, especially on the fields that are close to Hurricane Lake and drain into it. Swine manure is different than dairy manure. We know that swine manure P₂O₅ (P) levels are at a considerably higher ratio to nitrogen (N) than other manure products. This is a problem because crop nutrient requirements are much higher for N than for P. And there are problems that come from this.

Department Response: Thank you for your comment. Manure nutrient values can differ greatly due to many factors including: livestock diet, livestock housing and bedding, manure storage and handling system, and dilution from water (wash water or rainwater). The department requires annual manure nutrient tests to be conducted. Manure and soil tests are reviewed by the department and recommendations given during inspections. Refer to response to *Comment 3(C) NMP* for more information.

Comment 3(X)

Soil Sampling

The plan calls for composite soil sampling for the entire field, though several of these fields have varying landscape positions and slopes, along with wetlands (current or former) and adjacent land. Dr. David Franzen's research in the mid-2000s demonstrated the advisability of using "Management Zones" for nutrient inputs. Based on compilations of NDVI imagery from Agri-Data (attached) it is clear that there are probably at least three zones possible for each field in the plan. And the landowners have likely been using some form of zone management already for commercial fertilizer.

To be consistent with Best Management Practices, these fields should be soil sampled by Management Zones, with the manure applied at the lowest rate recommended. Variable rate of application of the remaining needed nutrients can then be applied. This prohibits the over-application of manure, and possible build up of nutrients that could leach, denitrify, or run off.

It should also be noted that the NDVI imagery clearly delineates low or no-yielding areas where no manure should be applied. These areas should be removed from the manure application plan if they have not already. And, better yet, planted to permanent vegetation.

Department Response: Thank you for your comment. Please refer to response to *Comment 3(C) NMP*. Sampling and testing of soils will be in accordance with section 7.4 of the design manual.

Comment 3(Y)

Nutrient Budget for Land Application

In addition, communications with the farmer(s) will ensure proper planning of commercial fertilizer applications with liquid manure applications so that excess nutrients will not be applied to the land.

While this makes logical sense, and in fact is the right thing to do, there is no ability of the CAFO operator to enforce this. Nor is there any reporting requirement by the landowner to DEQ, so there is no enforcement from DEQ either. One of the problems with Iowa water quality alleged by Dr. Chris Jones is that farmers do NOT comply with this concept and apply more fertilizer than needed after the manure application is made.

Department Response: Thank you for your comment. The department conducts inspections of CAFO facilities. During this time the NMP along with manure spreading records, soil tests and manure tests are reviewed to ensure nutrient applications are not exceeding the recommendations for nitrogen and phosphorus. The facility is required to retain these records in accordance with Section 7.7 of the design manual.

Comment 3(Z)

Land Application of Liquid Manure

- a. Careful scheduling of the land application activities will reduce the threat of odor emissions to residents near the facility.
- b. Days with low humidity are best for land application.
- c. Applications on holidays and weekends when people are most likely to be outdoors will be avoided when possible.
- d. The use of either dragline injection or tanker injection for land applications will be the method for liquid applications."

DEQ needs to develop some reasonable set back requirements from residences for manure application, especially swine manure. There is a very interesting provision in the Manure Application Easement regarding air quality wherein the Grantor (landowner) provides an actual air quality easement to the Grantee (swine CAFO):

Air Quality Easement. Grantor hereby grants to Grantee an odor and air quality easement over the Grantor's Property. For the term of this Agreement, Grantor waives any claim it may have against Grantee based on odor from the Facility Site or based on exceedances of state air quality standards applicable to the operation and use of the Facility Site. Grantor expressly waives the application of any air quality separation distance under State Code and therefore waives application of requirements to "separated locations" under State Code. Grantor further acknowledges and agrees that this air quality easement shall specifically include any health protection ordinance or pursuant to any health protection ordinance enacted by the State and County.

In this case the Grantor has rights. But what about the family of Jeff Morrow who live adjacent, just to the north of, the planned application on the NW Qtr of Section 11? Grantee is seemingly acknowledging the odor (even exceeding ND Air Quality Standards) and possible health issues by requiring the Grantor to provide an easement. What are the rights of the adjacent landowners? Or the people travelling down Highway 17 when manure is applied? And where

does a ND business entity get the right to claim an easement for air quality standards that may EXCEED the state's air quality standards or potential health protection ordinances?

While this easement is just for manure applications, it raises the same issue for odor and air quality emissions, including ones that could impact health, coming from the CAFO facility as well. Other than setbacks, what rights does ND law provide to neighbors and travelers affected by these emissions?

Department Response: Thank you for your comment. According to NDCC Section 23.1-06-15(4), a person is exempt from any odor violations while spreading or applying animal manure to land in accordance with an NMP approved by the department. The department will respond to any concerns of improper manure application or excessive odor near residences. The air quality easement is outside the scope of the permit. Manure shall be applied in accordance with section 7.6 of the design manual and the NMP. Please refer to responses to Comment 3(W) *Swine Manure* and Comment 3(FF).

Comment 3(AA)

Setback Requirements.

a. Manure shall not be applied any closer than 100 feet to any downgradient surface waters, open tile line intake structures, sinkholes, agricultural well heads or **other conduits** to surface waters."

I assert that any drainage ditch that directly empties into a coulee should be considered a **conduit** for the purposes of meeting the requirements of this section.

1. A 100' setback to PEM1 type wetlands (as shown as the color green on field maps) will be enforced at the discretion of the applicator at time of application."

I disagree that operators should have discretion on this set back. Because these wetlands are poorly drained (normal drainage including vertical translocation) it will be easy for nutrients to build up in them leading to eutrophication. These wetlands may also already have an abundance of nutrients in them. They may look dry, so the temptation of the applicator will be not only to ignore the buffer, but also to apply manure through the wetland itself.

Department Response: Thank you for your comment. Drainage ditches are considered to be a conduit to surface water and require a 35-foot setback. Please refer to response to *Comment 3(T) Conduit*.

Comment 3(BB)

Typical Crops Grown and Crop Yields for the Land Application Areas:

- a. Spring Wheat - 70 bushels/acre
- b. Corn Grain - 140 bushels/acre

- c. Soybeans - 40 bushels/acre
- d. Edible Beans - 2,000 pounds/acre
- e. Barley - 80 bushels/acre"

While not entirely out of line, I would consider these to be aspirational yields. They are at the higher end of either the NASS or RMA county average yields. The yields in the RUSLE 2 CSP planning section (shown below) are more reasonable "average yields." If the CAFO is going to use composite sampling, then these lower RUSLE 2 yields will be more accurate as a starting point.

RUSLE 2 CSP Record

Vegetation	Yield units	# yield units, #/ac
vegetations\Corn, grain	bushels	106.00
vegetations\Soybean, mw 30 in rows	bu	34.000
vegetations\Wheat, spring 7in rows	bushels	52.000
vegetations\Bean, pinto	lbs	1711.0

Adjust res. burial level: Normal res. burial
General yield level: Management set yield

These nutrient rates are reasonable though they are pushing it a bit.

Dakota SAO II, LLC

Nutrient Management Plan For ND Livestock Operations

ND Nutrient Planner

Plan Year: 2026																			
Part 1: Field Information										Part 2: Estimated Nutrient Requirement							Part 3: Planned Nutrient Application		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Field #	Legal Description	Spreadable Acres	Irrigated	No-Till > 5 Years	No-Till < 5 Years	Current Soil Tested: Spring 2025				Previous Year		Planning Year (2026)		Nutrient Recommendation (SF-882)			Manure Application Based on	Type of Manure and Equipment Used	
						N lb/Ac (0-2')	Phosphorus (ppm)(Olsen) (0-6")	Potassium (ppm K)	Organic Matter	Crop	Crop Yield, lb, bu, ton	Crop	Crop Yield, lb, bu, ton/acre	N (lb/A)	P ₂ O ₅ (lb/ac) (broadcast)	K ₂ O (lb/ac)		Type of Manure	Application Method
Union 11 F-5	Site 1	137.29				28	4	248	3.3	Edible Beans	2000	Corn, Grain	140	180	73	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 11 F-1	Site 1	129.54				43	3	230	2.8	Edible Beans	2000	Corn, Grain	140	165	80	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 12	Site 2	150.83				24	5	186	3.9	Soybean	40	Wheat	70	95	78	0	No Manure Application	Liquid Manure	Knife Injected
Union 13	Site 3	441.86				34	6	203	4.2	Wheat	70	Soybean	40	0	28	0	No Manure Application	Liquid Manure	Knife Injected
Union 14 NW	Site 4	86.55				31	5	316	3.2	Edible Beans	2000	Corn, Grain	140	177	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 14 SE	Site 4	144.49				29	5	315	3.5	Edible Beans	2000	Corn, Grain	140	179	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Grandpas	Site 4	62.4				29	5	315	3.5	Edible Beans	2000	Corn, Grain	140	179	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 23 F-6A	Site 5	59.9				32	3	318	4	Corn, Grain	140	Soybean	40	0	45	0	No Manure Application	Liquid Manure	Knife Injected
Union 23 F-6B	Site 5	31.07				18	8	331	4.2	Soybean	40	Wheat	70	172	37	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 24 NE Corner	Site 6	69.02				26	10	278	4	Wheat	70	Edible Beans	2000	74	20	0	No Manure Application	Liquid Manure	Knife Injected

But it is the use of the ND Phosphorus Index's alarming allowable phosphorous application rates of 91-150 pounds that creates the real challenge. Because swine manure is disproportionately high in P relative to N, there is a reasonable concern that fields for manure application will have an over-application of phosphorus, and this certainly seems to be the intention of this plan. It should also be noted that this Phosphorus Index tool has a specific disclaimer against using this tool in the manner used in this Plan: THE PHOSPHORUS INDEX

IS NOT INTENDED TO BE AN EVALUATION SCALE FOR DETERMINING WHETHER LANDUSERS ARE ABIDING WITHIN WATER QUALITY OR NUTRIENT MANAGEMENT STANDARDS THAT HAVE BEEN ESTABLISHED BY LOCAL, STATE, OR FEDERAL AGENCIES.

Phosphorus Risk Screening Tool									
If animal manure will be applied to this soil map unit, <u>and</u> soil test Phosphorus is > 20 ppm Olson (or > 20 ppm Mehlich 3 or, > 30 ppm Bray) <u>and</u> runoff water reaches surface water, complete the Phosphorus Index below.									
North Dakota Phosphorus Index									
THE PHOSPHORUS INDEX IS <u>NOT</u> INTENDED TO BE AN EVALUATION SCALE FOR DETERMINING WHETHER LANDUSERS ARE ABIDING WITHIN WATER QUALITY OR NUTRIENT MANAGEMENT STANDARDS THAT HAVE BEEN ESTABLISHED BY LOCAL, STATE, OR FEDERAL AGENCIES.									
Field:	Total Soil Erosion by Wind and Water in (tons/acre/year)	Surface Water Risk & Rating		Soil Test Phosphorus (STP) in parts per million (ppm)	Phosphorus Fertilizer Application Rate (pounds P ₂ O ₅ /acre) from all Sources	Phosphorus (All sources) Application Timing/Method	Distance to Permanent Surface Water or Water Course	Best Management Practices	Phosphorus Index Score
n 11, F	Less than 2 tons/acre/year	N/A		Olson <20 ppm	91-150 pounds/acre	Injected or Subsurface Applied	200-1000 feet	☐ Cover Crop ☐ Filter Strips ☐ Contour Buffer Strips ☐ Established No-till System (5 years or longer)	4
Union 11, Field 1	Less than 2 tons/acre/year	N/A		Olson <20 ppm	91-150 pounds/acre	Injected or Subsurface Applied	20-100 feet	☐ Cover Crop ☐ Filter Strips ☐ Contour Buffer Strips ☐ Established No-till System (5 years or longer)	7

Also, I do not see an acknowledgement that there is drain tile in Union Section 13 fields, and possibly others, that is supposed to be included in the Index calculations.

Department Response: Thank you for your comment. Regarding drain tile, refer to response to *Comment 3(C) NMP*. Drain tile is not a consideration in the North Dakota Phosphorous Index (PI). The PI and RUSLE2 are used as a reference for determining agronomic rates by the producer and are not used by the department when determining permit compliance. Please refer to responses to *Comment 3(Y) Nutrient Budget*, *Comment 3(W) Swine Manure*, and *Comment 3(DD)*.

Comment 3(CC)

The Nutrient Management Plan created by Dakota SAO, using high rates of manure application, results in P rates that are far in excess of the NDSU recommended rates as shown below. The Phosphorous Index tool used an Application Rate of 91-150 #s of P for calculation, yet the Nutrient Management Plan shows an intention to apply 190#s of P. The Phosphorous Index reports should be recalculated showing the actual planned application rate.

Department Response: Thank you for your comment. Refer to response to *Comment 3(BB) Yield* and *Comment 3(DD)*.

Comment 3(DD)

The Spring 2025 soil tests indicated the planned fields for manure application had P ppm levels ranging from 3 to 11 (one at 16), with the most common level being 5 ppm. Based on this, the P application rates would be 60 #s/acre for wheat and 78 #s/acre for corn. The 190 #s of P applied as manure, shown for a portion of the fields in the Nutrient Management Plan below, is

more than double the highest NDSU recommended rate, also shown below. This suggests this manure application into “manure disposal plan” rather than nutrient management plan.

Table 25-10. Broadcast fertilizer phosphate recommendations for North Dakota for spring wheat and durum based on soil test (Olsen).

Soil Test Phosphorus, ppm				
VL 0-3	L 4-7	M 8-11	H 12-15	VH 16+
Pounds P ₂ O ₅ /acre				
90	60	35	20	15*

* Wheat seeding always should include a small amount of starter fertilizer in a band regardless of soil test. If starter fertilizer banding is not used, rates in H and VH categories should be zero.

Table 8-9. Corn P recommendations, East River, non-irrigated, pounds P₂O₅ per acre.

Olsen Soil Test Phosphorus, ppm				
VL 0-3	L 4-7	M 8-11	H 12-15	VH 16+
104	78	52	39	10

ita SAO II, LLC

Nutrient Management Plan
For ND Livestock Operations
Plan Year: 2026

ND Nutrien

Part 3. Planned Nutrient Application										Part 4. Nutrient Application										Part 5. Nutrient Balance					
1	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42			
Field #	Solids (lbs/ton), ASAE, 2005, D 384.2			Liquid (lbs/acre-in), PART 651 Table 4-16			Manure Application		Maximum Manure Applied	Manure Applied			Manure Application (lbs/acre)		Commercial Application lbs/acre		Total lbs/acre		Crop Removal (lb/ac)		Soil Nutrient Balance				
	Organic N	Ammonium N	P ₂ O ₅	Organic N	Ammonium N	P ₂ O ₅	N Credit, (Prior year and year before that) (lbs/acre)	Available N (First Crop Year) lbs/ton or lbs/acre-in	Tons/Acre or acre-in/acre	Tons or Acre-in	Tons or Acre-in per Field	Time Period When Manure Applied	N	P ₂ O ₅	N	P ₂ O ₅	N	P ₂ O ₅	Estimated N	Estimated P ₂ O ₅	Nitrogen Balance lb/ac*	P ₂ O ₅ Balance ppm			
Union 11 F-5	0	0	0	510	210	524	0	342	0.53	0.37	50.8	Fall	127	194	53	0	180	194	126.2	49.0	81.8	11.2			
Union 11 F-1	0	0	0	510	210	524	0	342	0.48	0.37	47.9	Fall	127	194	38	0	165	194	126.2	49.0	81.8	10.2			
Union 12	0	0	0	510	210	524	0	342	0.28	0	0.0		0	0	95	78	95.3	77.9	87.5	39.2	31.8	6.9			
Union 13	0	0	0	510	210	524	0	342	0.44	0	0.0		0	0	0	28	0	28.4	150.0	32.0	34.0	5.8			
Union 14 NW	0	0	0	510	210	524	0	342	0.52	0.36	31.2	Fall	123	189	54	0	177	189	126.2	49.0	81.8	12.0			
Union 14 SE	0	0	0	510	210	524	0	342	0.52	0.36	52.0	Fall	123	189	56	0	179	189	126.2	49.0	81.8	12.0			
Grandpas	0	0	0	510	210	524	0	342	0.52	0.36	22.5	Fall	123	189	56	0	179	189	126.2	49.0	81.8	12.0			

Department Response: Thank you for your comment. The North Dakota PI allows manure and other sources of nutrients to be applied at rates to meet the nitrogen needs of a crop if the PI rating is low or medium. If the PI is high, it allows manure and other sources of nutrients to be applied at rates to meet the phosphorous removal in the crop biomass. If the PI is very high, it requires that no manure be applied to that field. Manure shall not be applied to fields where the soil test phosphorous exceeds 125 parts per million (ppm) (250 lbs per acre). Please refer to response to *Comment 3(C) NMP*.

Comment 3(EE)

This plan is a one year plan. When looking at the “Part 5: Nutrient Balance” column, it appears to show a significant build up in both N and P residual in the soil **after only one year!** (The top 2 rows are corn, row 3 is wheat, row 4 is soybeans, and rows 5-7 are corn.) The plan also includes soybeans and dry beans, which make for a good rotation with wheat and corn. However, the applied P needs for both of these crops in the following year is very low, meaning the bean rotation crops won’t be using much of the excess P that is applied. What this plan does

NOT address then, is the potential buildup of P rates in the soil from repeated applications at these high rates.

Additionally, because this high rate of manure (and P) is applied uniformly across the field, areas of lower yield such as hilltops and areas adjacent to wetlands and waterways, will not be using either the N or the P at that projected crop removal rates. This means that some areas of the field will quickly have excessive rates of P in the soil. Further, the drained wetlands, already loaded with nutrients, will quickly be over loaded with nutrients due to these high rates of manure application. Again, a zone management approach to manure application would help to reduce these problems. Or applying manure at lower rates.

Another approach that can be used to reduce P in the manure is changes in feed and/or additives. This Plan does not present this a management strategy it intends to use.

Also, the problem with this much applied P (190#s/acre) is that it is organic, not mineral, P so it is much more susceptible to run-off. See my previous comments regarding drainage causing an increased volume and velocity of water run-off, carrying this organic P with it. And we know that excessive P levels are one of the main drivers of lake eutrophication and blue-green algae blooms. As this water quickly enters Hurricane Lake, the problems will begin.

Department Response: Thank you for your comment. In response to nutrient loading concerns, inspections by department staff and review of field soil tests and manure application records provide feedback to ensure manure is applied in accordance with the NMP. Manure shall not be applied to fields where the soil test phosphorous exceeds 125 parts per million (ppm) (250 lbs per acre). Hexagon II has submitted to the department an updated 5-year nutrient balance, which is included in the appendices.

Comment 3(FF)

Additional Environmental and Air Quality Comments

These comments were submitted to the Pierce County Planning and Zoning Committee.

The proposed site is farther east, closer to the county line road than I remember from the first application 20 years ago. This makes odor issues for the Sandy and Gary Larson family even more likely as the barns are now just barely 1.5 miles away from them. Would Summit be willing to move the barns a few hundred feet west so that there is room for a nice buffer of trees and tall grass prairie meadow between the barns and the road to absorb odors and disrupt wind flow? Further, would Summit be willing to add a tall grass prairie meadow to the south side of the barns and add additional trees to create a better odor barrier to traffic on Highway 17?

The NRCS and the Pierce County Soil Conservation District could help with plans for a tall grass prairie and appropriate tree selection. Further, the Soil Conservation District could secure taller trees (3-4 foot) from Lincoln-Oakes Nursey so that the buffer establishes faster.

It would seem from the site plan that was presented, there is sufficient room to leave a good deal of the existing trees in place on the north east corner of the property. (Note: It appears the plan has been revised to accomplish this.) It would be possible to create a windbreak renovation plan that allows new trees to be established so that older trees could eventually be removed, making the site more attractive as people travel down Highway 17 or on the county road. Additional trees on the north side of the property should also be planted. Again, the Soil Conservation District and NRCS would have resources to help plan a windbreak renovation and additional tree rows on the north side.

While an under-building manure storage system limits how much water gets captured compared to a lagoon, it does not eliminate the odor from the manure. Hog barns typically have high capacity ventilation fans, and this will be quite important where manure is stored under the slatted floor. I worked in such a barn (though much smaller) when I was a teenager and there is no getting around the fact that there is an odor! Because the fans are pumping the exhaust air into the atmosphere, they are a continuous source of odors and possible pathogens. This could potentially impact the Sandy and Gary Larson farmstead. Would Summit be willing to place organic filters (straw bales) to capture some of the exhaust air and reduce the odors? This is one of the things the ND Pig Cooperative barns located along Highway 2 west of the Larimore rest area finally did to reduce odor from their barns.

I have a technical concern with the location of the storm water/drain tile basin. It appears t it is to be constructed in or near an existing wetland. The problem is that when it overflows it will flow down the county road ditch (which has been deepened and shaped by the landowner) into Highway 17 right away. I am not sure you want that to happen. Instead, the basin should be on the southwest corner of the site, so overflow goes into an existing field drain to a major drainage channel before exiting to the coulee and into Hurricane Lake.

In summary, Summit should be asked if it is willing to stipulate the following in its plan:

- Organic fan filters composed of continually changed straw bales.
- Prairie meadow surrounding the site, particularly on the south and east.
- Additional trees of a variety of species on the south and east sides to create wind and odor disruption along with increasing the site attractiveness.
- Renovation, rather than removal, of a significant portion of the existing windbreak in the northeast corner, along with additional trees on the north edge of the property
- Relocate the storm water/drain tile basin to the southwest corner of the site.

These changes would create a much more attractive facility site, especially since it is located so close to public viewing travelling on Highway 17. It also recognizes the importance of People and the Planet as part of the project.



Department Response: Thank you for your comment. Refer to response to *Comment 3(A) Zoning*. There is no standard for odor established at the federal level. Odors from the facility must meet the requirements of NDAC 33.1-15-16 of the North Dakota Air Pollution Control Rules. NDAC 33.1-15-16 establishes that the facility may not discharge into the ambient air any objectionable odorous air contaminant that causes odors that measure seven odor concentration units or higher as measured at specific locations. NDAC 33.1-15-16-01(2) defines an "odor concentration unit" as: *"a volume of odor-free air mixed with an equal volume of odorous air such that the combination would be at the threshold level of the olfactory senses. The intensity of an odor is determined by the ratio of the volume of odor-free air that must be mixed with a standard volume of odorous air so that a department-certified inspector or at least fifty percent of an odor panel can still detect the odor in the diluted mixture."*

Note that NDAC 33.1-15-16 does not require non-detectable or "zero" odors. Instead, the odor standard is a state-wide standard which provides a maximum concentration that cannot be exceeded; local zoning requirements may be established to ensure that the location of the facility is acceptable (i.e., "local control" is maintained over such factors as the land use compatibility of the facility at a given location).

Under NDAC 33.1-15-16, any odor reading to determine compliance with the odor standard must be taken at either: a) any point located beyond one-half mile from the facility; or b) within 100 feet of any existing residence, church, school, business, public building, park, or campground. According to NDAC 33.1-15-16-02(3), the odor standard does not apply "while spreading or applying animal manure or other recycled agricultural material to land in accordance with a nutrient management plan approved by the state department of environmental quality".

The most recent site plan shows the stormwater/drain tile basin located to the southwest of the site. Please refer to response to *Comment 3(T) Agricultural Stormwater Discharge*.

Comment 3(GG)

In conclusion, while I support increased animal agriculture in North Dakota, there are better locations for these large CAFOs to be built. I can not support this project as represented by these plans because of the facility proximity, and especially the fields for manure application proximity, to the north end of Hurricane Lake. There is a very high likelihood that manure will move from the fields into the waterways that run into the lake, contaminating the lake. I am very skeptical the owners, operators, or landowners will work hard to protect the environment, the Planet, or the People. Rather, I am quite sure they will work to maximize Profit over all other concerns.

Our last, and only, line of defense is the ND Department of Environmental Quality to both ensure that all concerns are met to prevent pollution in the first place and are regularly monitored to bolster the regulatory impact on this plan. With the apparent preference of the ND Industrial Commission members to support business and Profits first, I fear that the political pressure to use a "Sargeant Schulz" approach to regulating animal agriculture is incredibly high.

I support animal agriculture in ND that enhances our communities and the overall wellbeing of the People of our region. I think the additional jobs that animal agriculture can bring would be a tremendous asset to our communities. Employees and their families can add children to our school systems and provide staff for other businesses, along with their shopping and community involvement. Carrington has found that a 1,600 head dairy operation has been a real benefit and by all accounts is being managed in a sound environmental manner with great respect from the local community.

There is an excellent swine barn example, too, in this article 8 reasons why you never heard of this new North Dakota hog farm, Farm Progress, November 2017. Some comments in the article stand out: "They picked a good site." "They worked closely with the neighbors." "They listened to people from the community. Developers agreed to make changes in the project to address people's concerns." "They also beefed up biosecurity measures and aesthetics." "They did a good job of explaining who they are." This Ransom County cooperative worked hard to

balance People, Planet, and Profit by focusing on the first two, even if it meant a little less Profit. This is not what we have seen from Dakota SAO II and the people involved!
<https://www.farmprogress.com/livestock/8-reasons-why-you-never-heard-of-this-newnorth-dakota-hog-farm>

One of the philosophies that we have adopted on our farm is a 100-year time horizon. How will what we do today influence our land and natural resources for the next 100 years? It seems like a long time, but if my father were still alive, he would be having his 99th birthday in a few days. Much of the land that we farm has been in our family for over 130 years. 100 years is a realistic timeframe to consider the impact of our actions.

I have been told that Native Americans use a “seven generations” framework for evaluating how today’s decisions affect future generations. I like that, especially since we are working to be the stewards of this land once occupied by Native Americans. Seven generations is a little more than 100 years, so these two philosophies are quite similar.

In a few short weeks, ND will open an incredible Theodore Roosevelt Presidential Library. This library was designed to reflect the ideals of our 26th president, and I hope to experience it someday.

One of the quotes that I hope to find prominently displayed is this one:

“Here is your country. Cherish these natural wonders, cherish the natural resources, cherish the history and romance as a sacred heritage, for your children and your children’s children forever. Do not let selfish men or greedy interests skin your country of its beauty, its riches, or its romance.” Theodore Roosevelt

All three of these philosophies are similar. They focus on the incredible importance of People and the Planet we all live on together. The pursuit of Profit is not dismissed, only the pursuit of it by “selfish men or greedy interests.” I would define such men by their lack of concern for People and Planet.

People, Planet, Profit – these three remain. The decision of the ND Department of Environmental Quality will have an impact not only today, but for the next seven generations. Choose wisely.

Department Response: Thank you for your comment.

Commenter 4 - Lincoln Larson

Comment 4(A)

I'm the closest resident to this proposed Summit operation at just over 1 1/4 miles from the site.

I just want to put this operation into perspective. This facility will house more hogs than there are people in both Towner and Pierce counties combined. All these hogs will be concentrated in about a four-acre area. The concerning part is that hogs share approximately 98% of the human DNA making transfer of disease very possible. Would it be a health concern if these were people housed in a four-acre area? I don't think we'd process the waste the same.

These hogs will likely be treated with the same antibiotics humans use. This antibiotic usage creates a prevalence of antibiotic-resistant bacteria. That creates a substantial health risk for humans. This manure will be placed in near proximity to my home, which constitutes an unnecessary health risk, especially with all the water drainage around the areas where it will be applied. According to the American Public Health Association, operations like this produce H₂S, ammonia, VOCs, heavy metals, pathogens, and antibiotic-resistant bacteria. The increase in flies and rodents is a vector for spreading these contaminants. According to Duke University, Dr. Kim says life expectancy in North Carolina communities near hog CAFOs remains low even after adjusting for socioeconomic factors that are known to affect people's health and lifespan.

A recent study by the National Institute of Environmental Health Sciences shows residents living one mile from a CAFO have a 1.4 times increase in autoimmune diseases, twice the normal risk of rheumatoid arthritis, 1.7 times increase in hyperthyroidism, and 37% greater risk of hypothyroidism. Another study from the University of Wisconsin, Madison researched health conditions at one mile compared to 5 miles from CAFOs.

The study showed people at one mile are 3.1 times more likely to have doctor-diagnosed asthma, and over two and a half times more likely to have lung or nasal allergies. I believe these studies and many others show demonstrable health concern for me, my family, and other nearby residents. Multiple studies have recently been completed showing a statistically significant increase in disease rates of people living near hog operations like this one. I believe these studies show these health concerns and I would appreciate a further look into these studies as there's been some really recent ones released as early as this last month.

These kinds of large confined operations are a relatively new thing, and there is relevant research that shows that they constitute a health risk for those living in proximity to them. There are many things in the recent past that were considered harmless to public health until the effects were undeniable and many people had suffered the consequences. Some examples include asbestos, smoking, drinking while pregnant and DDT. I think we should learn from these mistakes of the past and protect the health of our future generations better and the Department of Environmental Quality is required to adequately protect the environment and the people that live in that environment. Studies have been submitted.

Department Response: Thank you for your comment. Refer to responses to *Comment 3(FF)* regarding site BMP's and odor.

Antibiotics: The North Dakota Board of Animal Health administers the rules for disease. Most antibiotics are administered under the supervision of a licensed veterinarian. The Food and Drug Administration (FDA) administers rules on the use of antibiotics in livestock feed. Antibiotic use is beyond the scope of the proposed permit and outside the department's authority.

Zoonotic Pathogens: According to the U.S. Center of Disease Control, pathogens *E. coli*, *Campylobacter*, *Salmonella*, *Listeria*, *Cryptosporidium parva*, and *Giardia* are not spread through the air; a person must come into contact with the animal or feces. Manure handling according to response to *Comment 3(C)* Nutrient Management Plan helps ensure that manure stays in the fields.

The WQS has a criterion for *E. coli*. *E. coli* is used as a surrogate parameter for other pathogens in the environment. The water quality *E. coli* standard is:

"Not to exceed 126 organisms per 100 ml as a geometric mean of representative samples collected during any 30-day consecutive period, nor shall more than 10 percent of samples collected during any 30-day consecutive period individually exceed 409 organisms per 100 ml. For assessment purposes, the 30-day consecutive period shall follow the calendar month. This standard shall apply only during the recreation season May 1 to September 30."

According to the Center for Disease Control (CDC), Methicillin-resistant *Staphylococcus aureus* (MRSA) is spread by skin-to-skin contact, shared equipment or supplies, and places that involve crowding with an infected source; MRSA is not spread through the air.

Health Risks: The department has reviewed the studies submitted during the public comment period. The applicability of these studies to the proposed site is affected by facility design, operations and maintenance (O&M), applicable state and local regulations, in addition to site specific conditions such as geology and meteorology. How studies are designed and constructed can affect how the results are compared to other situations. State regulations are developed through a public process to address many environmental and health issues discussed in the studies, such as required setbacks from residences, statewide odor standard, and the nuisance hydrogen sulfide standard. It has not been shown that these protections are inadequate nor that applicable health standards are likely to be exceeded.

Air Quality: The department's Division of Air Quality has rules for hydrogen sulfide, ammonia, and odor as laid out in the NDAC and NDCC.

Hydrogen sulfide (H₂S) is not regulated as a Hazardous Air Pollutant under the federal Clean Air Act. Although there is no federal (EPA) ambient air quality standard for H₂S or federal odor standard for H₂S, the North Dakota Air Pollution Control Rules have established more stringent requirements for H₂S as follows:

Ambient Air Quality Standards for Hydrogen Sulfide (Health Standards):

The North Dakota Air Pollution Control Rules establish ambient air quality standards for H₂S (NDAC 33.1-15-02 [Table 1]). Maximum H₂S levels allowed in ambient air are established to protect human health and the environment. The ambient air quality standards for H₂S are summarized in the following table:

Maximum Permissible Concentration of H ₂ S	Averaging Period
10.0 parts per million (ppm) (10,000 parts per billion (ppb))	Maximum instantaneous (ceiling) concentration not to be exceeded
0.20 ppm (200 ppb)	Maximum 1-hour average concentration not to be exceeded more than once per month
0.10 ppm (100 ppb)	Maximum 24-hour average concentration not to be exceeded more than once per year
0.02 ppm (20 ppb)	Maximum arithmetic mean concentration averaged over three consecutive months

Hydrogen Sulfide Odor Standard:

An odor standard of 0.05 ppm (50 ppb) for H₂S is established under NDAC 33.1-15-16.

Ammonia:

Ammonia is known to be emitted from CAFOs. Ammonia is not regulated as a Hazardous Air Pollutant under the federal Clean Air Act and there is no federal ambient air quality standard for ammonia; however, ammonia emissions are evaluated under the Policy for the Control of Hazardous Air Pollutant Emissions in North Dakota (Air Toxics Policy).

As indicated above, the federal Environmental Protection Agency (EPA) has not established allowable ambient levels for ammonia; however, acceptable exposure levels have been developed by state agencies as shown in the following table:

State Agency	Acceptable Exposure Level (ppb*)	Averaging Period
Minnesota Dept. of Health	4,590	Acute (1-hour)
	115	Chronic (annual)
California OEHHA**	4,590	Acute (1-hour)
	200	Chronic (annual)

* Both agencies listed in the table establish acceptable levels for ammonia in units of micrograms per cubic meter. The values have been converted to ppb.

**Office of Environmental Health Hazard Assessment. (The Minnesota Department of Health acute acceptable exposure level [referred to as a health risk value or HRV] is equivalent to the California OEHHA acute acceptable exposure level [referred to as a reference exposure level or REL]. The Minnesota Department of Health chronic HRV is more stringent than the California

OEHHA chronic REL. The department will utilize the more stringent Minnesota values for purposes of determining compliance with the Air Toxics Policy.)

Comment 4(B)

Concerning the potential permitting of the Hexagon II animal feeding operation there are several concerns that I believe need to be addressed. Dakota SAO II L.L.P. is the entity applying for this permit. It is worth noting that Dakota SAO II L.L.P. has not acquired ownership of the property in question. Furthermore, Dakota SAO II L.L.P. did not properly register with the Secretary of State in their original filing. Dakota SAO II L.L.P. stated on their original filing that they “will not be engaged in farming or ranching in North Dakota”. (See Exhibit 1) This partnership is applying for a permit for a swine AFO. This contradictory statement allowed Dakota SAO II L.L.P. to apply for a permit without listing the names and addresses of all partners. This is a requirement per North Dakota Century Code Title 45- 22-03-3-a for all operations that will be engaged in farming or ranching. All partners’ names and addresses must be listed in this filing in order for this partnership to be properly registered with the state of North Dakota. Until this issue is remedied the state would be negligent to permit this operation and it should, in fact, put permitting on hold until corrective action is completed by Dakota SAO II L.L.P.

Department Response: Thank you for your comment. The structure of the corporation is outside the authority of the department. Please refer to the North Dakota Secretary of State and the North Dakota Department of Agriculture.

Comment 4(C)

Another concern is that the manure transfer lines that will be used to transport manure to fields for application will be run through ditches and also must cross areas of manure exclusion zones in order to reach the intended fields for application. What contingency plans are in place in the event that a line leaks or breaks in one of these drainage ditches or exclusion zones? The large volume of material transported through these hoses has a potential to release a large amount to manure into these locations that lead into waterways draining into Hurricane Lake. How can you ensure that any spills will be properly cleaned before rainwater washes spilled material into these protected waterways? What are the consequences for a spill contaminating these protected waterways?

Department Response: Thank you for your comment. The facility has submitted an Emergency Response Plan that details the steps to be taken in case of this event. The facility will contact the department in case of a spill with all necessary details and will work with the department to create an approved clean-up plan, including all corrective actions. Please refer to responses to *Comment 3(C) NMP*.

Comment 4(D)

Further these manure transport lines will need to cross onto land that is not included in the application easements on file. What remedies will be available for spills, seepage and runoff

onto these lands? How will these spills be dealt with? Will the lines be routed in ways that ensure no danger to the general public and the vehicles traveling on the roadways? Will these roadways need to be closed down during certain application processes that will affect the free travel of these roads? If so, permitting for road closures needs to be ensured, now, in order to ensure that all acres are available for manure application and to prevent overapplication on other parcels.

Department Response: Thank you for your comment. Please refer to response to *Comment 4(C) Spill Response*. The encroachment of the public right of way by unapproved manure transfer lines is handled by the county.

Comment 4(E)

There are currently no plans for testing surface or groundwater surrounding the site. This should be required as the release of contaminants and a baseline reading are not able to be monitored without this testing. As the nearest resident to this facility, I am concerned about the integrity of my well water, which is my only source of water. I have 2 wells on my property. The DEQ should require testing of the groundwater surrounding their site which would allow me time to be contacted before my groundwater was contaminated. Otherwise, I will be responsible for monitoring both of my wells constantly for contamination, which is an otherwise unnecessary cost that I would have as a member of the public. I should not have to incur this additional cost as a general member of the public that does not consent to the building of this facility. Should I find that my water is contaminated in the future there would be no warning time to come up with other water source plans for my home and family. Groundwater testing should be a minimum requirement for this facility and a plan to contact nearby residents with concerns of contamination, should it occur in their test wells, needs to be required.

Department Response: Thank you for your comment. The department's Division of Water Quality reviewed the site and did not recommend any groundwater monitoring wells for the following reasons: there is a large amount of lean clay material underlying the site and there is no indication that an undifferentiated glacial drift aquifer underlies the operation's location.

Comment 4(F)

I also request that the DEQ visit each of the intended application fields on site and walk them on foot to ensure in person that all maps submitted to the DEQ are accurate in regard to locations of drainage ditches and 100' setbacks. Aerial map review is far from sufficient in this regard for several reasons. For one, these aerial maps are outdated and do not include recently constructed drainage systems. Aerial views do not suffice for accurately judging slope, landscape, and grass growth amounts in fields. Additionally, any future drainage of these fields should be submitted to the DEQ and changes in application should be made if appropriate.

Department Response: Thank you for your comment. The department has conducted a thorough review of each field and setback. Please refer to response to *Comment 3(C) NMP and*

Comment 3 (V) Land Application Sites. Future installation of drain tile is outside the authority of the department.

Commenter 5 - Guy Larson

Comment 5(A)

I farm directly downwind of the proposed, proposed hog facility and my son, his family and my parents are the two closest farmsteads to the facility and I have serious concerns about how this facility will affect the health of my family. We presented numerous studies to the planning and zoning meetings and the commissioner's public forums on the detrimental effects of living near these CAFOs and I'll just briefly highlight a couple of them and talk about the new one that he just talked about.

A 2018 study by North Carolina Institute of Medicine and Duke University concluded that North Carolina communities located near hog CAFOs had higher death rates on all studied diseases, including infant mortality, which I've got grandkids and I hope to have more over there, anemia, kidney disease, tuberculosis, septicemia, and higher hospital admissions. And a more recent study that just came out March 17th in 2026 by Yale University showed significant increases in all cancer rates in counties that have higher concentration of CAFOs. It goes on to say, CAFOs emit a wide range of harmful pollutants that can adversely affect human health. These include gaseous emissions, such as ammonia and hydrogen sulfide, particulate matter, volatile organic compounds, and bioaerosols containing endotoxins and antibiotic-resistant bacteria. Chronic exposure to these pollutants has been linked to inflammation, oxidative stress, and immunosuppression, which may contribute to cancer development. For example, hydrogen sulfide has been shown to induce DNA damage and impair cellular respiration, whereas particulate matter can provoke systemic inflammation and facilitate the delivery of carcinogenic compounds into the lungs.

Consistent with these findings, previous studies reported positive associations between CAFO exposure and several cancer outcomes. Booth et al in 2017 found significant positive associations between county level incidents of childhood leukemia and densities of animals or operations in nine U.S. states. The study in Iowa observed that residential proximity to intensive animal agriculture was positively associated with, with the risk of non-Hodgkin's lymphoma and leukemia. There are more than 150 human pathogens in hog waste, and they can live in the soil and water for over seven months. The waste from this facility is not treated in any way to kill them.

It's amazing to me that for biosecurity is recommended hog facilities be at least 2 miles from each other to prevent disease in the hogs, but setback for our residents for humans is only one mile. Both my son, his wife, their three young boys, and my parents are closer to a facility than they would recommend for hogs. That just isn't right. Hearing all this, can you, the Department of Environmental Quality, guarantee that my family will be safe and their health will not be

compromised by permitting of this facility? I don't believe you can. Let the record show that I have presented a small sample of the risks that will be forced upon my family without our consent and I am putting the state of North Dakota, the DEQ, Dakota SA0 1 and 2, Summit Ag Group, the families consenting and spreading manure on their land, and any other partner or investor associated with the facility on notice that you will be held liable for any detrimental health effects associated with being near this facility and manure it generates. I have a couple more of these studies.

Department Response: Thank you for your comment. Refer to response to *Comment 4(A)* Health Impacts.

Comment 5(B)

Public Comments Regarding Permit for Hexagon 2

In regards to the Hexagon II permit to the Department of Environmental Quality for a hog operation in Pierce County, I have the following concerns:

1. Dakota SAO and Dakota SAO II have not followed the North Dakota law in regards to their registration as LLPs (limited liability partnerships) under North Dakota Century Code 45-22-03 where it states under their registration requirements:

(3) A statement indicating whether the limited liability partnership will be engaged in farming or ranching in this state or owning or leasing land in this state which is used for farming or ranching.

(6) The name and address of each managing partner and, if the limited liability partnership will be engaged in farming or ranching in this state or owning or leasing land in this state which is used for farming or ranching, then the names and addresses of all partners.

Dakota SAO and Dakota SAO II both have had conflicting statements in their registrations and amended registrations regarding if they are engaged in farming and ranching. I would certainly consider a hog feeding operation of 9000 animals to be engaged in farming or ranching. They have not disclosed their investors in any of the registrations or annual reports. Dakota SAO on their annual report under name of partner chose to put "None Entered" into this column. Note that in their SEC filing it shows 18 investors at the time of their filing. (See Exhibit 1 and 2) They also state under Partner statement that "No partner listed above is a corporation or limited liability company." How do we know, since they didn't enter any partners. This seems to be a direct violation of North Dakota century code 45-22-03 concerning their registration with the state and thus their registration is null and void. The application to the DEQ as well as to the Pierce County Commissioners and manure agreements should all be invalid.

Department Response: Thank you for your comment. The structure of the corporation is outside the authority of the department. Please refer to the North Dakota Secretary of State and the North Dakota Department of Agriculture.

Comment 5(C)

2. The site for this facility is in close proximity to Hurricane Lake. The Pierce County Planning and Zoning board rightly voted unanimously to deny the permit based on its location to the lake. Hurricane Lake is set aside for non-agricultural use. It is listed as an exemption on the tax records for Pierce County. It was paid for with Duck Stamp money and made available for public use.

The Duck Stamp Act was amended in 1958 to give the Fish and Wildlife Service authorization to purchase, through duck stamp dollars, wetland areas for preservation of waterfowl habitat. These tracts, mostly wetlands in association with adjacent grassland are managed to provide nesting habitat for waterfowl, other migratory birds and other wildlife, as well as resting grounds for the birds during their migration.

The WPAs were incorporated into the National Wildlife Refuge System in 1966 and in North Dakota are managed within eleven wetland management districts.

Providing critical habitat WPAs are not just for waterfowl production.

In addition to providing critical habitat for waterfowl, they also provide critical habitat for a variety of birds such as avocets, harriers also known as marsh hawks, herons, grebes, and a wide array of songbirds, plus mink, muskrat, and other mammals that call the marsh home. And then, of course, there are the plants and animals of the adjacent uplands.

Public use

WPAs are great places to do some nature watching, and they are open to public use with a minimum of common-sense regulations. Allowed uses include hunting, fishing, trapping, wildlife observation, photography, and personal collection of wild fruits and berries, mushrooms, and asparagus.

It is critical we don't pollute these lands that were set aside to preserve these habitats for these birds and animals.

This site is also in the Devils Lake basin which is also at risk to the contaminants and nutrient runoff from this facility and the manure application.

Department Response: Thank you for your comment. The department has received documentation of zoning approval from Pierce County. Please refer to response to *Comment 3(A) Zoning*, *Comment 3(D) Surface Water Quality* and *Comment 3(C) NMP*

Comment 5(D)

3. The Manure management plan is not sufficient to protect the lake or groundwater. We took an aerial photo of just the fields adjacent to Hurricane Lake after just a 1 inch rainfall. (Exhibit 3) You can see that all the ditches are full of runoff going directly into Hurricane Lake. This area had zero setback for manure application. As you can see in the photo this ditch also shows the ditch is running through the area of site 7 which still shows zero setback for the area of this ditch. This should be corrected. The maps that are being used to determine setbacks are not inclusive as you can see that this area on site 7 is not real visible on the map. I am sure there are many other areas like this that unless you see them during a rainfall event, they could be missed. These fields in all of these sites have been extensively ditched and drained since the original application in 2007. I have seen large rainfall events in this area as I farm land near this site. The 100 foot setback is insufficient if we have a significant rainfall event. I have seen 5 to 8 inch rainfall events and they would be disastrous to Hurricane lake and the Devils Lake basin.

In looking at the manure easements it is interesting to note that there is an air quality and odor easement that the landowners must sign in the contract with Dakota SAO. What about the neighbors or public driving near this facility and fields where manure is applied? They are getting nothing from this facility and are forced to endure the air quality and odor. That is not public protection. I urge the DEQ to deny this permit and protect the land, water, and people of Pierce county and surrounding area.

Department Response: Thank you for your comment. Regarding stormwater discharge, refer to response to *Comment 3(T) Agricultural Stormwater Discharge*. Regarding manure spreading and setbacks, refer to responses to *Comment 3(C) NMP* and *Comment 3(V) Land Application Sites*. Regarding air quality easements, refer to response to *Comment 3(Z) Air Quality*.

Commenter 6 - Bryan Dean

Comment 6(A)

I'm a farmer, rancher, and producer from the Velva area. I reside on the board of the North Dakota Corn Growers Association.

And we, North Dakota Corn Growers represents about 13,000 corn growers across the state of North Dakota. We support the expansion of North Dakota of animal agriculture.

At this point in time, we sit at about 15% of our receipts in North Dakota are ag production receipts in animal agriculture, which is substantially less than those states around us which leaves room in the state of North Dakota for expansion of our animal agriculture. We are confident in our existing state laws, environmental laws that are in place that are rigorous than

most of these states around us. We have to trust in our regulatory institutions and our structures, and if there are any deficient, deficiencies, they should be addressed at the legislative level. Full and fair consideration on such projects should be given not only for those producers and public members affected, but for the growth and economic development of our communities.

We ask that the local, this local consideration focus on the size, scope and nature of this project and that the state consideration be targeted to compliance with our current environmental laws in place now. Thank you for your time and your attention.

Department Response: Thank you for your comment.

Commenter 7 - Kevin Dauphinais

Comment 7(A)

Fort Totten District Representative of Spirit Lake Tribe. My question was, our chairlady Lonna Street had sent a letter in concern to the project and we never received this response to the letter of concern. That's my question Because we never from spirit like Nation was never notified when any in follow up after the complaint was filed.

Department Response: Thank you for your comment. See response to *Comment 12(B) Spirit Lake Tribe Letter*.

Commenter 8 - Nathan Pesta

Comment 8(A)

For the past 22 years I've specialized in the design and permitting of livestock facilities as an agricultural engineer with DGA. The concrete pits beneath the barns are designed to Midwest Plant Service 36 and ACI 318 structural codes. These pits are designed for up to 16 months of storage with a proactive drain tile leak detection monitoring system around the foundation of the pits, providing real-time integrity assurance. The sites are designed for where the runoff is captured, filtered and controlled on site through diversions and a storm water basin. The facility represents the highest standards of environmental stewardship, regulatory compliance and technological innovation. I'll stand my professional engineering license on this facility.

Department Response: Thank you for your comment.

Comment 8(B)

Comments on draft fact sheet as follows:

1. Change "three deep pit" to "two deep pit, and one shallow pit" on pages 4 and 5.
2. Change "8 inches" to "10" thick, w/#5 vertical rebar @ 12" O.C. and #4 Horizontal rebar @ 12" O.C."

Department Response: Thank you for your comment. These changes were made to the factsheet.

Commenter 9 - Janelle Engstrom

Comment 9(A)

I'm here to represent my husband and myself. I want to show you a picture. This is Anna Engstrom. I want to show everybody this picture. Anna Engstrom was the first generation who farmed our land. She came and she farmed at 15 years old from Sweden. Our daughter is the 5th generation that farmed our land. It is wrong, that we have these guys, people that are not from North Dakota come here and take away our way of life. And they are from Iowa. This should not be happening. Whether the politicians say that it should be happening or not, the people are saying that it should not be happening. They should not be coming from Iowa and taking away our way of life. Period. I am against what these fellows from Iowa are coming and trying to do because what they're trying to do is against corporate farming law. Thank you.

Department Response: Thank you for your comment. The structure of the corporation is outside the authority of the department. Please refer to the North Dakota Secretary of State and the North Dakota Department of Agriculture.

Commenter 10 - Sam Wagner

Comment 10(A)

We represent over 600 members across the entire state of North Dakota, including many members that are in this room today testifying. One of the things that we wanted to talk about was some of the areas that have been, where the manure management, where the manure management is being spread.

As you can see there are multiple rivers that run or streams and drains. Site four, Section 4, on the west side there is clearly a stream running through that area. Site 3, Section 13, Site 7, Section 25, Site 10, Section 16 on the northeast quadrant of it, and then Site 8, Section 18. Many of these have water running through them.

We'd like to point out that in Abercrombie, when we submitted comments for the Abercrombie Dairy, there were multiple acreages that you, the DEQ pulled out due to the proximity of the streams, so we would like you to, to exercise the same care and judgment that you did when you were doing that. We also want to see testing wells around the site and on the permit, assurances that people, if there are any drying of wells or lack of water, that Summit can be held responsible for paying for this.

When we talk about every step of the law, it does not necessarily equal environmental friendly. It really is what is the most politically expedient. We've seen multiple regulations being pulled back from the DEQ over the last seven years that I've been an organizer here. You know, when we talk about, well, there are soybean processors that need to have this business, that's not under the DEQ's purview.

And finally, I'd just like to make one last comment, when we were at a model zoning, when we were at the model zoning ordinance, Pete Hanebutt of the Farm Bureau had stated that no one would ever set up a CAFO within a sensitive area. If we take a look at some of this where these manure spreading is, you can clearly see there are some sensitive areas here. I've never seen the corn growers or soybean, or Livestock Alliance ever come out to you guys and propose more regulations or more environmental safety, but I have seen them multiple times in Bismarck testify to rollback burdensome regulations. You can't have it both ways.

Department Response: Thank you for your comment. Refer to responses to *Comment 3(C) NMP*, *Comment 3(V) Land Application Sites* and *Comment 4(E) GW Monitoring*. Information regarding protecting and sampling of private wells can be found on our website at: https://deq.nd.gov/WQ/1_Groundwater/3_WW.aspx.

Comment 10(B)

In regards to the Hexagon II requesting a permit to build a farrowing operation that will house 5,422 head of gestating pigs with an average weight of 400 lbs, 1,088 head of lactating pigs with an average weight of 450 lbs, 1,188 head of grower pigs with an average weight of 150 lbs, 792 head of nursery pigs with an average weight of 35 lbs, and 792 head of finisher pigs with an average weight of 200 lbs.

Dakota Resource Council promotes sustainable use of North Dakota's natural resources and family-owned and operated agriculture by building member-led local groups that empower people to influence the decision-making processes that affect their lives and communities.

Socially Responsible Agriculture Project (SRAP) is a nonprofit 501(c)(3) organization. For more than 20 years, SRAP has served as a mobilizing force to help communities protect themselves from the damages caused by industrial livestock operations, and to advocate for a food system built on regenerative practices, justice, democracy and resilience. SRAP offers free support, providing communities across the U.S., including North Dakota, with the knowledge and skills to protect their rights to clean air, water, and soil and to a healthy, just, and vibrant future.

We have the following concerns regarding the permit:

- I. Dakota SAO II, LLP is Not Properly Registered in North Dakota so DEQ Cannot Accept, Review, or Hold Hearings a Permit Application for a Non-Entity.

The Secretary of State shows Dakota SAO II, LLP as a “limited liability partnership - domestic” since June 30, 2025. However, in order for LLPs to legally operate in North Dakota and transact business, they must meet the LLP formation requirements and register with the Secretary of State. N.D.C.C. 45-22-03. A registration requires the LLP Managing Partner to disclose the following (among other pieces of information):

(3) A statement indicating whether the limited liability partnership will be engaged in farming or ranching in this state or owning or leasing land in this state which is used for farming or ranching.

(6) The name and address of each managing partner and, if the limited liability partnership will be engaged in farming or ranching in this state or owning or leasing land in this state which is used for farming or ranching, then the names and addresses of all partners. N.D.C.C. 45-22-03(3)(a)(1)-(8) (emphasis added).

Despite filing registration forms, annual reports, amended registration forms, and amended annual reports since June 30, 2025, we believe that Dakota SAO II, LLP may have still failed to meet the state’s partnership disclosure requirements, and may have conducted certain business without the proper disclosures.

First, Dakota SAO II, LLP registered with the Secretary of State on June 30, 2025 and represented that it “will not be engaging in farming or ranching and will not be owning or leasing land in North Dakota which is used for farming or ranching.” Exhibit 1. During the summer 2025, it entered into manure application agreements with local residents, which are part of the DEQ application documents. On March 24, 2026, Dakota SAO II, LLP filed its first annual report where it also stated it “does not own or lease land in North Dakota that is used for farming/ranching.” Exhibit 1. On April 20, 2026, Dakota SAO II amended its registration to disclose that “[i]ntends to own agricultural real estate and construct and operate livestock feeding facilities” and that it will be engaged in farming or ranching, and it will own or lease land in North Dakota that is used for farming or ranching. Exhibit 2. The commenters believe that 2 Dakota SAO II, LLP should have made this declaration part of its original registration, and certainly before it entered into manure application agreements, or filed permit applications at the county and state levels.

Second, the registration form disclosed one managing partner; and the amended registration form disclosed two managing partners. But these disclosures are only part of what the law requires. N.D.C.C. 45-22-03(3)(a) requires disclosure of the names and addresses of all partners for LLPs engaged in farming or ranching. It does not appear that Dakota SAO II, LLP has disclosed this information to the state in its LLP registration or at any point during its Secretary of State filings, the Pierce County proceedings in 2025-2026, or in its amended filings this spring.

By not meeting LLP disclosure requirements, Dakota SAO II, LLP is not properly registered as a LLP in North Dakota. Thus it cannot operate in North Dakota, enter into manure application easements, or file permit applications. Unless and until Dakota SAO II, LLP meets these requirements, DEQ should not be dedicating any resources to reviewing permits applications, holding public hearings, or accepting public comment. At this point, Dakota SAO II, LLP is a non-entity because it has not met the basic registration requirements.

Given the risks to local farmers and community members, ensuring Dakota SAO II, LLP's entity status is critical here. Under North Dakota's partnership law, liabilities incurred by a LLP are solely the obligations of the LLP and LLP partners are not personally liable, directly or indirectly, for obligations under North Dakota LLP law. N.D.C.C. 45-22-08.1(a), (b). This protection from liability means that communities affected by the actions of the LLP must ensure now that the LLP's activities - such as proper formation and registration, undergoing a DEQ permit review processes, siting, constructing, and operating a 6,500 head swine facility - are closely reviewed to be consistent with corporation formation, land use, environmental, and public health laws. North Dakota's Corporate or LLC Farming Law (N.D.C.C. 10-6.1-01 through 1-27) is clearly focused on corporations and LLCs, but not on partnerships or LLPs. Where the statute does refer to partnerships, it allows them certain exceptions. For example, while Corporations and LLCs are limited to owning 640 acres in North Dakota (N.D.C.C. 10-6.1-12.2(5)(a),(b)), "partnerships" are not subject to this limitation so long as they meet Title 45. N.D.C.C. 10-6.1-12.2(5)(c). Dakota SAO II, LLP does not meet Title 45 because it has not disclosed all members of its partnership, and it cannot avail itself of the Corporate or LLC Farming Law provisions. A transparent, rigorous, and thorough approach to ensure the LLP is properly formed and registered is critical for communities to protect themselves against the direct and indirect impacts of this proposal. Without strong oversight, communities run the risk of having limited recourse when, not if, Dakota SAO II, LLP negatively impacts their drinking water, Hurricane Lake, the Wildlife Recreation Area, their roads, and the environment.

Department Response: Thank you for your comment. The structure of the corporation is outside the authority of the department. Please refer to the North Dakota Secretary of State and the North Dakota Department of Agriculture.

Comment 10(C)

The Dakota SAO II, LLP application relies in part on the nearly 20 year old application from the 2007 application for Hexagon. For example, Dakota SAO II, LLP relies on three 2007 well driller reports, 2007 geologic/hydraulic or soils information and soil boring logs, and soil classifications. This is the information that Dakota SAO II, LLP is then using to run agronomic rate scenarios, nutrient risk assessments, phosphorus index, and assess groundwater and surface water risk potentials, and soil condition needs. Unless more recent investigations confirm the accuracy of the 20 year old data, this information's shelf life has long expired. Using 20 year old stale information is grossly unfair to the public and lacks the diligence DEQ must require of permit

applicants. The commenters request that DEQ require current information for its review of any permit application.

Department Response: Thank you for your comment. The department has thoroughly reviewed all submitted site geotechnical information. The soil and geology of the area has shown no sign of significant changes that would affect surface geology.

Comment 10(D)

II. Site is inappropriate for the proposal

A. Environmental Concerns: Proximity to Hurricane Lake and Waterfowl Production Area

The proposed facility is situated within 4,100 feet of Hurricane Lake Waterfowl Production Area (WPA). This land is federally managed by the U.S. Fish and Wildlife Service for the protection of migratory birds, small wetlands, and prairie pothole ecosystems that are “natural sponges.” The proximity of this operation introduces the risk of phosphorus and nitrogen loading, and overloading the natural system, which can lead to eutrophication that destroys the aquatic ecosystem these protected species rely on. The WPA is also part of the North Dakota WPA network, providing essential protection for federal and state listed threatened and endangered species that use the WPA and the network for natural behaviors including feeding, nesting, breeding, migrating, and rearing young.

The applicant acknowledges in the Permit Application Section 8.C that “the facility location is a flat area with drainage flowing west into the tributary of Lake Hurricane”. Given that the Land Application Map Index identifies “High Risk” runoff areas in close proximity to these drainage pathways, the current Nutrient Management Plan is insufficient. In the event of major rainfall or rapid spring snowmelt, common in Pierce County, the 100-foot setbacks are inadequate to prevent contaminants from reaching the WPA. Therefore, the DEQ must mandate a comprehensive revision of the Nutrient Management Plan to include expanded buffers and enhanced mitigation efforts that go beyond the standard 100-foot setbacks.

Department Response: Thank you for your comment. Please refer to responses to *Comment 3(A) Zoning*, *Comment 3(C) NMP*, and *Comment 3(V) Land Application Sites*.

Comment 10(E)

B. Environmental Concerns - Proximity to Pierce County Recreation Area and Wildlife Protection Area

The facility would be located less than one mile from the Fish and Wildlife Service Pierce County Waterfowl Production Area. See Figure 1 below. Waterfowl Production Areas (WPAs) are part of the National Wildlife Refuge System - which is a network of lands set aside

specifically for wildlife. This Refuge System is a living heritage, conserving wildlife and habitat for people today and for generations to come. Pheasant and Duck hunting are the most common types of hunting in the area with dogs being at risk the most going into wetlands with blue algae blooms. Fishing accounts for the majority of the tourism for Devils Lake and features some of the best Northern Pike, Walleye, and Muskie Fishing in the United States, let alone the planet. Boating on the Scenic Lake is still extremely popular. This land is also part of Native Treaties along with reservation borders that are still disputed to this day. This area is dotted with state and federal protected archaeological sites which can include unmarked cemeteries and burials. Without a current survey, there is an immense risk of contaminating the historic fabric of Pierce County, and a loss of cultural heritage. The wetland and grassland habitats on WPAs are managed to provide important resting and breeding grounds for migratory birds, waterfowl, and other wildlife. By providing permanent habitat, this WPA helps sustain the country's waterfowl populations. Additionally, Hurricane Lake National Wildlife Refuge is a protected area in Pierce County, designed to provide crucial habitat and breeding grounds for migratory waterfowl, shorebirds, and grassland-nesting birds. Nearly 800,000 people visit waterfowl production areas each year.

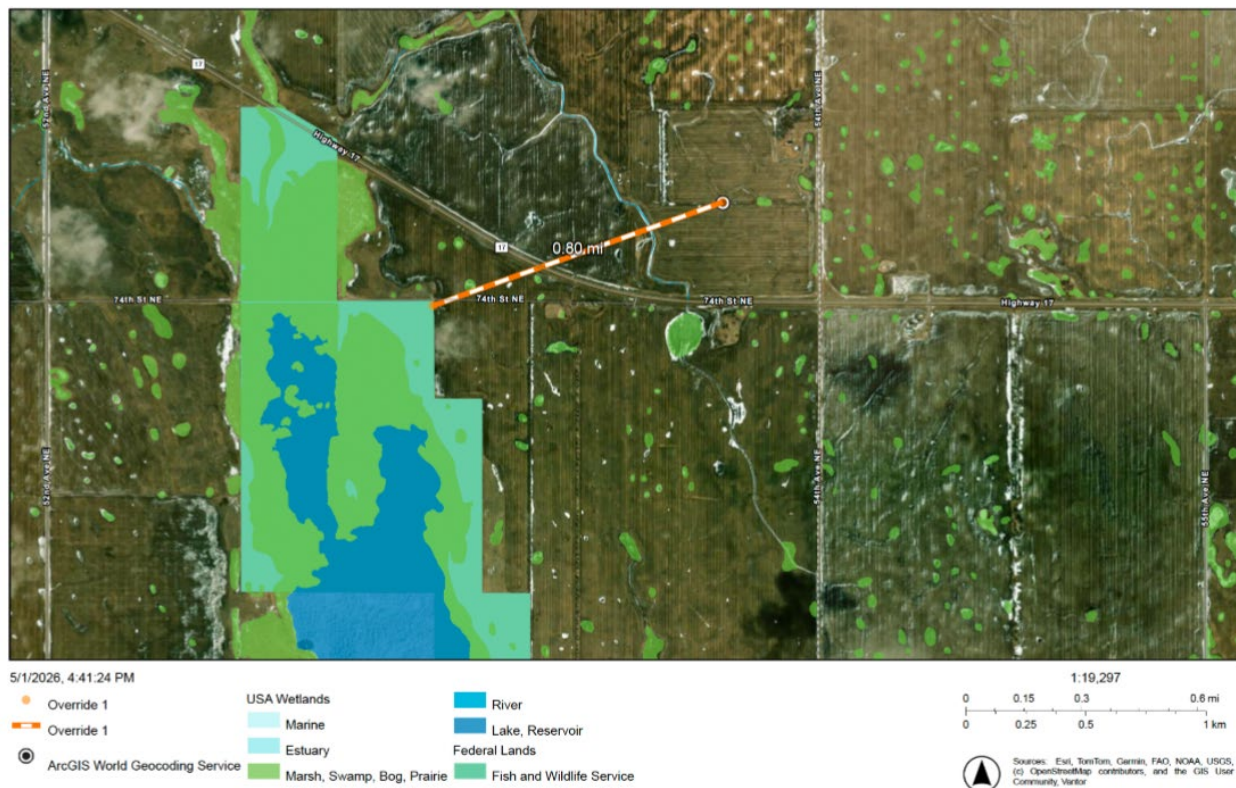


Figure 1 - SRAP Map of Distance from Proposed Facility to the Fish and Wildlife Service Pierce County Waterfowl Production Area

The J. Clark Salyer Wetland Management District covers approximately 8,354 square miles in Renville, Bottineau, Rolette, McHenry, Pierce, and Ward counties; within this wetland management district (WMD), the U.S. Fish and Wildlife Service manages 34,403 acres of waterfowl production areas, 134,008 acres of wetland easements, 98,706 acres of grassland easements, 18,371 acres of Farmers Home Administration conservation easements, and 8,062.5 acres of easement refuges. The WMD was formed to manage waterfowl production areas and the Wetland and Grassland Easement Program, both aimed at protecting and restoring crucial grasslands and wetlands for waterfowl production. Although waterfowl production areas, easements, and national wildlife refuges account for less than 2 percent of the landscape in the Prairie Pothole Region states, they are responsible for producing nearly 23 percent of this area's waterfowl. A critical aspect of protecting waterfowl and enhancing grasslands is the partnership collaboration and voluntary cooperation with private landowners. These areas, similar to the Hurricane Lake WPA, also provide essential protection for federal and state listed threatened and endangered species that use the WPA and the network for natural behaviors including feeding, nesting, breeding, migrating, and rearing young. This makes it even more imperative that DEQ assess the risk holistically, taking into consideration the crucial natural resources that could be detrimentally impacted.

Department Response: Thank you for your comment. The department has received all necessary documentation of local zoning authorization through Pierce County. Please refer to response to *Comment 3(D) Surface Water Quality*.

Comment 10(F)

C. Construction in a Drainage Basin

The proposed facility is located directly within the Devils Lake Basin, a subbasin of the Red River of the North Basin. Exhibit 3. Both Devils Lake and Stump Lake are the two primary closed-basin lakes located at the southern edge of the basin itself – this means they receive and store runoff from their drainage areas, contributing to dramatically fluctuating water levels that respond to environmental and climatic conditions. Historically, both lakes have overflowed into the Sheyenne River, as well as experiencing extremely dry conditions. In June of 2011, Devils Lake achieved a rise of more than 53 feet, expanding the lake's surface area by over 300 square miles. Since the 1990s, the entire basin has experienced a prolonged wet cycle with flooding that has impacted local communities and residents, inundated thousands of acres of agricultural land, and forced closure and abandonment of critical infrastructure. Per the application, runoff inclusive of stormwater or precipitation from the land around the barns and site buildings, will be directed away from the site. Geologic and historic experience demonstrates this area as a drainage basin highly susceptible to environmental conditions. Runoff and flow will continue to follow the path and flow it historically has, exacerbating an already precarious situation. The Commenters suggest that significantly more due diligence is required by DEQ to confirm that, in fact, the stormwater system for this facility can manage the

water quantities anticipated, and the diversion of stormwater is appropriate given the local environment, and that any stormwater runoff impacts are mitigated by the applicant.

Department Response: Thank you for your comment. Please refer to response to *Comment 3(T) Agricultural Stormwater Discharge* and *Comment 3(D) Surface Water Quality*.

Comment 10(G)

D. Groundwater data and supporting documentation warrants further clarification, updated sampling, and a continuous groundwater monitoring plan should be required.

There is currently one private well located on-site and at least three additional wells located within 2 miles from the facility. Given these wells likely draw water from the same source, the Spiritwood Aquifer, the lack of a mandatory, long-term Groundwater Monitoring Plan as part of the permit is a significant oversight. A one-time baseline water quality analysis (provided in Permit Application Section 7.A) is insufficient to protect these water sources from the cumulative impact of 1.1 million cubic feet of annual waste storage and application. The applicant's dismissal of a Groundwater Monitoring Plan as "not necessary" is a direct threat to the long-term viability of the local domestic water supply. The DEQ must require the applicant to establish a permanent groundwater monitoring network, consisting of upgradient and downgradient wells, to track nitrate and pathogen levels in real-time. Until a long-term groundwater monitoring plan is integrated into the Nutrient Management Plan, the DEQ cannot fulfill its mandate to prevent the degradation of North Dakota's shared water resources.

Department Response: Thank you for your comment. Please refer to response to *Comment 4(E) Groundwater Monitoring*.

Comment 10(H)

In the Permit Application Section 8, Geologic/Hydraulic or Soils Information pg. 2, the applicant states: "Groundwater was not encountered in any of the boreholes. Drain tile was determined to not be necessary." However, following the applicant's maps on pg. 8.A.2., the applicant includes 20 year old information from a prior application, and states "Water depths were only measurable in hole number 4 at a depth of 11.5 feet. A drain tile is planned to lower this depth and minimize the risk on the soil liner." In 2007, the geotechnical engineers also pointed out in their report that "water levels can be expected to fluctuate both yearly and seasonally."

Further, laboratory and permeability tests were conducted on soil samples in 2007. This data informed a predicted seepage rate, which in turn informed the waste storage pond's liner and design at that time two decades ago and for a smaller facility. This specific, critical soil testing and information is completely missing from the 2025 samples provided by the applicant. On page 2 of the Permit Application Section 2, it again states that the "Depth to Water Table at

Facility/Control Structure is >36 feet (One soil boring perched table at 11.5 feet),” which is inconsistent – this reflects the water depth measurements taken in 2007, not in 2025.

Commenters request that the applicant clarify the inconsistencies made in the application and given the site geology and facility location, and require additional borings to adequately characterize soil and ground water, and use as data that informs the facility’s engineering, including waste storage liners.

Department Response: Thank you for your comment. Groundwater was not encountered in either the 2007 or 2025 run of soil borings. The current method of manure storage, deep pit barns, does not require permeability testing.

Comment 10(I)

E. Feasibility of Water Supply and Impacts on Local Wells

The primary source of water for the facility will be well water and a rural water system. The closest wells indicated by the applicant in the submitted materials (not including the one private well found on-site that has no available documentation) are three test wells established by the applicant – located in the SE/4 of Section 24, T158N, R69W. Two reports show two wells were drilled to depths of 182 feet, however no water was found. The closest town to Cando obtains water from wells which rely on a groundwater supply. How will the facility draw well water when no water was found when drilling the test wells? If there is no well water available, what source(s) will the facility turn to for its water needs? What are the environmental impacts to the local community of drawing water and importing water from that source?

Department Response: Thank you for your comment. Water appropriation is beyond the scope of the proposed permit and is the responsibility of the North Dakota Department of Water Resources or the local potable water provider.

Comment 10(J)

III. Comment and Questions Regarding the Management of the Facility

Waste Handling:

43. Total Acres Controlled and Available for Land Application

Wetlands: The aerial maps presented show that the site is surrounded by many wetlands. In addition to the marked excluded areas for manure application, there appear to be many areas where manure application would not comply with the rule that “Manure shall not be applied any closer than 100 feet to any down- gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads or other conduits to surface waters.” Wetlands are surface

water bodies. In our public comments we named fields that appeared to have drains, ditches, or bodies of water near them.

Department Response: Thank you for your comment. Refer to response to *Comment 3(C)* NMP, *Comment 3 (V)* Land Application Sites, and *3 (I)* Spreading Setback.

Comment 10(K)

Animal Mortalities:

Provide a brief description of how animal mortalities will be handled.

Per ND Century Code

“ND century code Title 36 Section 36-14-19 subsection 3. states that If the carcass is of an animal which has died of a disease other than is specified in subsections 1 and 2, or from any other cause, it must be burned, buried, composted, or given to a licensed rendering plant within thirty-six hours, or must be disposed of by a method approved by the state veterinarian. If the carcass is buried, it must be buried not less than four feet [1.22 meters] below the surface of the ground and covered with dirt to that depth. No carcass may be disposed of along any public highway or along any stream, lake, or river nor be buried near or adjoining any such place.”

We are concerned about the ability of the farmers with little training to be able to dispose of the hogs that die on their property. Improperly buried livestock can attract wildlife such as foxes and coyotes and could also be a public health concern for disease. Pathogens have been known to be spread from employees disregarding personal protective equipment or safety procedures; runoff of untreated hog waste, or improperly disposed livestock mortality. We feel that due to the soil conditions and proximity to the water supply in the area onsite disposal may not be the best way to dispose of corpses.

First, we would recommend that you require in the permit to only allow landfill disposal of fatalities to improve safety on the facility.

If you decide not to follow that course of action. We would ask that you require in the permit that all personnel employed at the facility be given training in proper disposal procedures that would be available upon request from the DEQ. We would also advise that the DEQ require mortality rates to be monitored and commented on during the 5-year renewal of the permit. DEQ should require that any outbreaks of disease be reported within 24 hours of confirmation of the first known case of infection.

Department Response: Thank you for your comment. Composting is an approved method of mortality management and training is available through NDSU Extension. Disease outbreaks and mass mortality events are under the authority of the State Veterinarian.

Comment 10(L)

In the permit page 2 section 10. it states that they will notify the DEQ within a “reasonable amount of time”. Can the Department please outline exactly what that means? 1 year? 6 months? 3 months? 30 days? Please outline the standard procedure the department would use to receive, process, respond, and remedy a complaint regarding odor, spills, and groundwater contamination and what type of time table would be expected from a resident complaining.

Department Response: Thank you for your comment. This period of time is dependent on the severity of the incident. Complaints are received by the department through phone, email, letter, or in-person. The typical response is to conduct an inspection and interview with the permittee. Inspections are conducted as soon as possible. Permit compliance efforts can take varying amounts of time to remedy based on the severity of the violation. Any findings are logged by the department database and appropriate compliance or enforcement actions are taken.

Comment 10(M)**Water Quality Information****A. Surface water analysis**

“Runoff from the site appears to drain to lowlands or pothole wetlands which are a closed source and do not appear to runoff or drain elsewhere. Construction and operation of the current design is not expected to have any adverse effect on surface water quality. There are currently no plans to sample this water. “

The Devils Lake Basin does not have any natural outlets. Any leakage or overflow from this facility will easily contaminate both ground and surface water. Consideration should be given because these surface waters are of recreational and biological value. Private lands have wells in which they draw water. We should not be handwaving that absolutely no testing or sampling of this water is needed.

Department Response: Thank you for your comment. Refer to responses to *Comment 3(D) Surface Water Quality*, *Comment 4(E)*, and *Comment 10(A) Wells*.

Comment 10(N)**B. Analysis of livestock waste or runoff**

In addition to nitrogen and phosphorus content, swine waste also contains heavy metals, antibiotics, bacteria and viruses. Application fields are a major source of ground water contamination. The nutrient management plan offers a disclaimer for existing nutrients in the field but just allows for full strength applications every year. It handwaves the build up and conversion of organic nitrogen to nitrate. The repeated application of manure waste results in high organic nitrogen transforming to nitrate every year and is not completely accounted for in

the nutrient budget. The application method also reduces the plants' ability to use all the nutrients. The knifing operation destroys the root system and the plants only uptake the shallow (less the 1') nutrient with the remainder migrating in soil moisture to ground water. The fall applications are also a major source of contamination, since no plant uptake occurs between fall and spring, but winter precipitation continues to flush nutrients to ground water. Would the DEQ be in favor of issuing a ban on winter application on the manure from Dec 1st-March 31st? In 2025 Michigan passed a ban on all winter spreading due to complaints from residents and environmental scientists. The Michigan Ban passed last year is Jan 1st-March 19th but North Dakota has a far colder climate than Michigan. We would recommend Dec 1st-to March 31st.

Department Response: Thank you for your comment. Refer to responses to *Comment 3(C) NMP* and *Comment 4(A) Health Risks*. The facility has chosen fall application for injecting manure into fields. The application will be in accordance with the NMP reviewed and approved by the department. Manure shall not be applied to frozen, snow covered or saturated soils if there is a likelihood of runoff. For more information regarding manure application precautions, refer to Section 7.6 of the design manual.

Comment 10(O)

Operation and Maintenance Plan and Requirement

Inspect the concrete storage tank storage ponds for signs of leaking or seepage, excessive settling, excessive vegetation growth or damage due to vehicles or equipment, rodents or erosion. Report any leakage as detailed above and make plans to rectify any problems as soon as possible. **Will the time interval when the pit is empty or at a low level be minimized?** The concern is to minimize wall stress by keeping the internal and external pressures as equal as possible. This involves matching external groundwater level to internal manure depth. **Has the optimum manure level been established?**

2. Monitor the Deep pit concrete levels weekly. Inspect Sewer pipes to ensure they are not plugged or damaged. **What are the contingency plans if this were to occur?**
4. Maintain manure levels below the Freeboard level of the structures by carefully monitoring manure levels in the pit and scheduling manure application times. See above comment.

Department Response: Thank you for your comment. Load analysis has been conducted on columns, walls, footings, floors. This includes the soil load or hydrostatic pressure. The design also includes perimeter tile drain around each barn to relieve hydrostatic pressure. The operational depth and pumping interval of the pits will be managed by site staff in accordance with the facility operation and maintenance plan. Any level below the maximum operating elevation is appropriate. If lines were to be plugged or damaged, they would be repaired. All required department records, including site inspection records, are kept on site for department review at any time.

Comment 10(P)**IV. Clarification and Correction of Dakota Resource Council Comments from April 20, 2026**

We at the Dakota Resource Council have a mission to ensure sustainable practices in farming and animal agriculture. In the public hearing held on April 20th 2026, we stated that often we do not see organizations like the Farm Bureau, Corn Growers, Soybean Council and Animal Agriculture Alliance lobbying for increased regulations but often lobbying to decrease them. What our organization meant to say is that they advocate for them. Lobbying implies that they are being paid to directly speak to lawmakers which may be true for some of the organizations but not all of them. We would also like to state once again that testimony given that states “We need to approve these facilities so that our soybean processing facilities will have customers” is of no concern to this department and should not be used as a reason to approve these permits.

Department Response: Thank you for your comment.

Comment 10(Q)**V. Conclusion**

Thank you for your consideration of our comments. We encourage you to deny the permit application for Dakota SAO II, LLP and the Hexagon 2 location.

Department Response: Thank you for your comment. Permit applications received by the department are reviewed to ensure they are in compliance with applicable rules and regulations prior to any permit issuance.

Commenter 11 - Amber Wood**Comment 11(A)**

All right. Good evening. My name is Amber Wood. I'm the Executive Director of the North Dakota Livestock Alliance. My address is P.O. Box 369, Bismarck, ND 58502. The North Dakota Livestock Alliance is writing this comment in support to the Hexagon 2 permit application due to their compliance with the animal feeding operations rules of the North Dakota Department of Environmental Quality, the State Water Quality Standards, and the conditional use permit requirements of Pierce County.

NDLA is confident that the extensive NDDEQ animal feeding permit review process successfully protects the environment and natural resources of our state. The engineered design plan, including manure storage systems, composting, and nutrient management plan, gives today's farmers and ranchers extremely beneficial use of manure while ensuring the land and water is sustained for generations to come. The natural nutrients contained in manure are valuable

fertilizers for crops and the organic matter is crucial to improving soil health. Access to manure is also, reduces North Dakota crop producers dependency on commercial fertilizers, giving them more control over one of the most expensive and fluctuating input costs. These benefits combine to increase crop yields and bolster the next generation of North Dakota farmers. The North Dakota Livestock Alliance Governing Board of Directors is the North Dakota Pork Council, North Dakota Corn Utilization Council, North Dakota Farmers Union, Midwest Dairy, North Dakota Division, North Dakota Corn Growers Association, North Dakota Soybean Council, North Dakota Farm Bureau, Agtegra Cooperative and the North Dakota Ethanol Council. We work with all species of animal agriculture and all herd sizes across the state. Since NDLA is founded in 2017, we have worked with five new hog barns that have successfully permitted and are operating across the state of North Dakota. The North Dakota Livestock Alliance does not participate in any of that. Thank you.

Department Response: Thank you for your comment.

Comment 11(B)

Submitted to the ND Department of Environmental Quality,

The North Dakota Livestock Alliance (NDLA) is writing this comment in support of the Hexagon 2 permit application #NDAFO0711, due to their compliance with the Animal Feeding Operations Rules of the ND Department of Environmental Quality (NDDEQ), the State Water Quality Standards and the Conditional-Use Permit requirements of Pierce County.

NDLA is confident that the NDDEQ animal feeding permit review process successfully protects the environment and natural resources of our state. The engineer-designed plan, including manure storage systems, composting and nutrient management plan, gives today's farmers and ranchers extremely beneficial use of manure while ensuring the land and water is sustained for generations to come. The natural nutrients contained in manure are valuable fertilizer for crops and the organic matter is crucial to improving soil health. Access to manure also reduces North Dakota crop producers' dependency on commercial fertilizers, giving them more control over one of their most expensive and fluctuating input costs. These benefits combine to increase crop yields and bolster the next generation of ND farmers.

The NDLA Governing Board of Directors is the ND Pork Council, ND Corn Utilization Council, ND Farmers Union, Midwest Dairy – ND Division, ND Corn Growers Association, ND Soybean Council, ND Farm Bureau, Agtegra Cooperative and the ND Ethanol Council. We work with all species of animal agriculture and all herd sizes across the state. Since NDLA's founding in 2017, we have worked with 5 new hog barns that have been successfully permitted and are operating across the state.

Department Response: Thank you for your comment.

Commenter 12 - Lonna Street

Comment 12(A)

[untranslated]¹ Good afternoon or good evening, members of the Pierce County Commission. My name is Lonna Street. My Indian name is Inyan Wakan Win. That means Holy Stone Woman. I come to you today from the Spirit Lake Nation, and I stand here today not only as a leader of the Spirit Lake Nation, but a steward of the lands. Our lands that belong to us as North Dakotans and I come here to a voice my, my concerns and provide testimony to the opposition of the conditional use permit application submitted to you by Dakota SAOS is what I call it for a proposed swine operation in Pierce County.

In our nation, we say Mni Wakan, because that means the water is sacred. The water is sacred to us, whether it's Spirit Lake, Mni Wakan, or Hurricane Lake, or Lake Ilbin. water is sacred to us. And so that's, I stand here today and express my concern about the proposed CAFO farms, you know, that are being proposed here in Pierce County. And like it was mentioned earlier, I did submit a letter, and the letter is dated December 12th, 2025, and it was received timely by your offices. And so, like my, my co-worker, Mr. Kevin Dauphinais had made mention, there was never a response. There was never anything that formally indicated that my written comments were received regarding my letter. No acknowledgement or confirmation of receipt. And so, to me, that raises another concern, an important question. How are the voices and the concerns of the people that you heard today? The people that are going to be most particularly impacted, the people not only of Pierce County, but of people down the line on that waterway, because all waters connect. As Indian people, we believe we are all related and all our waters of life connect.

And so how are those people, how are their voices being heard? How are they impacting you as Pierce County Commissioners? How are they being heard? How are they being recorded? And how are their addresses being processed through your system that you have here?

So, these issues, like I mentioned, are not limited, limited to Pierce County boundaries. The impact of the CAFO farm of this scale does not stop at a fence line or a jurisdictional border or a lake. It continues to flow, whether it's downstream, upstream, however that works, it continues to flow into the greater waters. And so, water does not recognize those lines, and we know that as Indian people. The waterways connected to this project, including those flowing into Devils Lake, Hurricane Lake, Lake Ibsen, they form a shared water system. And what affects one part of that system will inevitably, inevitably affect the whole system. There are approximately around 405 acres of waterways that could be impacted when that impact reaches Mni Wakan, which is our spirit lake.

¹ Testimony given in Dakota language.

So, the impact that I'm talking about is not theoretical, it's inevitable. The nutrient runoff, the contamination risks, as you've heard other people get up and talk about. The degradation of water quality. It will affect not only our shorelines, but yours as well, theirs as well. So, I want to provide an important context regarding the history of this land and water under the Treaty of 1867, which we as the people of the Mni Wakan people fall under our reservation boundaries are described beginning at the most easterly point of the Devils Lake waters. That's along the waters of said Lake to the most westerly point. To me, that's the North Shore. And so that includes Devils Lake in our boundaries and our jurisdiction and our say. And so when my, my letter was submitted, you know, word had had gotten back to us at our offices, at the Mni Wakan offices, that our letter didn't matter because we don't live here. We're relatives though. We're North Dakotans. We're stewards of the land, political office or not, we're stewards of this land.

There has been ongoing legal debate about how the boundary is interpreted, whether it's along the North Shore, the South Shore or otherwise. But I want to be very clear that this isn't about ownership. This is about health. This is about human rights.

And this is about the responsibility to protect the waters and the systems that sustain all of us. So, for the people of the Spirit Lake Nation, it's not just an environmental issue, it's cultural, it's spiritual, and it's a human rights issue.

Our lake is sacred, and since time immemorial, we have maintained a relationship with these waters. We conduct ceremonies, including the annual feeding of the Mni Wakan, the spirit lake. The water is a living being within our creation story. It is not a resource to be used without consequences. It's a relative of ours and yours as well, and it's a responsibility for us to protect that.

When we are grown, when we when our parents bring us up, we are taught that we are here for a purpose, to care for the land and for the children, and to leave both better than we found them. This proposed development does not do that, and it does not meet the responsibility of what we were taught. It does not protect the lands. It does not protect the water, and it does not protect the future of our children or yours. So there are serious concerns that remain unanswered here. Health impacts to nearby communities, long term land degradations, water contamination risks, compliance with environmental protection, including the Clean Water Act. And these are not minor concerns. They deserve clear answers or people deserve clear answers, transparency and accountability. The public deserves to know how the risks will be mitigated, if they can be mitigated at all. As leaders, we all share the same responsibility, and we're all leaders in our own homes. We're all leaders of our lands, of our homesteads. I stand here as a steward of the land, and I ask that you do the same. The decision is not just administrative, it's not political, it's moral and it's generational. So, I respectfully ask that you reconsider and rescind the approval of this permit that that was authorized. Consider your children, their children, your grandchildren, and consider the condition of the natural resources that will be left to them as a result of this decision. We are all connected and what happens to the water happens to all of us. With that, I say Mitakuye Owasin, we are all related. Thank you. I

want to provide you a copy of my letter, I also want to provide you a copy of the letter I submitted on December 12th.

Department Response: Thank you for your comment. Please see responses to *Comment 3(C) NMP* and *Comment 3(D) Surface Water*.

Comment 12(B)

Dear Director Haroldson:

On behalf of the Spirit Lake Tribe, I am writing to submit our comments on the Dakota SAO II, LLP CAFO permit application no. NDAFO-0711. As reflected in the attached letter dated December 12, 2025 to the Pierce County Board of Commissioners (Pierce County BoC), the Spirit Lake Tribe set forth a myriad of deficiencies with the Dakota SAO II's conditional use permit application, and concluded that the Pierce County BoC should not have granted this application since it failed to meet North Dakota applicable statutory requirements as well as the governing regulations of the Pierce County Planning & Zoning Council. See attached December 12, 2025 letter. The Pierce County Board of Commissioners apparently ignored our letter as we did not receive any response from them.

The Spirit Lake Tribe also has grave concerns about irregularities in the Pierce County BoC's reconsideration of this application that occurred last month (April 2026) regarding this conditional use permit. At its regular monthly meeting on April 7th, the Pierce County BoC reconsidered and rescinded its approval of the conditional use permit based on the applicant's failure to meet certain registration and disclosures which require, among others, that the applicant disclose all owners of the applicant company or corporation. Six days later, at a "special session" the Pierce County BoC again reconsidered the Dakota SAO II conditional use permit application and took action to "rescind" the action it took on April 7th to rescind approval of this conditional use permit application. The April 13th action was based solely on a letter from a law firm representing Dakota SAO II's. This letter cites no authority, either statutory, regulatory or caselaw, and in relying on such letter, the Pierce County BoC acted in an arbitrary, capricious and unreasonable manner.

Therefore, the Tribe maintains that the action taken by the Pierce County BoC on April 7, 2026, at a regularly scheduled County Commission meeting, effectively rescinded the conditional permit because the requisites thereof were not fulfilled by the applicant, so there is no permit at this time. The process must be restarted by applicant. As a result, the Tribe believes that the Department of Environmental Quality (DEQ) permit is premature and should be denied for that reason alone because the Pierce County BoC's action effectively denied Dakota SAO II's conditional use permit application. In order to resurrect this matter, Dakota SAO II would be required to resubmit its application, correct deficiencies, and seek approval from the Pierce County BoC.

Moreover, we have concerns that Dakota SAO II has not fully demonstrated its entitlement to hold any CAFO permit in the state of North Dakota. We have concerns surrounding the completeness of the corporation's registration to operate in the state pursuant to N.D.C.C. 45-22-03(3)(a). We also share the environmental concerns laid out in Section II of the public comments of the Dakota Resource Council, which is attached to this letter. Accordingly, the proposed site location violates applicable statutory setback requirements and related effects, including (1) its proximity to the Hurricane Lake Waterfowl Protection Area, (2) its proximity to the Pierce County Recreation Area and Wildlife Protection Area, (3) its drainage to Devils Lake basin, and (4) the impact on nearby groundwater. We also share the concerns described in Section III of Dakota Resource Council's public comments regarding the proposed waste and mortalities handling requirements, and the threat the operation's waste products pose to water quality in the Devils Lake area. Accordingly, we adopt the comments reflected in Sections I, II, and III of Dakota Resource Council's public comments.

In our December 12, 2025 letter to the Pierce County BoC, we referred to residents who appeared before the BoC stating that they live within a mile of the project site and expressed concerns with about the project's impact on their wells and their drinking water. These concerns were ignored and the BoC failed to make sure the ground water well setback requirements were met. More troubling is BoC's rejection of the comments and production of maps and citation to the North Dakota Century Code showing that Hurricane Lake, located within a 1/2 mile of the project site, is a source water protection area that is entitled to the 1.5-mile heightened setback surface water protection. Given the massive amount of water required for this project, the enormous amount of manure this project will produce yearly, and impacts on a federally protected wildlife area (Hurricane Lake refuge), at a minimum, this application and project should be also regulated by the Clean Water Act and a NPDES permit should be required.

Under our 1867 Treaty, Spirit Lake (Devil's Lake) is our permanent home, where America agreed that it would provide and help us with a permanent and livable home for our Dakota People into the future. Thus, the United States has a Federal trust responsibility to protect our home, and our neighbors must respect our Treaty under the Constitution of the United States. The proposed Hog Farm is incompatible with our rights to a permanent and livable homeland.

For these reasons, the Spirit Lake Tribe requests that the North Dakota Department of Environmental Quality to deny the permit application for Dakota SAO II, LLP and the Hexagon 2 location.

Department Response: Thank you for your comment. The structure of the corporation is outside the authority of the department; refer to the North Dakota Secretary of State and the North Dakota Department of Agriculture. Please refer to responses to *Comment 3(A) Zoning*, *Comment 3(C) NMP*, and *Comment 3(D) Surface Water*.

Commenter 13 - Richard Street

Comment 13(A)

I'm a spiritual clergy of our traditional ways of our people. And I take time to say this because I was born and raised till I was 18 years old in the state of Iowa, and I know the consequences of pig farms. My people live along the river. They're known as Meskwaki people and I have relatives and I'm from Spirit Lake of the Sioux people. So, the same consequences that they have taken on or the same consequences that the people here will have. We can no longer eat the animals, use the fish and all the things that we do as we live as traditional people on the land when it comes to these pigs and these pigs won't affect, per se these people here because they won't receive any money from it. They won't see any benefits from it. It's for other people. People come to North Dakota to use North Dakota for their resources and all those things that are growing here, 80% of it go out of the state.

So, I'm sure that the money that they make doesn't come back and come back to us for our own health, to doctor us or to fix us after they leave us with sickness, with pigs. Pigs are the most unnatural animal of this earth because they were never here and they should never be allowed to live on this land, because God firstly didn't put them here to live. He put the animals, I'm going to speak for the animals, the ducks and the geese and the eagles and the elk, the buffalo, the animals that are here, the natural resources that this lake has, that people come and spend billions of dollars to come to Devils Lake. We don't want the pigs to kill the land, and the pigs will kill the land and they will kill us due to their carcinogenic ways that they have. So, I know, because I'm from Iowa and I've seen it, and what it does. Thank you very much and that's what I wanted to say, for the people of this land. [untranslated].

Department Response: Thank you for your comment.

Commenter 14 - Jeff Kenner**Comment 14(A)**

I want to read a little bit more on the study the one guy was talking about the studies of the Lake Alice National Wildlife Refuge Watershed revealed that nutrient runoff from agriculture and livestock operations, particularly concentrated animal feeding operations, CAFOs, impacts water quality. Elevated nutrients, phosphorus, nitrates, and E. coli were linked to these sources with significant spatial variation observed across the basin. Lake Alice, North Dakota water quality findings.

I'm bringing this up because the Cando hog farms are polluting Lake Alice, and now they want to start a new facility right by Hurricane Lake. Contaminant studies found concentrations of phosphorus, nitrate, nitrite, sulfates and E coli that often exceed North Dakota or EPA water quality standards. The sources, the primary culprits for decreased water quality are runoff from agriculture, land, and CAFOs in the upper Devils Lake Basin. Now this map that was sitting here is, Hurricane Lake is in North Dakota, is part of a specific drainage basin known as the Devils

Lake Basin. Everything runs down into Devils Lake. It's a closed basin. Devil Lake Basin, Hurricane Lake is located within this 3,810 square mile closed basin in northeast, northeastern North Dakota. The hydrology part of it. Hurricane Lake is part of the Mauve-Coulee watershed, which drains into the larger, frequently flooding Devils Lake system. And the Devils Lake basin is a sub-basin out of the Hudson Bay drainage basin. Now, this map shows that Hurricane Lake drains, the watershed goes into Devils Lake. And I want to know, I want to make a statement, I guess I can't ask a question. If you as the director, sign off on this, that is telling me that you are guaranteeing me and other people that this hog facility will not pollute Hurricane Lake. And it will not affect people's health. Thank you.

Department Response: Thank you for your comment. Please refer to response to Comment 4(A) *Health Impacts and Comment 3(D) Surface Water Quality*.

Comment 14(B)

Hurricane Lake Wildlife Refuge, WPA is a PARK and RECREATIONAL DISTRICT. It is owned by the U.S. Fish & Wildlife Service. It is NOT taxed. Part of their land extends into the mile setback for the proposed Dakota SAO II-Hexagon II Sow Farm site. According to ND Century Code referring to parks (Page 1 and 2 attached), you cannot have an animal feeding operation where a PARK is within the one-mile setback. Page 3 (attached) is self-explanatory showing the PARK and RECREATIONAL DISTRICT is within the 1-mile mandatory setback. Page 4 (attached) of the ND Century Code proves that Hurricane Lake Wildlife Refuge is NOT agricultural property. Page 5 is the history of Hurricane Lake WPA and National Wildlife Refuge. Pages 6-15 proves that the US Government defined this area of land as a PARK AND RECREATIONAL DISTRICT by virtue of their designation and their ownership signage. Do NOT get the lower part of Hurricane Lake, which is agriculture land that people own, (even though it is water), mixed up with the upper part of Hurricane Lake, that the US Government owns. Some people have made that mistake. You need to deny Dakota SAO II-Hexagon II Sow Farm a permit.

Department Response: Thank you for your comment. Refer to response to *Comment 3(A) Zoning*.

Commenter 15 - Joey Bailey

Comment 15(A)

I am here to speak in support of the swine project in Pierce County. Agriculture has always been the backbone of this state. This project represents responsible livestock development that strengthen, strengthens both the local economy and environmental stewardship. There is a significant demand for locally grown feed ingredients directing, directly supporting North Dakota farmers and rural businesses.

On top of using our feed that is already made here, grown here, swine manure is very sought after by the local farmers, especially now with the high fertilizer costs. As a rancher myself, animal care is extremely important. The owners emphasize zero tolerance for neglect, regular training and audits to ensure animal well-being, along with long standing engagement in the communities where they operate. Rather than turning away from agriculture, we should be working to improve and support it.

This hog barn represents not just a single project, but a commitment to keeping our community productive, resilient and forward-looking. Projects like this help keep agriculture strong, support farm families, and sustain rural communities in North Dakota. I fully support this project. Thank you.

Department Response: Thank you for your comment.

Commenter 16 - Lonnie Anderson

Comment 16(A)

I'm a neighbor to Harlan and farm close to those guys. They're good farmers, but I as a personal man have never intentionally taken advantage of my neighbors for my own self-profit. He's done a good job to farm. If you look at that map, he has drained his, those quarters of land very well. He's done a good job. Both Collin and Brooks. I know these guys. I farm right next to them. But they're infringing upon their neighbors. In their plan, they have listed 3,631 acres that will take to put this fertilizer on. That's five sections of land. That's more land than what they have in their permit.

They have no water there, so rural water will have to come in. And I'm guessing it's so far away it's going to cost a lot of money. I would say it's going to cost somewhere between \$11 and \$16 million to provide enough water and they'll have to have a pressure type tank, a standing static water pressure to give all of the surrounding neighbors enough water pressure to be to be good, because even during spring, spring, spring seasons time, the water pressure goes down and it really inhibits everybody's access to water.

The other one is the permit that Pierce County, and I also serve on the Planning and Zoning Board, but I do not represent them tonight, but I have paperwork that has been presented to me. The application does not match the state application. What we were presented as the planning and zoning does not match the state's planning permit. The other one is how many shareholders. Our findings is they have 18, the state says no more than ten. If I as an individual would put something forward and I have that kind of big errors, it would get thrown out.

The permit is for five years. Are we going to be back here, five years from now and in 2031? Are we ready to do this again five years from now?

It's a five-year permit. The groundwater monitoring plan, water runs downhill and I said and I said before that they've done a great job of draining their land and making it work. So, the offset in 100 feet from, so this is the coulee that drains 100 feet that way and 100 feet that way, you're going to end up with less acres actually farmed to what you're doing right now today.

Department Response: Thank you for your comment. State AFO permits operate on a five-year cycle. Water appropriation is outside of the scope of this permit. The structure of the corporation is outside the authority of the department, refer to the North Dakota Secretary of State and the North Dakota Department of Agriculture. Please refer to response to *Comment 3 (C) NMP and Comment 3 (V) Land Application Sites*. The NMP contains 3,596.98 spreadable acres. That calculation was made after additional setbacks were added to field maps.

Commenter 17 - Hayden Larson

Comment 17(A)

I'm a neighboring farmer to a confinement operation here. And right next door to them, they operate at the highest quality and with complete redundancy. I'm in strong support of this.

Department Response: Thank you for your comment.

Commenter 18 - Travis Westland

Comment 18(A)

I just wanted to thank the state for having this permit process. It ensures that everything is being done above board. It gives me reassurance that we're going to be doing everything according to the permit. Really looking forward to working with these guys and I support this project. Thank you.

Department Response: Thank you for your comment.

Commenter 19 - Kathy Duttnhefner

Comment 19(A)

The North Dakota Parks and Recreation Department (NDPRD) has completed its review of the proposed Animal Feeding Operation Permit for Hexagon 2 Facility in Pierce County, North Dakota.

NDPRD's review scope includes:

- Properties owned, leased, or managed by NDPRD.
- Properties protected under Section 6(f) of the Land and Water Conservation Fund (LWCF).

- Plant species of concern and significant ecological communities documented through NDPRD surveys, federally listed species data, and information provided by partner agencies with jurisdictional authority.

Findings:

- NDPRD Managed Lands: The proposed project does not occur on or adjacent to properties owned, leased, or managed by NDPRD.
- LWCF Section 6(f) Compliance: The proposed project does not appear to affect properties protected under Section 6(f) of the LWCF.
- Biological Resources: A review of internal records indicates no documented occurrences of species of concern or significant ecological community resources within the project area. Site- specific field verification may be conducted, as appropriate, prior to project implementation to confirm existing conditions.

Notice Regarding Natural Heritage Data: As of January 1, 2026, the North Dakota Parks and Recreation Department (NDPRD) has discontinued its annual Biotics database license and data-sharing agreement with NatureServe. Consequently, NDPRD will no longer include standard Natural Heritage Program data in responses to solicitations of views or environmental review documents.

Our reviews are now limited to internal data regarding managed lands and specific species of concern. For comprehensive ecological data or statewide species occurrences, we encourage you to refer to the NatureServe Explorer webpage. NatureServe is the definitive source for information on rare and endangered species and ecosystems in the Americas. Their online guide provides information on the 100,000 species and ecosystems tracked across the network.

Resource Link: <https://explorer.natureserve.org/>

Department Response: Thank you for your comment.

Public Comments

Public Notice Comments List

Submission Reference Number: HQF-QMTH-WB78N
Public Notice Type: Public Notice - Draft Permit
Public Notice Duration: 03/21/2026 to 05/05/2026
Public Notice Created By: Gilley, Cameron

Number of Public Comments Received: 10

Comment Date	Commenter Name	Comments	Has attachments?
05/06/2026	Shenan Atcitty		SLT Itr - Pierce County Bd of Comm - Dakota SAO Hog Farm - 12DEC2025 final.pdf DRC comments re Hexagon II NDAFO-0711 permit application - 04MAY2026.pdf SLT comments on Dakota SAO II Hog Farm application before NDDEQ - 05MAY2026.pdf
05/05/2026	Jeff Kenner	Hurricane Lake Wildlife Refuge, WPA is a PARK and RECREATIONAL DISTRICT. It is owned by the U.S. Fish & Wildlife Service. It is NOT taxed. Part of their land extends into the mile setback for the proposed Dakota SAO II-Hexagon II Sow Farm site. According to ND Century Code referring to parks (Page 1 and 2 attached), you cannot have an	PAGE 1.jpeg pAGE 2.jpeg pAGE 6.jpeg pAGE 5.jpeg pAGE 8.jpeg pAGE 7.jpeg pAGE 13.jpeg pAGE 10.jpeg pAGE 14.jpeg pAGE 15.jpeg pAGE 11.jpeg page 3.docx pAGE 12.jpeg pAGE 9.jpeg pAGE 4.jpeg

		animal feeding operation where a PARK is within the one mile setback. Page 3 (attached) is self-explanatory showing the PARK and RECREATIONAL DISTRICT is within the 1 mile manadatory setback. Page 4 (attached) of the ND Century Code proves that Hurricane Lake Wildlife Refuge is NOT agricultural property. Page 5 is the history of Hurricane Lake WPA and National Wildlife Refuge. Pages 6-15 proves that the US Government defined this area of land as a PARK AND RECREATIONAL DISTRICT by virtue of their designation and their ownership signage. Do NOT get the lower part of Hurricane Lake, which is agriculture land that people own, (even though it is water), mixed up with the upper part of Hurricane Lake, that the US Government owns. Some people have made that mistake. You need to deny Dakota SAO II-Hexagon II Sow Farm a permit. Respectfully, Jeff Kenner	
05/05/2026	Guy Larson		Exhibit 1.pdf exhibit3.png Public Comments Regarding Permit for Hexagon 2.pdf exhibit 2.pdf

05/05/2026	Lincoln Larson	Please see the attached comments and exhibit 1 file.	DEQ Written Comment.pdf Exhibit 1.pdf
05/04/2026	Dakota Resource Council	Comments by Sam Wagner and SRAP, maybe a duplicate but I recieved no confirmation email, resubmitting just to be sure	2026.05.04 FINAL Exhibits.DRC SRAP Comments.pdf Regarding Hexagon II May 5th 2026.pdf
05/04/2026	Samuel Wagner (Dakota Resource Council)	Please see attached files. If you have any questions our contact info is included in the files as well.	Regarding Hexagon II May 5th 2026.pdf 2026.05.04 FINAL Exhibits.DRC SRAP Comments.pdf
05/04/2026	Paul E. Overby	Thank you for the opportunity to submit comments on this application. Please feel free to contact me for any follow-up needed.	Max_Plant_Growth_NDVI__Multi_year_Sec 10-11Z.pdf Max_Plant_Growth_NDVI__Multi_year_Sect 11-14U.pdf Public Comment to ND DEQ regarding Dakota SAO II, LLP Permit Application.pdf Max_Plant_Growth_NDVI__Multi_year_Sect 17-19Z.pdf Max_Plant_Growth_NDVI__Multi_year Sect 24U.pdf
04/20/2026	Amber Wood	Comments are attached below	Hexagon II NDDEQ Public Comment 4-2026.pdf
04/20/2026	Mitch Baum	Attached are Nathan Pesta's comments on the fact sheet following his review	Hexagon II - DRAFT PERMIT FACT SHEET - NDAFO0711_SOB_D_20260316 redlined.pdf FW_ Hexagon II - Draft Permit and Fact Sheet.pdf
04/09/2026	Kathy Duttenhefer	Environmental Review –Animal Feeding Operation Permit – NDAF00711 – Hexagon 2 – Pierce	NDDEQ_DWQ_ANIMAL_FEEDING_OPERATIONS_NDAF00711_KD_RESPONCE_LETTER_DL_5.4.2026.pdf Environmental Review –Animal Feeding Operation Permit – NDAF00711 – Hexagon 2 – Pierce.pdf

		North Dakota Parks and Recreation Department's Environmental Review Response letter is attached.	
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North Dakota Department of Environmental Quality
Public Hearing for: Hexagon II
ND State Animal Feeding Operation Permit NDAFO0711

April 20, 2026
Hearing Officer: Marty Haroldson

Transcribed by Cameron Gilley

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Marty Haroldson: [00:14]

Alright. Please note that the hearing is being recorded for the purpose of creating a record. Let the record show that it is 5:01 on the 20th day of April 2026. This is the time and place as scheduled April 20th, 2026 on at 5:00 PM at the Pierce County Courthouse in Rugby, ND For the aforementioned hearing, on the proposed state animal feeding operation permit for a concentrated animal feeding operation. The North Dakota Department of Environmental Quality received an application for the Hexagon II Swine facility. The application indicates that the facility will have a total of 9,282 swine. This swine will consist of 5,422 gestating pigs with an average weight of 400 lbs., 1,088 grower pigs with an average weight of 150 lbs., 792 nursery pigs with an average weight of 35 lbs., and 792 finisher pigs with an average weight of 200 lbs. Manure will be stored in concrete deep pits under the barns. Manure will be applied by injection at agronomic rates in accordance with their nutrient management plan.

After the department review of the design submitted with the request for permit application, a notice of public comment period on the State Animal Feeding Operation Permit was issued and posted on the department's web page, as well as printed in the Pierce County Tribune, Rugby, ND on March 21st, 2026. The notice also posted at the Bisbee Post Office and Pierce County Auditor's Office. The public notice does identify the purpose of the public notice, tentative determinations made by the department, where to obtain additional information regarding the proposed permit and where written comments could be directed.

It is important to note that all comments received by the close of the comment period on May 5th, 2026, whether written or recorded during the scheduled public hearing, will be considered prior making a final determination on the proposed permit. Upon completion of the Department of Environmental Quality review of all written and oral comments, a recommendation will be provided to the Department of Environmental Quality's Director for final determination. We estimate the process may take up to 30 days, but as long as 90 days to complete from the close of the comment period. The time to complete a review of the comments may take longer or be shorter, depending upon the number and complexity of the comments.

The following is the procedure we will follow in this hearing today. I will shortly open the hearing for testimony at which time anyone interested in presenting testimony on the proposed permit will be allowed to speak. Anyone presenting testimony should state their name, address and the organization they represent, if any. Also, everyone presenting testimony and everyone in attendance is required to sign the attendance sheet for the record located at this time at the entrance of the room. Please indicate on the attendance sheet whether you are giving testimony.

Remember that this is not a legislative hearing, adjudicative hearing, or a court hearing.

The purpose of this hearing is to obtain input such as additional data or viewpoints from interested parties, especially those who have not had or will not have an opportunity to submit written testimony. Both written and oral testimony will be considered equally. It is not necessary to repeat comments submitted in writing.

I would like to emphasize that this hearing is not a question-and-answer session. However, if there is clarification needed in regard to the proposed permit, we will be listening to your testimony and will be happy to try and provide clarification after. The public testimony portion of the hearing is completed. Also, remember that the proposed permit only relates to health and environmental impacts associated with permitting and animal feeding operation. It does not relate to social and economic impacts or compatible land use. Therefore, we ask that you limit your comments to those concerns relating to the proposed permit to ensure that all interested parties have an opportunity to provide comment for the record. Address your comments to the hearing officer and speak clearly into the microphone located at the podium.

The purpose of this hearing is to obtain additional viewpoints to allow the person testifying to be heard clearly. Please refrain from cheering, booing, applauding, or talking while testimony is being given. Based on the number of people who have indicated on the sign-in sheet that wish to testify I will limit each person to five minutes of testimony until everyone is, or everyone who wishes has had an opportunity to speak. At that time, you may add additional testimony if you wish. Are there any questions concerning the hearing procedure to be followed today?

Seeing there is no questions, the hearing is now open for testimony. From the sign in sheet, we have randomly selected someone to begin. I will call by name... I will call by name as we go through the list. The person testifying will go up to the podium and I will also let you know who the next person will be so that they can prepare as well. We have selected John Nelson. I will remind you to if you do wish to testify at this time, you can decline and the next person can be selected. And then on deck is Tom Bodine.

John Nelson: [07:06]

Good evening everyone. For the record, my name is John Nelson. I live at 426th Ave. SE in Rugby and I serve in the North Dakota Legislature, also serve All Seasons Rural Water District and serve as a City Commissioner in the City of Rugby.

I've been following this ... this project for quite some time now and I believe that the ... they followed every step of the law to ... to make this as safe an operation as ... as an environmentally conscious operation as can be done in North Dakota. I think with the closed ... with the closed lagoon and the injection of the fertilizer, and the timeliness of when it will be applied will ensure that the water ... the water quality will not be affected. And I think it's

from a, I guess a wider view of the situation, animal agriculture is ... is needed in North Dakota. I've, I've been and I just attended a soybean workshop.

Well, there were some soybean processors that, that were in attendance and they were... To make their operations competitive, they need a local, a more local market than, than shipping all their product out of state like we've been done for years in agriculture. We need to start processing this, the agricultural process, products that we grow more locally. This will ensure a beneficial use of, from a local standpoint, for the for the community in the region and for the entire state.

So I wholeheartedly support this, this operation to go forward as long as they meet the the, the components of, of what the DEQ provides as, as restrictions and I know a little bit about your, your process and I think that they've been good stewards in the, in the, in the in the processing that are the operations that they have currently in in the Cando area and I expect nothing less in, in in Pierce County. So, I wholeheartedly support the, the, the application.

Marty Haroldson: [09:47]

Paul Overby will be after Tom.

Tom Bodine: [09:52]

Good evening, everybody. My name is Tom Bodine. I'm here on behalf of Ag Commissioner Doug Goehring from Bismarck. The Commissioner would love to be here and he, he applauds these types of. businesses being able to look at North Dakota. I guess it matches a lot with what the Commissioner's vision statement is. We support agriculture by embracing diversity, innovation, research and trade. As you look at North Dakota and the Ag department and Ag Commissioner, it doesn't matter if you have one cow or 10,000.

As long as you meet the standards, what is required in state law, in which I would say our state law when it comes to CAFOs and animal feeding operations are some of the most stringent in the nation, just like Representative John Nelson talked about, we would love to continue to see our animals be developed in our state. We are definitely heavy on the grain production side as we look at animal agriculture and these types of operations being able to diversify our industry even more to make it more stronger.

So with that, the Commissioner's in whole full support, as long as it meets all the environmental conditions as well, this should be a permitted facility. Thank you.

Marty Haroldson: [11:10]

Thank you.

Does Paul Over still want to talk? Testify?

Paul Overby.

Paul Overby: [11:28]

Thought I'd have more time to relax.

Thank you, Paul Overby, at 5237 78th St. NE, Woldford, ND.

In general, I'm in. In general, I'm in support of animal agriculture. This one I find to be problematic. If I were going to site a livestock operation, I probably wouldn't put it on the shores of the lake. There are so many good places in North Dakota that can support livestock facilities, even CAFO's. Putting it right on the shores of Hurricane Lake North Dakota is not one of them.

In the sustainability lingo, there's a phrase that's called people, planet, profits. And basically, what that means is it's important to balance those out the people, the planet or the environment, and the profits and what, what is going to have the highest priority? Part of the concern I have is that the organization that's Summit AG that's involved in this is coming out of state of Iowa and state of Iowa has some of the worst pollution, polluted waters in, in the entire country and also has some of the highest cancer rates in, in the country. And Doctor Chris Jones wrote a book that he called The Swine Republic and he noted that animal agriculture in Iowa has created a culture of basically, animal agriculture dominance, where people's concerns are being pushed off to the side by their equivalent of the North Dakota Department of Agriculture, by state regulators and the DNR, and it eventually ended up in him getting fired, because he was too outspoken in bringing environmental concerns to the public.

In the North Dakota Nutrient Reduction Strategy for Surface Water published by the North Dakota DEQ, one of the things that notes that 69% of the perennial streams in the state are impaired due to excessive P and 57% due to excessive N. In addition, a growing number of lakes and reservoirs in the state are experiencing harmful blue-green algae or cyanobacteria blooms caused by these excessive N and P loadings. And I contend that locating this facility so close to Hurricane Lake is going to increase that potential problem for the lake. I'm not going to read all of the things that are included in the DEQ guideline. I'm actually going to submit this as written testimony. My printer didn't work very well. So but one of one of the things in, in, in the manual, it talks about preventing interaction between precipitation and pollutants. And so it's very important that water that runs off of these fields not interact with the pollutants. And I've made this statement previously, I'll reiterate it that these fields... The notice says reissue, but lots changed in twenty years. Twenty years ago, I was here too and when that permit was issued, that land was not drained. Today it is. Every acre that the manure application is, is for, has been drained and there are, are numerous drainage ditches that cross this land, providing just exactly that interaction between precipitation and pollutants that the North Dakota DEQ says is a priority to not let happen. And so that's one of my concerns for, for this is the amount of drainage has been added to this.

Also from the 2026-2031 nonpoint source pollution management program, a priority is that water bodies that are fully supporting all beneficial uses but threatened by potential nonpoint source pollutants should be a priority for them. And I suggest that if this permit is

going to be approved that you all should add Hurricane Lake to your list immediately. OK, because it's now going to be one of those lakes that is potentially threatened by non-point source pollution. I don't say that lightly.

Vandenberg et al., the paper published in the Environmental Monitor Assessment state that their study of water quality in the Lake Alice Basin, including in and around the swine barns, now operated by Summit Ag, shows a positive correlation between the nutrients, nitrate, nitrite, and, and TKN, another nitrogen measurement, and the percentage of CAFO nutrient management areas within the sub watersheds and suggests that the ag operations in these areas may have potential impact on the area. So, the same operator is now going to move and operate in Hurricane Lake Basin. So, they, they state that higher total organic carbon of pollutant concentrates are correlated with the distance to the CAFO facilities. It concluded this, the greatest threats to water quality of the Lake Alice Natural Wildlife Refuge appear to be a high nutrient and E coli concentrations within the aquatic system. So, I'm running out of my five minutes of time. If there's more time off, I'll take it. Thank you.

Marty Haroldson: [16:50]

Thank you.

Next, next we have a Lincoln Larson and then up after Lincoln would be Guy Larson.

Lincoln Larson: [17:18]

Hello, my name is Lincoln Larson, 5436 73rd St. in Bisbee. I'm the closest resident to this proposed Summit operation at just over 1 1/4 miles from the site.

I just want to put this operation into perspective. This facility will house more hogs than there are people in both Towner and Pierce counties combined. All these hogs will be concentrated in about a four-acre area. The concerning part is that hogs share approximately 98% of the human DNA making transfer of disease very possible. Would it be a health concern if these were people housed in a four acre area? I don't think we'd process the waste the same.

These hogs will likely be treated with the same antibiotics humans use. This antibiotic usage creates a prevalence of antibiotic-resistant bacteria. That creates a substantial health risk for humans. This manure will be placed near, in near proximity to my home, which constitutes an unnecessary health risk, especially with all the water drainage around the areas where it will be applied. According to the American Public Health Association, operations like this produce H₂S, ammonia, BOCs, heavy metals, pathogens, and antibiotic-resistant bacteria. The increase in flies and rodents is a vector for spreading these contaminants. According to the Duke University, Dr. Kim says life expectancy in North Carolina communities near hog CAFOs remains low even after adjusting for socioeconomic factors that are known to affect people's health and lifespan.

A recent study by the National Institute of Environmental Health Sciences shows residents living one mile from a CAFO have a 1.4 times increase in autoimmune diseases, twice the normal risk of rheumatoid arthritis, 1.7 times increase in hyperthyroidism, and 37% greater risk of hypothyroidism. Another study from the University of Wisconsin, Madison researched health conditions at one mile compared to 5 miles from CAFOs.

The study showed people at one mile are 3.1 times more likely to have doctor-diagnosed asthma, and over two and a half times more likely to have lung or nasal allergies. I believe these studies and many others show demonstrable health concern for me, my family, and other nearby residents.

Multiple studies have recently been completed showing a statistically significant increase in disease rates of people living near hog operations like this one. I believe these studies show these health concerns and I would appreciate a further look into these studies as there's been some really recent ones released as early as this last month.

These kinds of large confined operations are a relatively new thing, and there is relevant research that shows that they constitute a health risk for those living in proximity to them. There are many things in the recent past that were considered harmless to public health until the effects were undeniable and many people had suffered the consequences. Some examples include asbestos, smoking, drinking while pregnant and DDT. I think we should learn from these mistakes of the past and protect the health of our future generations better and the Department of Environmental Quality is required to adequately protect the environment and the people that live in that environment. And I do have a bunch of studies here printed out. Should I submit them now or does that work?

Marty Haroldson: [21:19]

Sure, yeah, that'll be, that'll be fine. Is your name on it?

Next up we have Guy Larson, followed by, is it Ryan Dean?

Guy Larson: [21:37]

All right, I'm Guy Larson, 102 1st St., Cando, ND, and I farm directly downwind of the proposed, proposed hog facility and my son, his family and my parents are the two closest farmsteads to the facility and I have serious concerns about how this facility will affect the health of my family. We presented numerous studies to the planning and zoning meetings and the commissioner's public forums on the detrimental effects of living near these CAFOs and I'll just briefly highlight a couple of them and talk about the new one that he just talked about.

A 2018 study by North Carolina Institute of Medicine and Duke University concluded that North Carolina communities located near hog CAFOs had higher death rates on all studied diseases, including infant mortality, which I've got grandkids and I hope to have more over there, anemia, kidney disease, tuberculosis, septicemia, and higher hospital admissions. And a more recent study that just came out March 17th in 2026 by Yale

University showed significant increases in all cancer rates in counties that have higher concentration of CAFOs. It goes on to say, CAFOs emit a wide range of harmful pollutants that can adversely affect human health. These include gaseous emissions, such as ammonia and hydrogen sulfide, particulate matter, volatile organic compounds, and bioaerosols containing endotoxins and antibiotic-resistant bacteria. Chronic exposure to these pollutants has been linked to inflammation, oxidative stress, and immunosuppression, which may contribute to cancer development. For example, hydrogen sulfide has been shown to induce DNA damage and impair cellular respiration, whereas particulate matter can provoke systemic inflammation and facilitate the delivery of carcinogenic compounds into the lungs.

Consistent with these findings, previous studies reported positive associations between CAFO exposure and several cancer outcomes. Booth et al in 2017 found significant positive associations between county level incidents of childhood leukemia and densities of animals or operations in nine U.S. states. The study in Iowa observed that residential proximity to intensive animal agriculture was positively associated with, with the risk of non-Hodgkin's lymphoma and leukemia. There are more than 150 human pathogens in hog waste, and they can live in the soil and water for over seven months. The waste from this facility is not treated in any way to kill them.

It's amazing to me that for biosecurity is recommended hog facilities be at least 2 miles from each other to prevent disease in the hogs, but setback for our residents for humans is only one mile. Both my son, his wife, their three young boys, and my parents are closer to a facility than they would recommend for hogs. That just isn't right. Hearing all this, can you, the Department of Environmental Quality, guarantee that my family will be safe and their health will not be compromised by permitting of this facility? I don't believe you can. Let the record show that I have presented a small sample of the risks that will be forced upon my family without our consent and I am putting the state of North Dakota, the DEQ, Dakota SA0 1 and 2, Summit Ag Group, the families consenting and spreading manure on their land, and any other partner or investor associated with the facility on notice that you will be held liable for any detrimental health effects associated with being near this facility and manure it generates. I have a couple more of these studies.

Marty Haroldson: [25:15]

Bryan Dean

Bryan Dean: [25:19]

Good evening. My name is Bryan Dean. I'm a farmer, rancher, producer from the Velva area. I reside on the board of the North Dakota Corn Growers Association. And we, North Dakota Corn Growers represents about 13,000 corn growers across the state of North Dakota. We, we support the, the expansion of North Dakota of animal agriculture.

At this point in time, we sit at about 15% of our receipts in North Dakota are ag production receipts in animal agriculture, which is substantially less than those states around us, which, which, I believe, leaves room in the state of North Dakota for expansion of our animal agriculture. We are, we are confident in our existing state laws, environmental laws that are in place that are rigorous than most of these states around us. We have to trust in our regulatory institutions and our structures, and if there are any deficient, deficiencies, they should be addressed at the legislative level. Full and fair consideration on such projects should be given not only for those producers and public members affected, but for the growth and economic development of our communities.

We ask that the local, this local consideration focus on the size, scope and nature of this project and that the state consideration be targeted to compliance with our current environmental laws in place now. Thank you for your time and your attention.

Marty Haroldson: [27:02]

Pardon me for his name is Kevin from Totten. Sorry, I can't, I don't, I couldn't even begin to get your last name. Thank you.

Kevin Dauphinais: [27:16]

Good evening. Kevin Dauphinais, Fort Totten, District Representative of Spirit Lake Tribe. My question was, our chairlady Lonna Street had sent a letter in concern to the project and we never received this response to the letter of concern. That's my question Because we never from spirit like Nation was never notified when any in follow up after the complaint was filed.

Marty Haroldson: [27:47]

OK, we'll look into it, but. Nathan Pesta, and after Nathan, will be Janelle Engstrom.

Nathan Pesta: [27:58]

Good evening. My name is Nathan Pesta and for the past 22 years I've specialized in the design and permitting of livestock facilities as a agricultural engineer with DGA. The concrete pits beneath the barns are designed to Midwest Plant Service 36 and ACI 318 structural codes. These pits are designed for up to 16 months of storage with a proactive drain tile leak detection monitoring system around the foundation of the pits, providing real-time integrity assurance. The sites are designed for where the runoff is captured, filtered and controlled on site through diversions and a storm water basin. The facility represents the highest standards of environmental stewardship, regulatory compliance and technological innovation. I stand, I'll stand by my professional engineering license on this facility.

Marty Haroldson: [28:54]

Janelle Engstrom. And after Janelle will be Sam Wagner.

Janelle Engstrom: [29:04]

Janelle Engstrom. I have two addresses, 5281 69th Street Northeast, York, North Dakota and also 1511B, 6th Avenue SE, in Rugby, North Dakota. I'm here to represent my husband and myself. I want to show you a picture. This is Anna Engstrom. I want to show everybody this picture. Anna Engstrom was the first generation who farmed our land. She came and she farmed at 15 years old from Sweden. Our daughter is the 5th generation that farmed our land. It is wrong, that we have these guys, people that are not from North Dakota come here and take away our way of life. And they are from Iowa. This should not be happening. Whether the politicians say that it should be happening or not, the people are saying that it should not be happening. They should not be coming from Iowa and taking away our way of life. Period. So I am against, what these fellows from Iowa are coming and trying to do because what they're trying to do is against corporate farming law. Thank you.

Marty Haroldson: [30:51]

Please do not clap. Thank you. Sam Wagner is up and then after Sam will be Jeff Kenner.

Sam Wagner: [31:14]

[inaudible: "Just bring this visual up here."] I'm here too, so you guys can see what I'm talking about, and I'll turn it around when need be. My name is Sam Wagner. I am with the Dakota Resource Council. There's also another address for the Dakota Resource Council, 1902 E Divide Ave. Bismarck, ND 58501 so you can send a response to our organization as well as my P.O. Box that I have listed on my testimony there. So, we represent over 600 members across the entire state of North Dakota, including many members that are in this room today testifying. One of the things that we wanted to talk about was some of the areas that have been, where the manure management, where the manure management is being spread.

As you can see there are multiple rivers that run or streams and drains

Marty Haroldson: [32:12]

Sam, we're not going to be able to, we're not going to be able to get a good recording of you, of your testimony if you're not going to talk into the mic.

Sam Wagner: [32:19]

Not a problem. Anyway, so just on here and you guys can look at this later on as well, Site floor, Section 4, on the west side there is clearly a stream running through that area. Site 3, Section 13, Site 7, Section 25, Site 10, Section 16 on the northeast quadrant of it, and then Site 8, Section 18. Many of these have water running through them.

We'd like to point out that in Abercrombie, when we submitted comments for the Abercrombie Dairy, there were multiple acreages that you, the DEQ pulled out due to the proximity of the streams, so we would like you to, to exercise the same care and judgment that you did when you were doing that. We also want to see testing wells around the site

and on the permit, assurances that people, if there are any drying of wells or lack of water, that Summit can be held responsible for paying for this.

When we talk about ... And then just going on the last part of this and responding to some of the other testimony here. When we talk about every step of the law, it does not necessarily equal environmental friendly. It really is what is the most politically expedient. We've seen multiple regulations being pulled back from the DEQ over the last seven years that I've been an organizer here. You know, when we talk about, well, there are soybean processors that need to have this business, that's not under the DEQ's purview. And finally, I'd just like to make one last comment, when we were at a model zoning, when we were at the model zoning ordinance, Pete Hanebutt of the Farm Bureau had stated that there is no one... No one would ever set up a CAFO within a sensitive area. If we take a look at some of this where these manure spreading is, you can clearly see there are some sensitive areas here.

I've never seen the corn growers or soybean, or Livestock Alliance ever come out to you guys and propose more regulations or more environmental safety, but I have seen them multiple times in Bismarck testify to rollback burdensome regulations, guys, you can't have it both ways. That is the final bit of my time, and I submit my comments to you. Thank you.

Marty Haroldson: [35:27]

OK. Thank you. Amber Wood, then followed by, is it a Janelle Engstrom, I think?

So, Amber Wood, please.

Amber Wood: [35:47]

All right. Good evening. My name is Amber Wood. I'm the Executive Director of the North Dakota Livestock Alliance. My address is P.O. Box 369, Bismarck, ND 58502. The North Dakota Livestock Alliance is writing this comment in support to the Hexagon 2 permit application due to their compliance with the animal feeding operations rules of the North Dakota Department of Environmental Quality, the State Water Quality Standards, and the conditional use permit requirements of Pierce County.

NDLA is confident that the extensive NDDEQ animal feeding permit review process successfully protects the environment and natural resources of our state. The engineered design plan, including manure storage systems, composting, and nutrient management plan, gives today's farmers and ranchers extremely beneficial use of manure while ensuring the land and water is sustained for generations to come. The natural nutrients contained in manure are valuable fertilizers for crops and the organic matter is crucial to improving soil health. Access to manure is also, reduces North Dakota crop producers dependency on commercial fertilizers, giving them more control over one of the most expensive and fluctuating input costs. These benefits combine to increase crop yields and bolster the next generation of North Dakota farmers. The North Dakota Livestock Alliance.

Governing Board of Directors is the North Dakota Pork Council, North Dakota Corn Utilization Council, North Dakota Farmers Union, Midwest Dairy, North Dakota Division, North Dakota Corn Growers Association, North Dakota Soybean Council, North Dakota Farm Bureau, Agtegra Cooperative and the North Dakota Ethanol Council. We work with all species of animal agriculture and all herd sizes across the state. Since NDLA is founded in 2017, we have worked with five new hog barns that have successfully permitted and are operating across the state of North Dakota. The North Dakota Livestock Alliance does not participate in any of that. Thank you.

Marty Haroldson: [37:33]

Thank you. And then we had Janelle, I think it's Engstrom from looks like York. Anybody? It looks like Janelle. It looks like Engstrom and it looks like the address is 5281 69th St. NE, York.

Janelle Engstrom: [37:52]

Oh that's me, I've already stood up.

Marty Haroldson: [37:53]

Ok, so OK, so you had your name on there twice? Thank you for that. And then there's Lonna Street from yep, and then on deck will be Richard.

Lonna Street: [38:28]

[untranslated]¹ Good afternoon or good evening, members of the Pierce County Commission. My name is Lonna Street. My Indian name is Inyan Wakan Win. That means Holy Stone Woman. I come to you today from the Spirit Lake Nation, and I stand here today not only as a leader of the Spirit Lake Nation, but a steward of the lands. Our lands that belong to us as North Dakotans and I come here to a voice my, my concerns and provide testimony to the opposition of the conditional use permit application submitted to you by Dakota SAOS is what I call it for a proposed swine operation in Pierce County.

In our nation, we say Mni Wakan, because that means the water is sacred. The water is sacred to us, whether it's Spirit Lake, Mni Wakan, or Hurricane Lake, or Lake Ilbin or... Correct me if I'm saying that wrong, but nonetheless, water is sacred to us. And so that's, I stand here today and express my concern about the proposed CAFO farms, you know, that are being proposed here in Pierce County. And like it was mentioned earlier, I did submit a letter, and the letter is dated December 12th, 2025, and it was received timely by your offices. And so, like my, my co-worker, Mr. Kevin Dauphinais had made mention, there was never a response. There was never anything that formally indicated that my written comments were received regarding my letter. No acknowledgement or confirmation of receipt. And so, to me, that raises another concern, an important question. How are the voices and the concerns of the people that you heard today? The people that are going to

¹ Testimony provided in Dakota language.

be most particularly impacted, the people not only of Pierce County, but of people down the line on that waterway, because all waters connect. As Indian people, we believe we are all related and all our waters of life connect.

And so how are those people, how are their voices being heard? How are they impacting you as Pierce County Commissioners? How are they being heard? How are they being recorded? And how are their addresses being processed through your system that you have here?

So, these issues, like I mentioned, are not limited, limited to Pierce County boundaries. The impact of the CAFO farm of this scale does not stop at a fence line or a jurisdictional border or a lake. It continues to flow, whether it's downstream, upstream, however that works, it continues to flow into the greater waters. And so, water does not recognize those lines, and we know that as Indian people. The waterways connected to this project, including those flowing into Devils Lake, Hurricane Lake, Lake Ibsen, they form a shared water system. And what affects one part of that system will inevitably, inevitably affect the whole system. There are approximately around 405 acres of waterways that could be impacted when that impact reaches Mni Wakan, which is our spirit lake.

So, the impact that I'm talking about is not theoretical, it's inevitable. The nutrient runoff, the contamination risks, as you've heard other people get up and talk about. The degradation of water quality. It will affect not only our shorelines, but yours as well, theirs as well. So, I want to provide an important context regarding the history of this land and water under the Treaty of 1867, which we as the people of the Mni Wakan people fall under our reservation boundaries are described beginning at the most easterly point of the Devils Lake waters. That's along the waters of said Lake to the most westerly point. To me, that's the North Shore. And so that includes Devils Lake in our boundaries and our jurisdiction and our say. And so when my, my letter was submitted, you know, word had had gotten back to us at our offices, at the Mni Wakan offices, that our letter didn't matter because we don't live here. We're relatives though. We're North Dakotans. We're stewards of the land, political office or not, we're stewards of this land.

There has been ongoing legal debate about how the boundary is interpreted, whether it's along the North Shore, the South Shore or otherwise. But I want to be very clear that this isn't about ownership. This is about health. This is about human rights. And this is about the responsibility to protect the waters and the systems that sustain all of us. So, for the people of the Spirit Lake Nation, it's not just an environmental issue, it's cultural, it's spiritual, and it's a human rights issue.

Our lake is sacred, and since time immemorial, we have maintained a relationship with these waters. We conduct ceremonies, including the annual feeding of the Mni Wakan, the spirit lake. The water is a living being within our creation story. It is not a resource to be

used without consequences. It's a relative of ours and yours as well, and it's a responsibility for us to protect that.

When we are grown, when we when our parents bring us up, we are taught that we are here for a purpose, to care for the land and for the children, and to leave both better than we found them. This proposed development does not do that, and it does not meet the responsibility of what we were taught. It does not protect the lands. It does not protect the water, and it does not protect the future of our children or yours. So there are serious concerns that remain unanswered here. Health impacts to nearby communities, long term land degradations, water contamination risks, compliance with environmental protection, including the Clean Water Act. And these are not minor concerns. They deserve clear answers or people deserve clear answers, transparency and accountability. The public deserves to know how the risks will be mitigated, if they can be mitigated at all. As leaders, we all share the same responsibility, and we're all leaders in our own homes. We're all leaders of our lands, of our homesteads. I stand here as a steward of the land, and I ask that you do the same. The decision is not just administrative, it's not political, it's moral and it's generational. So, I respectfully ask that you reconsider and rescind the approval of this permit that that was authorized. Consider your children, their children, your grandchildren, and consider the condition of the natural resources that will be left to them as a result of this decision. We are all connected and what happens to the water happens to all of us. With that, I say Mitakuye Owasin, we are all related. Thank you. I want to provide you a copy of my letter, I also want to provide you a copy of the letter I submitted on December 12th.

Marty Haroldson: [45:32]

And for the record, I'm just going to put in that this is the Department of North Dakota and the Department of Environmental Quality, not the Pierce County Commission.

Lonna Street: [45:44]

OK, so we're here at Pierce County and the Pierce County people are speaking.

Marty Haroldson: [45:48]

But I just, I just for the record, I just want to make that clear, but thank you so much for everything. The last one that we have on the list is Richard. Oh, sorry. And then we'll come back to Jeff Kenner.

Richard Street: [46:08]

My name is Richard Street. I'm from Saint Michael, North Dakota, and I'm a spiritual clergy of our traditional ways of our people. And I take time to say this because I was born and raised till I was 18 years old in the state of Iowa, and I know the consequences of pig farms. My people live along the river. They're known as Meskwaki people and also, I have relatives and I'm from Spirit Lake of the Sioux people. So, the same consequences that they have taken on or the same consequences that the people here will have. We can no longer

eat the animals, use the fish and all the things that we do as we live as traditional people on the land when it comes to these pigs and these pigs won't affect, per se these people here because they won't receive any money from it. They won't see any any benefits from it. It's for other people. People come to North Dakota to use North Dakota for their resources and all those things that are growing here, 80% of it go out of the state.

So, I'm sure that the money that they make doesn't come back and come back to us for our own health, to doctor us or to fix us after they leave us with sickness, with pigs. Pigs are the most unnatural animal of this earth because they were never here and they should never be allowed to live on this land, because God firstly didn't put them here to live. He put the animals, I'm going to speak for the animals, the ducks and the geese and the eagles and the elk, the buffalo, the animals that are here, the natural resources that this lake has, that people come and spend billions of dollars to come to Devils Lake. We don't want the pigs to kill the land, and the pigs will kill the land and they will kill us due to their carcinogenic ways that they have. So, I know, because I'm from Iowa and I've seen it, and what it does. Thank you very much and that's what I wanted to say, for the people of this land. [Mitakuye Owas'in].

Marty Haroldson: [48:36]

Last, we have Jeff Kenner.

Jeff Kenner: [48:42]

I'm Jeff Kenner from Devils Lake, ND, 7591 50th St. NE. I want to read a little bit more on the study the one guy was talking about, the studies of the Lake Alice National Wildlife Refuge Watershed revealed that nutrient runoff from agriculture and livestock operations, particularly concentrated animal feeding operations, CAFOs, impacts water quality. Elevated nutrients, phosphorus, nitrates, and E. coli were linked to these sources with significant spatial variation observed across the basin. Lake Alice, North Dakota water quality findings.

I'm bringing this up because the Cando hog farms are polluting Lake Alice, and now they want to start a new facility right by Hurricane Lake. Contaminant studies found concentrations of phosphorus, nitrate, nitrite, sulfates and E coli that often exceed North Dakota or EPA water quality standards. The sources, the primary culprits for decreased water quality are runoff from agriculture, land, and CAFOs in the upper Devils Lake Basin. Now this map that was sitting here is, Hurricane Lake is in North Dakota, is part of a specific drainage basin known as the Devils Lake Basin. Everything runs down into Devils Lake. It's a closed basin. Devil Lake Basin, Hurricane Lake is located within this 3,810 square mile closed basin in northeast, northeastern North Dakota. The hydrology part of it. Hurricane Lake is part of the Mauve-Coulee watershed, which drains into the larger, frequently flooding Devils Lake system. And the Devils Lake basin is a sub-basin out of the Hudson Bay drainage basin. Now, this map shows that Hurricane Lake drains, the watershed goes into

Devils Lake. And I want to know, I want to make a statement, I guess I can't ask a question. If you as the director, sign off on this, that is telling me that you are guaranteeing me and other people that this hog facility will not pollute Hurricane Lake. And it will not affect people's health. Thank you.

Marty Haroldson: [52:03]

Thank you. With that, is there anybody else that would like to testify that?

Joey Bailey: [52:15]

Good evening. My name is Joey Bailey, 424 W Highway 2, Towner, ND. I am here to speak in support of the swine project in Pierce County. Agriculture has always been the backbone of this state. This project represents responsible livestock development that strengthen, strengthens both the local economy and environmental stewardship. There is a significant demand for locally grown feed ingredients directing, directly supporting North Dakota farmers and rural businesses.

On top of using our feed that is already made here, grown here, swine manure is very sought after by the local farmers, especially now with the high fertilizer costs. As a rancher myself, animal care is extremely important. The owners emphasize zero tolerance for neglect, regular training and audits to ensure animal well-being, along with long standing engagement in the communities where they operate. Rather than turning away from agriculture, we should be working to improve and support it.

This hog barn represents not just a single project, but a commitment to keeping our community productive, resilient and forward-looking. Projects like this help keep agriculture strong, support farm families, and sustain rural communities in North Dakota. I fully support this project. Thank you.

Lonnie Anderson: [53:56]

My name is Lonnie Anderson. I'm a neighbor to Harlan and farm close to those guys. They're good farmers, but I as a personal man have never intentionally taken advantage of my neighbors for my own self-profit. He's done a good job to farm. If you look at that map, he has drained his, those quarters of land very well. He's done a good job. Both Collin and Brooks. I know these guys. I farm right next to them. But they're infringing upon their neighbors. In their plan, they have listed 3,631 acres that will take to put this fertilizer on. That's five sections of land. That's more land than what they have in their permit. They have no water there, so rural water will have to come in. And I'm guessing it's so far away it's going to cost a lot of money. I would say it's going to cost somewhere between \$11 and \$16 million to provide enough water and they'll have to have a pressure type tank, a standing static water pressure to give all of the surrounding neighbors enough water pressure to be to be good, because even during spring, spring, spring seasons time, the water pressure goes down and it really inhibits everybody's access to water.

The other one is the permit that Pierce County, and I also serve on the Planning and Zoning Board, but I do not represent them tonight, but I have paperwork that has been presented to me. The application is not match the state application. What we were presented as the planning and zoning does not match the state's planning permit. The other one is how many shareholders. Our findings is they have 18, the state says no more than ten. If I as an individual would put something forward and I have that kind of big errors, it would get throw'd out.

The permit is for five years. Are we going to be back here, five years from now and in 2031? Are we ready to do this again five years from now?

Marty Haroldson: [56:51]

Please no grandstanding.

Lonnie Anderson: [56:52]

Right. Or is that am I wrong again? I don't know for sure, but that's what I was told. It's a five-year permit. The groundwater monitoring plan, water runs downhill and I said and I said before that they've done a great job of draining their land and making it work. So, the offset in 100 feet from, so this is the coulee that drains 100 feet that way and 100 feet that way, you're going to end up with less acres actually farmed to what you're doing right now today. When you do the numbers,

Marty Haroldson: [57:35]

Please talk in. Please talk into the mic.

Lonnie Anderson: [57:36]

It would be less acres totally when you get done. In 3631 acres, that's five sections. That's way more land or acres than what their permit the, the paperwork that was handed to us. So, there's another discrepancy and like I said, the shareholders. The state says 10, they've got 18. I don't understand how the state keeps sending it back, making it work. This is wrong. This is wrong. As a private individual, if sent a piece of paperwork in and it was wrong and rejected back, I got to start over. Thank you.

Marty Haroldson: [58:22]

Is there anybody else that would like to testify?

Anybody else?

Hayden Larson: [58:41]

Hayden Larson, I'm a third-generation farmer and my address is 7574 79th Ave. NE, Starkweather, ND. I'm a neighboring farmer to a confinement operation here. And right next door to them, they operate at the highest quality and with complete redundancy. I'm in strong support of this.

Marty Haroldson: [59:06]

Anybody else for any testimony?

Going once.

Well, let's go first round, for the new people.

Travis Westland: [59:26]

Ok, uh. Travis Westland, 9448 75th St. NE Hammond, ND 58338. I just wanted to thank the state for having this permit process. It ensures that everything is being done above board. It makes me, gives me reassurance that we're going to be doing everything according to the permit. Really looking forward to working with these guys and I support this project. Thank you.

Marty Haroldson: [59:56]

Any other new testimony? We'll try it again. Once, twice, three. OK, so with that, we've got plenty of time. I'll open up for three minutes for those that would like to add to their testimony. Does anybody want to add to their testimony?

Paul Overby: [60:30]

I want to pick up on. I want to pick up on something that Lonnie was talking about regarding the, the legality of the corporation, not because you can do anything about it, but because what it brings up is 4 words to me, integrity, trust, honesty and character. What we are left with, when this permit is issued is those four things are dependent on DEQ. We have no say in that. We are dependent on those things happening. They've already breached that in my personal opinion by how they carried out this permitting process and the legal process of application, if in fact this 18 versus 10 is true. I'm hearing a lot of scuttlebutt. I don't know. I'd like to hear the answers to it, but it really brings into question all of the things, all of the commitments and signed documents, etcetera, etcetera, of, of this permit, this manure application.

So, a couple things, just one, I do want to add on to this and that is been referred to, but if we end up with manure issues and the real issues with manure as far as Hurricane Lake go are primarily those applications that are in Union Township. All of the applications in Zion Township go through a coulee and go through multiple stages before they end up in Devils Lake. Not that they can't end up in Devils Lake, but the application grounds in, in Blooming Township are, in fact, one of them is like right there on the shore of the lake.

And the problem is that cyanobacteria. So right now, Hurricane Lake does not have a cyanobacteria problem, but overload of nutrients will create that. Hunting dogs get killed from cyanobacteria. There's been lots of cases of that. Hurricane Lake is a hunting lake. People use that. They use it for water. They use it for recreation.

The other thing that's rather interesting is North Dakota Trust Lands has a pasture right adjacent to the floodplain of Hurricane Lane. It's got a dugout in it. Right now, that dugout is totally surrounded by water coming from the coulee's that drain where this manure is going to be applied. Are you confident that in the future we're not going to have dead cattle from drinking that livestock, from, from drinking that water?

I have completed an analysis of all the fields that were, that were on the map here and I'll be submitting that in written testimony. There are some things that are better than what was applied before. A lot of the areas have been buffered. I notice there's some land that's been removed. Good. There's more that should be removed. The coulees are better buffered, but I, I could not understand if the 100-foot buffer was coming from the center line of the coulee or from the grass edge of the coulee. It should be from the grass edge of the coulee, not from the center line of the coulee, because you're trying to stop water from into that grass buffer, which is part of the channel itself. The channel is wider than the center line, so if it's 100 feet from the center line, that's kind of a putsy thing, and I haven't studied your regs enough to know that.

The other thing that's, I know it's been talked about for an injected system, I did not see where it was specifically described. Are we talking injecting two inches deep, three inches deep, two feet deep? What's the injecting system? There's a very interesting video on the dairy from Carrington that shows an injection system, which is probably the one that would be used. Very common use got a lead coulter. It's got an injection knife that's about that deep. And the interesting thing is watching the manure ooze back to the surface, because it can't handle the total volume of liquid and keep it in the slot. So, we're kind of again back to integrity, trust, character, all those things dependent on the applicator and the operator having a system that injects the manure deep enough, closes the slot, tighten up. to keep the manure from floating back to the surface where rain and snow melt can carry it into the water stream. I'm having troubles with that one. I am having big troubles with that. Thank you.

Marty Haroldson: [65:05]

Is there anybody else that would like to add to their testimony?

Going once, twice, three.

All right. That will conclude our hearing. We appreciate everybody's time.

Recording End: [65:30]

Public Comments Regarding Permit for Hexagon 2

In regards to the Hexagon II permit to the Department of Environmental Quality for a hog operation in Pierce county, I have the following concerns:

1. Dakota SAO and Dakota SAO II have not followed the North Dakota law in regards to their registration as LLPs (limited liability partnerships) under North Dakota Century Code 45-22-03 where it states under their registration requirements:

(3) A statement indicating whether the limited liability partnership will be engaged in farming or ranching in this state or owning or leasing land in this state which is used for farming or ranching.

(6) The name and address of each managing partner and, if the limited liability partnership will be engaged in farming or ranching in this state or owning or leasing land in this state which is used for farming or ranching, then the names and addresses of all partners.

Dakota SAO and Dakota SAO II both have had conflicting statements in their registrations and amended registrations regarding if they are engaged in farming and ranching. I would certainly consider a hog feeding operation of 9000 animals to be engaged in farming or ranching. They have not disclosed their investors in any of the registrations or annual reports. Dakota SAO on their annual report under name of partner chose to put "None Entered" into this column. Note that in their SEC filing it shows 18 investors at the time of their filing. (See Exhibit 1 and 2) They also state under Partner statement that "No partner listed above is a corporation or limited liability company." How do we know, since they didn't enter any partners. This seems to be a direct violation of North Dakota century

code 45-22-03 concerning their registration with the state and thus their registration is null and void. The application to the DEQ as well as to the Pierce County Commissioners and manure agreements should all be invalid.

2. The site for this facility is in too close proximity to Hurricane Lake. The Pierce County Planning and Zoning board rightly voted unanimously to deny the permit based on its location to the lake. Hurricane Lake is set aside for non agricultural use. It is listed as an exemption on the tax records for Pierce County. It was paid for with Duck Stamp money and made available for public use.

The Duck Stamp Act was amended in 1958 to give the Fish and Wildlife Service authorization to purchase, through duck stamp dollars, wetland areas for preservation of waterfowl habitat. These tracts, mostly wetlands in association with adjacent grassland are managed to provide nesting habitat for waterfowl, other migratory birds and other wildlife, as well as resting grounds for the birds during their migration.

The WPAs were incorporated into the National Wildlife Refuge System in 1966 and in North Dakota are managed within eleven wetland management districts.

Providing critical habitat

WPAs are not just for waterfowl production. In addition to providing critical habitat for waterfowl, they also provide critical habitat for a variety of birds such as avocets, harriers also known as marsh hawks, herons, grebes, and a wide array of songbirds, plus mink, muskrat, and other mammals that call the marsh home. And then, of course, there are the plants and animals of the adjacent uplands.

Public use

WPAs are great places to do some nature watching, and they are [open to public use](#) with a minimum of common-sense regulations. Allowed uses include hunting, fishing, trapping, wildlife observation, photography, and personal collection of wild fruits and berries, mushrooms, and asparagus.

It is critical we don't pollute these lands that were set aside to preserve these habitats for these birds and animals.

This site is also in the Devils Lake basin which is also at risk to the contaminants and nutrient runoff from this facility and the manure application.

3. The Manure management plan is not sufficient to protect the lake or groundwater. We took an aerial photo of just the fields adjacent to Hurricane Lake after just a 1 inch rainfall. (Exhibit 3) You can see that all the ditches are full of runoff going directly into Hurricane Lake. This area had zero setback for manure application. As you can see in the photo this ditch also shows the ditch is running through the area of site 7 which still shows zero setback for the area of this ditch. This should be corrected. The maps that are being used to determine setbacks are not inclusive as you can see that this area on site 7 is not real visible on the map. I am sure there are many other areas like this that unless you see them during a rainfall event, they could be missed. These fields in all of these sites have been extensively ditched and drained since the original application in 2007. I have seen large rainfall events in this area as I farm land near this site. The 100 foot setback is insufficient if we have a significant rainfall event. I have seen 5 to 8 inch rainfall events and they would be disastrous to Hurricane lake and the Devils Lake basin.

In looking at the manure easements it is interesting to note that there is an air quality and odor easement that the landowners must sign in the contract with Dakota SAO. What about the neighbors or public driving near this facility and fields where manure is applied? They are getting nothing from this facility and are forced to endure the air quality and odor. That is not public protection. I urge the DEQ to deny this permit and protect the land, water, and people of Pierce county and surrounding area.

Thank you,

Guy Larson



SPIRIT LAKE TRIBE

P.O. BOX 359 • FORT TOTTEN, ND 58335 • PHONE 701-766-4221 • FAX 701-766-4739

May 5, 2026

Marty Haroldson, Director
Division of Water Quality
ND Department of Environmental Quality
918 East Divide Ave,
Bismarck ND 58051-1947

Re: Public Comments in Opposition to Permit Applications
NDAFO-0711.

Dear Director Haroldson:

On behalf of the Spirit Lake Tribe, I am writing to submit our comments on the Dakota SAO II, LLP CAFO permit application no. NDAFO-0711. As reflected in the attached letter dated December 12, 2025 to the Pierce County Board of Commissioners (Pierce County BoC), the Spirit Lake Tribe set forth a myriad of deficiencies with the Dakota SAO II's conditional use permit application, and concluded that the Pierce County BoC should not have granted this application since it failed to meet North Dakota applicable statutory requirements as well as the governing regulations of the Piece County Planning & Zoning Council. See attached December 12, 2025 letter. The Pierce County Board of Commissioners apparently ignored our letter as we did not receive any response from them.

The Spirit Lake Tribe also has grave concerns about irregularities in the Pierce County BoC's reconsideration of this application that occurred last month (April 2026) regarding this conditional use permit. At its regular monthly meeting on April 7th, the Pierce County BoC reconsidered and rescinded its approval of the conditional use permit based on the applicant's failure to meet certain registration and disclosures which require, among others, that the applicant disclose all owners of the applicant company or corporation. Six days later, at a "special session" the Pierce County BoC again reconsidered the Dakota SAO II conditional use

Director Haroldson
Division of Water Quality
ND Department of Environmental Quality
May 5, 2026

permit application and took action to “rescind” the action it took on April 7th to rescind approval of this conditional use permit application. The April 13th action was based solely on a letter from a law firm representing Dakota SAO II’s. This letter cites no authority, either statutory, regulatory or caselaw, and in relying on such letter, the Pierce County BoC acted in an arbitrary, capricious and unreasonable matter.

Therefore, the Tribe maintains that the action taken by the Pierce County BoC on April 7, 2026, at a regularly scheduled County Commission meeting, effectively rescinded the conditional permit because the requisites thereof were not fulfilled by the applicant, so there is no permit at this time. The process must be restarted by applicant. As a result, the Tribe believes that the Department of Environmental Quality (DEQ) permit is premature and should be denied for that reason alone because the Pierce County BoC’s action effectively denied Dakota SAO II’s conditional use permit application. In order to resurrect this matter, Dakota SAO II would be required to resubmit its application, correct deficiencies, and seek approval from the Pierce County BoC.

Moreover, we have concerns that Dakota SAO II has not fully demonstrated its entitlement to hold any CAFO permit in the state of North Dakota. We have concerns surrounding the completeness of the corporation’s registration to operate in the state pursuant to N.D.C.C. 45-22-03(3)(a). We also share the environmental concerns laid out in Section II of the public comments of the Dakota Resource Council, which is attached to this letter. Accordingly, the proposed site location violates applicable statutory setback requirements and related effects, including (1) its proximity to the Hurricane Lake Waterfowl Protection Area, (2) its proximity to the Pierce County Recreation Area and Wildlife Protection Area, (3) its drainage to Devils Lake basin, and (4) the impact on nearby groundwater. We also share the concerns described in Section III of Dakota Resource Council’s public comments regarding the proposed waste and mortalities handling requirements, and the threat the operation’s waste products pose to water quality in the Devils Lake area. Accordingly, we adopt the comments reflected in Sections I, II, and III of Dakota Resource Council’s public comments.

Director Haroldson
Division of Water Quality
ND Department of Environmental Quality
May 5, 2026

In our December 12, 2025 letter to the Pierce County BoC, we referred to residents who appeared before the BoC stating that they live within a mile of the project site and expressed concerns with about the project's impact on their wells and their drinking water. These concerns were ignored and the BoC failed to make sure the ground water well setback requirements were met. More troubling is BoC's rejection of the comments and production of maps and citation to the North Dakota Century Code showing that Hurricane Lake, located within a 1/2 mile of the project site, is a source water protection area that is entitled to the 1.5-mile heightened setback surface water protection. Given the massive amount of water required for this project, the enormous amount of manure this project will produce yearly, and impacts on a federally protected wildlife area (Hurricane Lake refuge), at a minimum, this application and project should be also regulated by the Clean Water Act and a NPDES permit should be required.

Under our 1867 Treaty, Spirit Lake (Devil's Lake) is our permanent home, where America agreed that it would provide and help us with a permanent and livable home for our Dakota People into the future. Thus, the United States has a Federal trust responsibility to protect our home, and our neighbors must respect our Treaty under the Constitution of the United States. The proposed Hog Farm is incompatible with our rights to a permanent and livable homeland.

For these reasons, the Spirit Lake Tribe requests that the North Dakota Department of Environmental Quality to deny the permit application for Dakota SAO II, LLP and the Hexagon 2 location.

Thank you for your thoughtful consideration.

Sincerely,



Lonna J. Street, Chairwoman

Director Haroldson
Division of Water Quality
ND Department of Environmental Quality
May 5, 2026

CC: Pierce County Commission
Attn: Karen Migler
Kmigler@ND.GOV



SPIRIT LAKE TRIBE

P.O. BOX 359 • FORT TOTTEN, ND 58335 • PHONE 701-766-4221 • FAX 701-766-4126

December 12, 2025

SENT VIA FAX: (701) 776-6942

Board of Commissioners
Pierce County North Dakota
240 2nd Street SE, Suite 6
Rugby, North Dakota, 58368

RE: Opposing Dakota SAO II, LLP's Application for Conditional Use Permit for Swine Farm.

Dear Board of Commissioners:

On behalf of the Spirit Lake Tribe, I am writing to submit our comments to the conditional use permit application submitted by Dakota SAO II, LLP for the construction of a new gestation-farrowing swine farm (referred to hereinafter as, "Hog Farm"). This letter incorporated and supplements the comments submitted in the October 30, 2025 letter from the Spirit Lake Tribe Environmental Protection Administration. The Spirit Lake Tribe requests a rehearing of this matter in light of the many errors in the decision, the lack of a comprehensive written decision, and the failure to fully mitigate the hazards that will be caused by the Hog Farm.

The Spirit Lake Tribe is affected by this proposed Concentrated Animal Feeding Operation (CAFO) because of the potential detrimental effects it could have on the water quality of Hurricane Lake and its neighboring connected lakes such as Devils Lake, recreation and tourism, and the even higher risk of flooding due to the outlets being shut off from insufficient water quality being sent down stream.

As discussed in detail below, this conditional use permit application fails to meet applicable North Dakota statutory requirements as well as the governing regulations of the Pierce County Planning & Zoning Council. We reviewed Dakota SAO II's conditional use application, the minutes of the November 5, 2025 public hearing before the Pierce County Planning & Zoning Council and the minutes of the November 13, 2025, public hearing before the Pierce County Board of Commissioners. Notably, the Planning & Zoning Council unanimously voted on November 5, 2025 to deny the conditional use permit application, while the Board of Commissioners voted 3-2 on November 13, 2025 to approve said application. Even though the Planning & Zoning Council acts in an advisory capacity, the Board of Commissioners at a minimum, should have explained why it rejected the Planning & Zoning Council's unanimous recommendation.

As a foundational matter, pursuant to Article 4, §4(1)(a-f) of the Pierce County Planning and Zoning Regulations, the Board of Commissioners shall not grant any conditional use permit application unless all of the following conditions are found to be present:

- a. The conditional use will not be detrimental to or endanger the public health, safety or general welfare;
- b. The existing permitted uses in the area will not be substantially impaired or diminished by the establishment of the conditional use;
- c. The conditional use will not impede the normal and orderly development of the surrounding property for uses permitted in the district;
- d. Adequate utilities, access roads, drainage, and other necessary site improvements have been or are being provided;
- e. Adequate measures have or will be taken to provide access and exit so designed as to minimize traffic congestion in the public roads and streets; and
- f. The conditional use shall conform to all provisions of the district in which it is located.

Similarly, the Pierce County Planning and Zoning Regulations governing the approval criteria of a conditional use permit to construct and operate a new Hog Farm requires: “The operator of a new facility ... to locate, construct, operate and maintain the facility so as to minimize, reduce or abate effects of pollution on environmental resources and on public safety and health.” *See* Article 2, §11(1)(c)(i) of Pierce County Planning and Zoning Regulations.

From a review of the publicly available records, the Board of Commissioners apparently did not make any affirmative findings that Dakota SAO’s conditional use application met every one of the baseline conditions, set forth in Article 4, §4(1)(a-f) of its regulations. In fact, residents opposed to the Hog Farm project expressed strong concerns about water contamination, detrimental health care impacts and effects, diminished property values that will result from the project, the putrid odors created by the project that will interfere with air quality and fresh air enjoyment, and the colossal amount of water usage required for the project which could detrimentally impact existing water uses, and water supplies the community relies upon, to name a few. One resident testified that the water usage at the project site will be comparable to 40% of the City of Rugby’s usage and wondered what will happen to the site if company pulls out mid-construction.

The Board of Commissioners apparently approved Dakota SAO’s conditional application without specifically addressing these concerns/objections. Clearly, this process has lost sight of a baseline regulatory requirement placed on Dakota SAO to locate, construct, operate and maintain the facility so as to minimize, reduce or abate effects of pollution on environmental resources and on public safety and health. From the public record, Dakota SAO merely made broad, lofty statements about health, safety and the environment without specifically addressing the myriad of concerns raised by community members.

Similarly, the public record for this conditional use permit demonstrates that the project does not comply with the other key Pierce County Planning and Zoning Regulations. In particular, the setback requirements set forth in Article 2, §11(2)(a)(i) of said regulations were not specifically addressed or dealt with by the Board of Commissioners, as follows:

- **Water Resource Setbacks:** The operator of a new animal feeding operation that has more than 1,000 animal units shall not locate or establish that operation:

- Within 1,200 feet [*0.227 miles*] of a private ground water well which is not owned by the operator or within 1,500 feet [*0.284 miles*] of a public ground water well, which does not have a delineated source water protection area.
- Within 1,000 feet [*0.19 miles*] of surface water which is not included in a source water protection area.

Several residents who stated they live within a mile of the project site testified at the public hearings on this conditional use permit of their concerns with their wells. These concerns were summarily ignored with no apparent response or reference to them, and without making sure the ground water well setback requirements were met. More disconcerting was Board of Commissioners' rejection of the comments and production of maps and citation to the North Dakota Century Code showing that Hurricane Lake, located within a 1/2 mile of the project site, is a source water protection area that is entitled to the 1.5-mile heightened setback surface water protection. Given the massive amount of water required for this project, the enormous amount of manure this project will produce yearly, and impacts on a federally protected wildlife area (Hurricane Lake refuge), this project should be also regulated by the Clean Water Act and a NPDES permit should be required.

Lincoln Larson, the closest resident to the site discussed numerous health conditions listed in studies showing correlation to living near a CAFO, including autoimmune diseases, hyperthyroidism, asthma, allergies, and decreased life expectancy. He also stated that the Waterfowl Protection Area is 1/2 mile from the site and discussed the expected amount of waste to be produced yearly. He showed on a map that the application lacked a setback near a ravine, and he shared pictures of the ravine after a past rain, showing that it flows directly into Hurricane Lake and then into two other protection areas. Another commenter similarly pointed out that the Hurricane Lake area is a wildlife protection area and within one-mile of the project site and therefore is entitled to a 1-mile setback set forth in Article 2, § 11(2)(a)(i)(2) of the Pierce County Planning and Zoning Regulations.

However, the Board of Commissioners apparently did not take these comments into account even though such comments, if considered and analyzed, should have resulted in a finding that Dakota SAO's conditional use application failed to meet the Pierce County's applicable setback requirements for protected surface waters.

Incidentally, the Pierce County Planning and Zoning Regulations clearly disadvantage rural residents who live outside the boundaries of incorporated cities and towns and who lack access to a public water system by only requiring a 1,000-foot setback for nearby CAFOs, rather than having a 1.5-mile setback from any incorporated city that has a population of 500 persons or less and from any platted subdivision with ten (10) or more residences. The rural residents impacted by this new proposed Hog Farm should be entitled to the same 1.5-mile setback protection. Obviously, the way the regulations are crafted, these very residents and others similarly situated are often targeted for siting of these CAFOs because these residents have substantially diminished protections under the current regulations. They deserve better and their governmental bodies should be acting to protect their interests.

- Odor Setbacks:
 - The operator of a new facility for an animal feeding operation shall not locate that operation within the extra-territorial zoning jurisdiction of an incorporated city.

- An owner of property shall locate and establish a residence, business, church, school, public park or zone for residential use so as to provide a separation distance from any existing animal feeding operation. The separation distances, or setbacks, are listed in the following table. An owner of property who is an operator may locate the owner's residence or business within the setbacks.

Setback Distances for Animal Feeding Operations		
Number of Animal Units	Hog Operations	Other Animal Operations
Fewer than 300	None	None
300- 1,000	0.50 mile	0.50 mile
1,001– 2,000	0.75 mile	0.50 mile
2,001- 5,000	1.00 mile	0.75 mile
5,001 or more	1.50 miles	1.00 mile

- The operator of a new animal feeding operation shall locate the site of that operation from existing residences, businesses, churches, schools, public parks, and areas of property that are zoned residential so as to exceed the corresponding listed setback from these places.

Despite the numerous comments and testimony from residents regarding the anticipated rancid odor that will result from the construction of this Hog Farm and the related setback requirements set forth in the Pierce County Planning and Zoning Regulations, the Board of Commissioners did not make any finding on this important factor, nor did it make any determinations on whether the applicable odor setbacks applied or require placing any mitigating conditions on the conditional use permit.

In addition, to the substantive deficiencies with Dakota SAO's conditional use permit application, we note that there are a number of technical defects with said application, including:

- Compliance with NDCC §11-33-02.1.(d) – Dakota SAO's application fails to describe the location of the proposed Hog Farm as required by ND Century Code because the said application does not include or specify setback distances.
- Compliance with NDCC §11-33-02.1.a.(2) – SAO's application fails to specifically include a statement that "crops, vegetation, forage growth, or postharvest residues will not be sustained in the normal growing season over any portion of the lot or facility.
- Compliance with Article 2, §11(3)(a)(v)(1) of Pierce County Planning and Zoning Regulations - Dakota SAO's applications on its face fails to show compliance with the financial assurance bond requirements. Without showing that Dakota SAO posted a bond, the public cannot be assured that this important requirement has been satisfied.

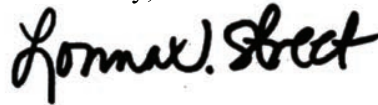
The Board of Commissioners is constrained by its prevailing regulations, which command that "no building structure or land shall be used, occupied, erected, constructed, moved, reconstructed or structurally altered except in conformity with all of the regulations for the district in which it is located." See Article 2, §2 of Pierce County Planning and Zoning Regulations. Given the

Pierce County Board of Commissioners
December 12, 2025
Page 5 of 5

comments and testimony provided to the governing county boards pointing out the deficiencies of Dakota SAO's proposed Hog Farm, the Board of Commissions should have denied this application, as submitted.

In conclusion, for the reasons set forth in this letter, the Spirit Lake Tribe strongly opposes Dakota SAO's conditional use permit and will continue to weigh in with the ND Department of Health and the ND Department of Environmental Quality, the other permitting agencies overseeing this Hog Farm Project.

Sincerely,

A handwritten signature in black ink, reading "Lonna J. Street". The signature is written in a cursive, flowing style with a large initial "L".

Chairwoman Lonna J. Street
Spirit Lake Tribe

material to land owned or leased by that person in accordance with rules adopted by the department. An owner or operator of a lagoon or waste storage pond permitted by the department is exempt from this section in the spring from the time when the cover of the permitted lagoon or pond begins to melt until fourteen days after all the ice cover on the lagoon or pond has completely melted. Notwithstanding these exemptions, all persons shall manage their property and systems to minimize the impact of odors on their neighbors. # 1

5. This section does not apply to chemical compounds that can be individually measured by instruments, other than a scentometer, that have been designed and proven to measure the individual chemical or chemical compound, such as hydrogen sulfide, to a reasonable degree of scientific certainty, and for which the department of environmental quality has established a specific limitation by rule.
6. For purposes of this section:
 - a. "Business" means a commercial building used primarily to carry on a for-profit or nonprofit business which is not residential and not used primarily to manufacture or produce raw materials, products, or agricultural commodities;
 - b. "Campground" means a public or private area of land used exclusively for camping and open to the public for a fee on a regular or seasonal basis;
 - c. "Church" means a building owned by a religious organization and used primarily for religious purposes;
 - d. "Park" means a park established by the federal government, the state, or a political subdivision of the state in the manner prescribed by law;
 - e. "Public building" means a building owned by a county, city, township, school district, park district, or other unit of local government; the state; or an agency, industry, institution, board, or department of the state; and
 - f. "School" means a public school or nonprofit, private school approved by the superintendent of public instruction.
7. a. In a county or township that does not regulate the nature, scope, or location of an animal feeding operation under section 11-33-02.1 or section 58-03-11.1, the department shall require that any new animal feeding operation permitted under chapter 61-28 be set back from any existing residence, church, school, business, public building, park, or campground.
 - (1) If there are fewer than three hundred animal units, there is no minimum setback requirement.
 - (2) If there are at least three hundred animal units but no more than one thousand animal units, the setback for any animal operation is one-half mile [.80 kilometer].
 - (3) If there are at least one thousand one animal units but no more than two thousand animal units, the setback for a hog operation is three-fourths mile [1.20 kilometers], and the setback for any other animal operation is one-half mile [.80 kilometer].
 - (4) If there are at least two thousand one animal units but no more than five thousand animal units, the setback for a hog operation is one mile [1.60 kilometers], and the setback for any other animal operation is three-fourths mile [1.20 kilometers].
 - (5) If there are five thousand one or more animal units, the setback for a hog operation is one and one-half miles [2.40 kilometers], and the setback for any other animal operation is one mile [1.60 kilometers].
- b. The setbacks set forth in subdivision a do not apply if the owner or operator applying for the permit obtains an odor easement from the pre-existing use that is closer.
- c. For purposes of this section:
 - (1) One mature dairy cow, whether milking or dry, equals 1.33 animal units;
 - (2) One dairy cow, heifer or bull, other than an animal described in paragraph 1 equals 1.0 animal unit;

air any objectionable odorous air contaminant that measures seven odor concentration units or higher outside the property boundary where the discharge is occurring. If an agricultural operation as defined by section 42-04-01 has been in operation for more than one year, as provided by section 42-04-02, and the person making the odor complaint was built or established after the agricultural operation was established, the measurement for compliance with the seven odor concentration units standard must be taken within one hundred feet [30.48 meters] of the subsequently established residence, church, school, business, or public building making the complaint rather than at the property boundary of the agricultural operation. The measurement may not be taken within five hundred feet [.15 kilometer] of the property boundary of the agricultural operation. #2

2. In areas located outside a city or outside the area over which a city has exercised extraterritorial zoning as defined in section 40-47-01.1, a person may not discharge into the ambient air any objectionable odorous air contaminant that causes odors that measure seven odor concentration units or higher as measured at any of the following locations:
 - a. Within one hundred feet [30.48 meters] of any residence, church, school, business, or public building, or within a campground or public park. An odor measurement may not be taken at the residence of the owner or operator of the source of the odor, or at any residence, church, school, business, or public building, or within a campground or public park, that is built or established within one-half mile [.80 kilometer] of the source of the odor after the source of the odor has been built or established;
 - b. At any point located beyond one-half mile [.80 kilometer] from the source of the odor, except for property owned by the owner or operator of the source of the odor, or over which the owner or operator of the source of the odor has purchased an odor easement; or
 - c. If a county or township has zoned or established a setback distance for an animal feeding operation which is greater than one-half mile [.80 kilometer] under either section 11-33-02.1 or 58-03-11.1, or if the setback distance under subsection 7 is greater than one-half mile [.80 kilometer], measurements for compliance with the seven odor concentration units standard must be taken at the setback distance rather than one-half mile [.80 kilometer] from the facility under subdivision b, except for any residence, church, school, business, public building, park, or campground within the setback distance which was built or established before the animal feeding operation was established, unless the animal feeding operation has obtained an odor easement from the pre-existing facility.
3. An odor measurement may be taken only with a properly maintained scentometer, by an odor panel, or by another instrument or method approved by the department of environmental quality, and only by inspectors certified by the department who have successfully completed a department-sponsored odor certification course and demonstrated the ability to distinguish various odor samples and concentrations. If a certified inspector measures a violation of this section, the department may send a certified letter of apparent noncompliance to the person causing the apparent violation and may negotiate with the owner or operator for the establishment of an odor management plan and best management practices to address the apparent violation. The department shall give the owner or operator at least fifteen days to implement the odor management plan. If the odor problem persists, the department may proceed with an enforcement action provided at least two certified inspectors at the same time each measure a violation and then confirm the violation by a second odor measurement taken by each certified inspector, at least fifteen minutes, but no more than two hours, after the first measurement.
4. A person is exempt from this section while spreading or applying animal manure or other recycled agricultural material to land in accordance with a nutrient management plan approved by the department of environmental quality. A person is exempt from this section while spreading or applying animal manure or other recycled agricultural

Twenty-five (25%) percent of the dwelling is used for such

1 purposes.

2 H. Nursing homes and hospitals but not including sanitariums

3 for contagious or infectious diseases or mental institutions.

4 I. Golf courses but not including miniature courses or driving

5 ranges operated for commercial purposes, and provided

6 buildings and structures incidental to the course are located

7 not less than three hundred (300) feet from the nearest

8 residents.

9 J. Electric substations and gas regulator stations provided:

10 (1.) For each electric substations where transformers are
exposed there shall be an enclosing fence at least six feet high.

**CHAPTER 57-02
GENERAL PROPERTY ASSESSMENT**

#4

57-02-01. Definitions. (Effective for taxable years through December 31, 2025)

As used in this title, unless the context or subject matter otherwise requires:

Yellow
Doesn't
Pertain

1. "Agricultural property" means platted or unplatted lands used for raising agricultural crops or grazing farm animals, except lands platted and assessed as agricultural property prior to March 30, 1981, shall continue to be assessed as agricultural property until put to a use other than raising agricultural crops or grazing farm animals. Agricultural property includes land on which a greenhouse or other building is located if the land is used for a nursery or other purpose associated with the operation of the greenhouse. The time limitations contained in this section may not be construed to prevent property that was assessed as other than agricultural property from being assessed as agricultural property if the property otherwise qualifies under this subsection.
 - a. Property platted on or after March 30, 1981, is not agricultural property when any four of the following conditions exist:
 - (1) The land is platted by the owner.
 - (2) Public improvements, including sewer, water, or streets, are in place.
 - (3) Topsoil is removed or topography is disturbed to the extent that the property cannot be used to raise crops or graze farm animals.
 - (4) Property is zoned other than agricultural.
 - (5) Property has assumed an urban atmosphere because of adjacent residential or commercial development on three or more sides.
 - (6) The parcel is less than ten acres [4.05 hectares] and not contiguous to agricultural property.
 - (7) The property sells for more than four times the county average true and full agricultural value.
 - b. Land that was assessed as agricultural property at the time the land was put to use for extraction of oil, natural gas, or subsurface minerals as defined in section 38-12-01 must continue to be assessed as agricultural property if the remainder of the surface owner's parcel of property on which the subsurface mineral activity is occurring continues to qualify for assessment as agricultural property under this subsection.
2. "Air carrier transportation property" means the operative property of each airline whose property is assessed for taxation purposes pursuant to chapters 57-06 and 57-32.
3. "Assessed valuation" means fifty percent of the true and full value of property.
4. "Centrally assessed property" means all property which is assessed by the state board of equalization under chapters 57-05, 57-06, and 57-32.
5. "Commercial property" means all property, or portions of property, not included in the classes of property defined in subsections 1, 4, 11, and 12.
6. "Credits" means and includes every claim and demand for money or other valuable thing, and every annuity or sum of money receivable at stated periods, due or to become due, and all claims and demands secured by deeds or mortgages, due or to become due.
7. "Governing body" means a board of county commissioners, city council, board of city commissioners, school board, or board of education, or the similarly constituted and acting board of any other municipality.
8. "Money" or "moneys" means gold and silver coin, treasury notes, bank notes, and every deposit which any person owning the same or holding in trust and residing in this state is entitled to withdraw as money or on demand.
9. "Municipality" or "taxing district" means a county, city, township, school district, water conservation and flood control district, Garrison Diversion Conservancy District, county park district, joint county park district, irrigation district, park district, rural fire protection district, or any other subdivision of the state empowered to levy taxes.
10. "Person" includes a firm, corporation, or limited liability company.

7:33

5G 10

when did Hurricane Lake...

AI Mode All News Images Shopping Videos

AI Overview



The Hurricane Lake North Dakota Waterfowl Production Area (WPA) was established on **November 9, 1933**, by Executive Order 6420-B.

The WPA program itself was part of the New Deal's efforts to provide relief work during the Great Depression. The specific WPA that created what is now known as Hurricane Lake was initially established under the authority of the National Industrial Recovery Act to provide public work projects for the unemployed. The site later became a National Wildlife Refuge in 1939, serving as a breeding and resting place for migratory birds.



of the Work Administration...

established by EO 6420-B, 1933, under authority of...

Archives (.gov)



Section 2: WPA North Dakota

Thousands of years camped at the junc...

North Dakota St



Home



search



NOTIFICATIONS



ACTIVITY



8:58

4G 92



Google



Q what is the meaning of th...

AI Mode All Images Shopping Videos Web

◆ AI Overview



In [Merriam-Webster](#), "zone" has several meanings, primarily referring to **an area or region distinguished by a particular characteristic** or designated for a specific purpose. This includes geographical divisions like the Earth's latitudinal zones, as well as city districts set aside for specific uses (like residential or business zones), and specific areas

within a playing field, such as an end zone. As a

Show more ▼



Merriam-Webster

<https://www.merriam-webster.com>

ZONE Definition & Meaning

The meaning of ZONE is any of five great divisions of the earth's surface with respect to latitude and temperature.

How to use zone in a sentence.



Home



Search



Notifications



Activity



11:39 AM, Oct 30



#7



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Q what does recreational di...



#8

◆ AI Overview

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A **recreational district** is a specific area, either a special district or a zoning classification, established to provide, protect, and manage public recreation areas and services. These districts are designed to preserve land for parks and open spaces or to manage facilities and programs for community leisure activities like sports, arts, and outdoor pursuits. 

WHAT IS A SPECIAL DISTRICT



What a recreational district is

- **A defined geographical area:** It can be a special district created by a government body, such as a park and recreation district, which is a special-purpose unit that provides parks and recreational facilities within its boundaries.
- **A zoning classification:** It can also be a zoning designation (like "Public Recreation and Open Space") for land intended to be preserved for public parks or natural areas.
- **Dedicated to public use:** The areas and



Home



Search



Notifications



Activity



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Q can a waterfowl producti...

**park**

/pärk/

A park is a defined area of land, usually featuring natural elements like grass, trees, and water, set aside for public recreation, enjoyment, or conservation. These spaces are often maintained by governments—ranging from municipal to national levels—and designed to provide leisure opportunities, such as playgrounds, sports areas, and walking paths. w Wikipedia +4

Key Characteristics of a Park

- **Purpose:** Primarily designated for recreation, environmental conservation, or aesthetic enjoyment.
- **Public Access:** Often accessible to the general public, though some may have fees (like national parks or theme parks).
- **Natural Elements:** Frequently landscaped with vegetation, offering a "green space" within urban environments.
- **Facilities:** Frequently equipped with playgrounds, benches, and sports facilities. GP RED +4

Types of Parks

- **Urban Parks/Pocket Parks:** Small to large green spaces within cities for local recreation.



7:45 27°

5 24

Q what's another word for...



◆ AI Overview

h X +2

Common synonyms for a **wildlife refuge** include **wildlife sanctuary, nature reserve, wildlife reserve, and conservation area**. These areas are protected zones dedicated to conserving biodiversity and preserving natural habitats for animals and plants.

Additional Synonyms and Related Terms:

- **Nature preserve**
- **Game reserve or game park**
- **Protected area**
- **Natural area**
- **Sanctuary**
- **Forest preserve**
- **Biosphere reserve or bioreserve** Friends of Iroquois ... +3

These terms generally describe land set aside to manage and protect wildlife. Wikipedia

Nature reserve - Wikipedia

A nature reserve (also known as a wildlife refuge, wildlife sanctuary,...

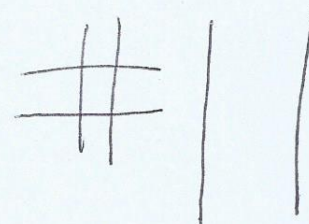
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☰ 🐱 Another word for

🔍 park



What is another word for **park**?

Contexts ▲

Noun

- A large area of land, typically abundant with greenery
- A large public garden or area of land used for recreation
- A playing field or sports stadium
- A large enclosed piece of ground attached to a country house
- A nature reserve
- Series of spots for motor vehicle parking
- A parklike area where animals are exhibited
- A piece of land for public use
- An area with a large number of trees
- An open area, typically a central location with much activity
- A place where vehicles, typically taxis, wait for passengers
- A place that is frequented for holidays or recreation

Verb

- To bring a vehicle to a halt in a specified place
- To place something in a particular space or position
- To postpone from being dealt with
- To stay or rent accommodation at a place
- To come to rest, especially after descending from the air
- To store or stockpile for later use
- To push roughly





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USA Parks

North Dakota

Central Region

Hurricane Lake National Wildlife Refuge



#12

Western Meadow Lark © stateparks.com

Picnic Table © stateparks.com



HURRICANE LAKE NATIONAL WILDLIFE REFUGE

HURRICANE LAKE NATIONAL
WILDLIFE REFUGE

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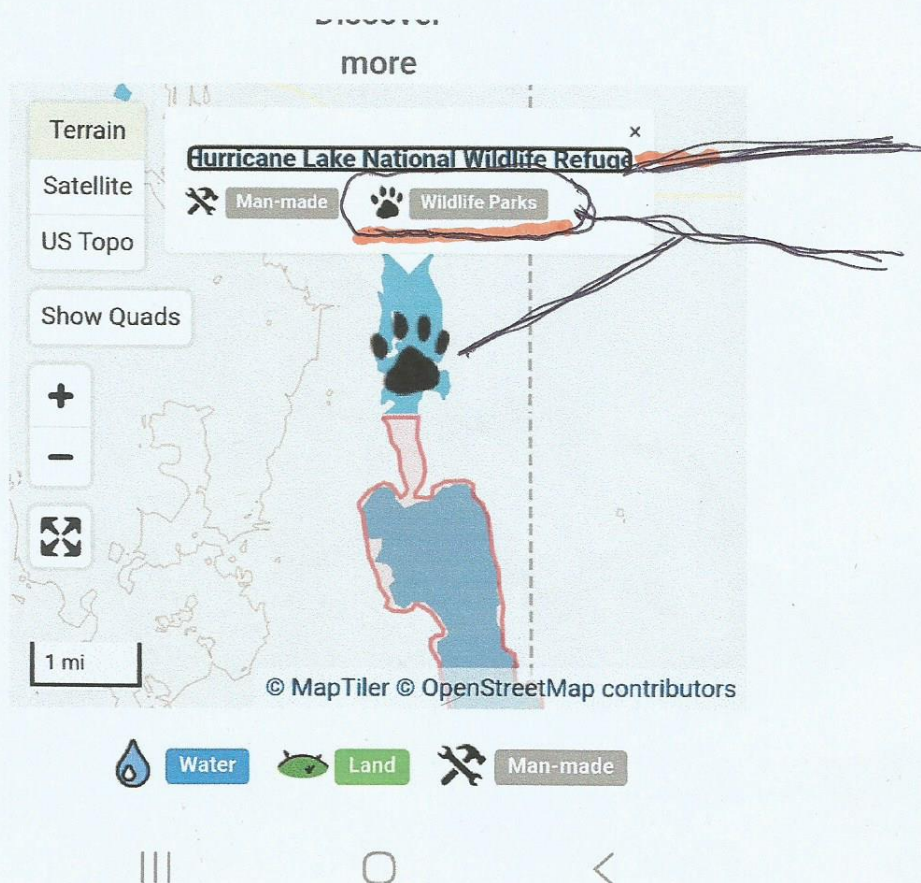
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US Topo Map

The USGS (U.S. Geological Survey) publishes a set of the most commonly used topographic maps of the U.S. called US Topo that are separated into rectangular quadrants that are printed at 22.75"x29" or larger. Hurricane Lake is covered by the Hurricane Lake West, ND US Topo Map quadrant

[Free US Topo Map PDF](#)[Order Waterproof Printed Topo Map](#)

#13



9:03 52:09

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Hurricane Lake Nation...
topoquest.com

#14

TopoQuest

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Hurricane Lake National Wildlife Refuge, North Dakota

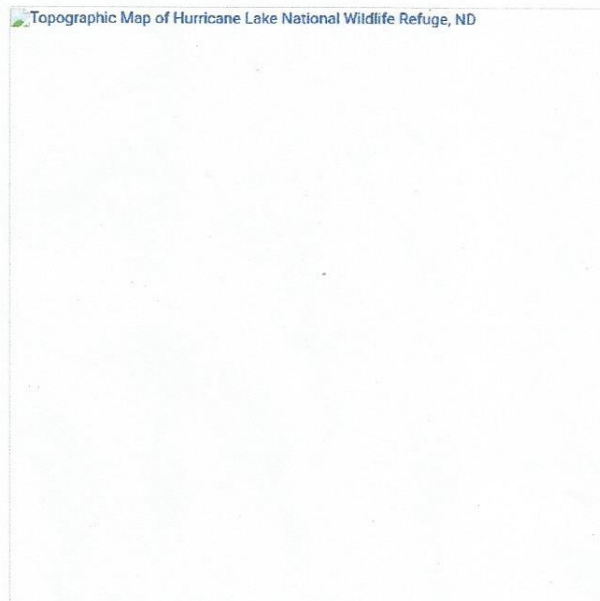


Hurricane Lake National Wildlife Refuge is a park located in Pierce County, ND at N48.46611° W99.51792° (NAD83) and at an elevation of 1555 ft MSL. It can be seen on the USGS 1:24K topographic map [Hurricane Lake West, ND](#).

Feature Type: Park
Latitude: N48.46611° (NAD83 datum)
Longitude: W99.51792°
Elevation: 1555 ft MSL
County: Pierce County, North Dakota

USGS 24K Map: [Hurricane Lake West, ND](#)
USGS 24K MRC: 48099D5

QR &

Barcode
ScannerYou can view this location or feature in our [Topographic Map Viewer](#) now.

Click on map above to begin viewing in our Map Viewer.

Here are some other places near Hurricane Lake National Wildlife Refuge that may be of interest:

Feature Name	Type	Latitude	Longitude	Distance	View Map
Dale and Martha Hawk Museum	Building	N48.5514°	W99.6167°	7.4 miles	View Map
Halling Cemetery	Cemetery	N48.5300°	W99.4385°	5.7 miles	View Map
Hurricane Lake	Lake	N48.4243°	W99.5040°	3.0 miles	View Map
Hurricane Lake Cemetery	Cemetery	N48.4149°	W99.5391°	3.7 miles	View Map
Hurricane Lake	Church	N48.4147°	W99.5385°	3.7 miles	View Map



9:04 52:50

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EE

Play



#15

Click on map above to begin viewing in our Map Viewer.

Here are some other places near Hurricane Lake National Wildlife Refuge that may be of interest:

Feature Name	Type	Latitude	Longitude	Distance	View Map
Dale and Martha Hawk Museum	Building	N48.5514°	W99.6167°	7.4 miles	View Map
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Hurricane Lake Church	Church	N48.4147°	W99.5385°	3.7 miles	View Map
Hurricane Lake National Wildlife Refuge	Park	N48.4661°	W99.5179°	0.0 miles	View Map
North Prairie Church	Church	N48.3892°	W99.4285°	6.7 miles	View Map
Pleasant Valley Cemetery	Cemetery	N48.5622°	W99.5800°	7.2 miles	View Map
Teubner Cemetery	Cemetery	N48.5595°	W99.4720°	6.8 miles	View Map
Township of Springfield	Civil	N48.4144°	W99.4280°	5.5 miles	View Map
Township of Zion	Civil	N48.5013°	W99.4279°	4.8 miles	View Map

Note: Coordinates in the location and feature list above are referenced to NAD83 datum.

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0007458230



**LIMITED LIABILITY PARTNERSHIP
ANNUAL REPORT**
SECRETARY OF STATE
(See SFN 52299)

For Office Use Only

-FILED-

SOS Control ID#: 0006613530

Date Filed: 3/26/2026

Fee for current filing year:

- \$25 if received on or before March 31; and
- \$45 if received thereafter.

Annual Report Due Date 03/31/2026																																													
Limited Liability Partnership Name Dakota SAO, LLP State or country of origin: NORTH DAKOTA																																													
Principal Executive Office Address ERIC PETERSON 10640 COUNTY HIGHWAY D20 ALDEN, IA 50006-4814																																													
Mailing Address ERIC PETERSON 10640 COUNTY HIGHWAY D20 ALDEN, IA 50006-4814																																													
Registered Agent in North Dakota CAPITOL CORPORATE SERVICES, INC. Commercial Registered Agent Physical Address 1213 NP AVE STE 301 FARGO, ND 58102 Mailing Address 1213 NP AVE STE 301 FARGO, ND 58102																																													
Character of the Business swine production																																													
Farm/Ranch Owned or Leased Land This limited liability partnership owns or leases land in North Dakota that is used for farming/ranching. <table><thead><tr><th>Number of Acres</th><th>Section</th><th>Township</th><th>Range</th><th>County</th></tr></thead><tbody><tr><td>38.720</td><td>SCT 06</td><td>TWN 157</td><td>RNG 65</td><td>TOWNER COUNTY</td></tr><tr><td>58.080</td><td>SCT 17</td><td>TWN 157</td><td>RNG 65</td><td>TOWNER COUNTY</td></tr><tr><td>19.360</td><td>SCT 17</td><td>TWN 157</td><td>RNG 65</td><td>TOWNER COUNTY</td></tr><tr><td>160</td><td>SCT 15</td><td>TWN 158</td><td>RNG 65</td><td>TOWNER COUNTY</td></tr><tr><td>40</td><td>SCT 19</td><td>TWN 158</td><td>RNG 65</td><td>TOWNER COUNTY</td></tr><tr><td>1.080</td><td>SCT 32</td><td>TWN 157</td><td>RNG 66</td><td>TOWNER COUNTY</td></tr><tr><td>8.94</td><td>SCT 24</td><td>TWN 158</td><td>RNG 69</td><td>PIERCE COUNTY</td></tr><tr><td>70</td><td>SCT 24</td><td>TWN 158</td><td>RNG 69</td><td>PIERCE COUNTY</td></tr></tbody></table>	Number of Acres	Section	Township	Range	County	38.720	SCT 06	TWN 157	RNG 65	TOWNER COUNTY	58.080	SCT 17	TWN 157	RNG 65	TOWNER COUNTY	19.360	SCT 17	TWN 157	RNG 65	TOWNER COUNTY	160	SCT 15	TWN 158	RNG 65	TOWNER COUNTY	40	SCT 19	TWN 158	RNG 65	TOWNER COUNTY	1.080	SCT 32	TWN 157	RNG 66	TOWNER COUNTY	8.94	SCT 24	TWN 158	RNG 69	PIERCE COUNTY	70	SCT 24	TWN 158	RNG 69	PIERCE COUNTY
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Partners																																													



Name of Managing Partner	Complete Mailing Address
Eric Peterson	Eric Peterson 10640 County Highway D20 Alden, IA 50006

Name of Partner	Complete Mailing Address
None Entered	

Partner statement
No partner listed above is a corporation or limited liability company.

Signature

☒ I, the undersigned, am authorized to sign this Annual Report, know the contents, and believe the statements contained within to be true. I understand that if I make a false statement, I may be subject to criminal penalties.

Eric Peterson 03/26/2026

Sign Here Date



5/5/2026

North Dakota Department of Environmental Quality,

Concerning the potential permitting of the Hexagon II animal feeding operation there are several concerns that I believe need to be addressed. Dakota SAO II L.L.P. is the entity applying for this permit. It is worth noting that Dakota SAO II L.L.P. has not acquired ownership of the property in question. Furthermore, Dakota SAO II L.L.P. did not properly register with the Secretary of State in their original filing. Dakota SAO II L.L.P. stated on their original filing that they “will not be engaged in farming or ranching in North Dakota”. (See Exhibit 1) This partnership is applying for a permit for a swine AFO. This contradictory statement allowed Dakota SAO II L.L.P. to apply for a permit without listing the names and addresses of all partners. This is a requirement per North Dakota Century Code Title 45-22-03-3-a for all operations that will be engaged in farming or ranching. All partners’ names and addresses must be listed in this filing in order for this partnership to be properly registered with the state of North Dakota. Until this issue is remedied the state would be negligent to permit this operation and it should, in fact, put permitting on hold until corrective action is completed by Dakota SAO II L.L.P.

Another concern is that the manure transfer lines that will be used to transport manure to fields for application will be run through ditches and also must cross areas of manure exclusion zones in order to reach the intended fields for application. What contingency plans are in place in the event that a line leaks or breaks in one of these drainage ditches or exclusion zones? The large volume of material transported through these hoses has a potential to release a large amount of manure into these locations that lead into waterways draining into Hurricane Lake. How can you ensure that any spills will be properly cleaned before rainwater washes spilled material into these protected waterways? What are the consequences for a spill contaminating these protected waterways?

Further these manure transport lines will need to cross onto land that is not included in the application easements on file. What remedies will be available for spills, seepage and runoff onto these lands? How will these spills be dealt with? Will the lines be routed in ways that ensure no danger to the general public and the vehicles traveling on the roadways? Will these roadways need to be closed down during certain application processes that will affect the free travel of these roads? If so, permitting for road closures

needs to be ensured, now, in order to ensure that all acres are available for manure application and to prevent overapplication on other parcels.

There are currently no plans for testing surface or groundwater surrounding the site. This should be required as the release of contaminants and a baseline reading are not able to be monitored without this testing. As the nearest resident to this facility, I am concerned about the integrity of my well water, which is my only source of water. I have 2 wells on my property. The DEQ should require testing of the groundwater surrounding their site which would allow me time to be contacted before my groundwater was contaminated. Otherwise, I will be responsible for monitoring both of my wells constantly for contamination, which is an otherwise unnecessary cost that I would have as a member of the public. I should not have to incur this additional cost as a general member of the public that does not consent to the building of this facility. Should I find that my water is contaminated in the future there would be no warning time to come up with other water source plans for my home and family. Groundwater testing should be a minimum requirement for this facility and a plan to contact nearby residents with concerns of contamination, should it occur in their test wells, needs to be required.

I also request that the DEQ visit each of the intended application fields on site and walk them on foot to ensure in person that all maps submitted to The DEQ are accurate in regard to locations of drainage ditches and 100' setbacks. Aerial map review is far from sufficient in this regard for several reasons. For one, these aerial maps are outdated and do not include recently constructed drainage systems. Aerial views do not suffice for accurately judging slope, landscape, and grass growth amounts in fields. Additionally, any future drainage of these fields should be submitted to the DEQ and changes in application should be made if appropriate.

Regards,

Lincoln Larson

Dakota Resource Council and SRAP

Public Comments Regarding DEQ Permit applications NDAFO-0711

May 4, 2026

Exhibit Index and Document Description

Exhibit 1 - Dakota SAO II, LLP Registration (June 30, 2025) and First Annual Report
(March 24, 2026)

Exhibit 2 - Dakota SAO II, LLP Amended Registration (April 20, 2026)

Exhibit 3 - Devils Lake Basin Detailed Map



0007114522

**LIMITED LIABILITY PARTNERSHIP
REGISTRATION**

SECRETARY OF STATE

(See SFN 50233)

For Office Use Only

-FILED-

SOS Control ID#: 0007114522

Date Filed: 6/30/2025

FILING FEE:

- Registration with up to two managing partners: \$35
- Each additional managing partner: \$3 (not to exceed \$250)

Exhibit 1

Limited Liability Partnership Name Dakota SAO II, LLP					
Principal Executive Office Address 1213 NP AVE STE 301 FARGO, ND 58102					
Mailing Address ERIC PETERSON 10640 HIGHWAY D20 ALDEN, IA 50006-4814					
Registered Agent in North Dakota CAPITOL CORPORATE SERVICES, INC. Commercial Registered Agent Physical Address 1213 NP AVE STE 301 FARGO, ND 58102 Mailing Address 1213 NP AVE STE 301 FARGO, ND 58102					
Formation Date The limited liability partnership shall be effective when filed with the Secretary of State.					
Nature of Business Own agricultural real estate and construct and operate livestock feeding facilities.					
Partners Farm/ranch statement This partnership will not be engaged in farming or ranching in North Dakota and will not be owning or leasing land in North Dakota which is used for farming or ranching.					
<table border="1"><thead><tr><th>Name of Managing Partner</th><th>Complete Mailing Address</th></tr></thead><tbody><tr><td>Eric Peterson</td><td>Eric Peterson 10640 Co. Hwy D20 Alden, IA 50006</td></tr></tbody></table>		Name of Managing Partner	Complete Mailing Address	Eric Peterson	Eric Peterson 10640 Co. Hwy D20 Alden, IA 50006
Name of Managing Partner	Complete Mailing Address				
Eric Peterson	Eric Peterson 10640 Co. Hwy D20 Alden, IA 50006				
Signature ☒ I, the undersigned and a managing partner, affirm that this partnership elects to be a limited liability partnership. I have read this registration, know the contents, and believe the statements contained within to be true. I understand that if I make a false statement, I may be subject to criminal penalties. <i>Eric Peterson</i> _____ Sign Here					
_____ Date					



CONSENT TO USE BUSINESS NAME
SECRETARY OF STATE
SFN 59250 (05-2016)

For Office Use Only

ID Number:	
WO Number:	
Filed:	By:

FILING FEE: \$10.00

1. Name of the business or organization currently registered with the North Dakota Secretary of State that is granting consent to use a business name that is the same or is deceptively similar

Dakota SAO, LLP

2. Proposed business name for which consent is being granted

Dakota SAO II, LLP

3. "I (We), the owner(s), or the person(s) authorized to sign on behalf of the business named in number 1, hereby grant consent to the business name defined in number 2 and accept responsibility to monitor or enforce any restrictions or limitations agreed to by the business named in number 2. I (We) understand that if I (we) make a false statement in this document, I (we) may be subject to criminal penalties."

Signature 	Title Manager	Date 6/30/2025
Signature	Title	Date

4. Name of person to contact about this document

Meagan Herrin



0007458216



**LIMITED LIABILITY PARTNERSHIP
ANNUAL REPORT**
SECRETARY OF STATE
(See SFN 52299)

For Office Use Only

-FILED-

SOS Control ID#: 0007114522

Date Filed: 3/24/2026

Fee for current filing year:

- \$25 if received on or before March 31; and
- \$45 if received thereafter.

Exhibit 1

Annual Report Due Date
03/31/2026

Limited Liability Partnership Name
Dakota SAO II, LLP
State or country of origin: NORTH DAKOTA

Principal Executive Office Address
ERIC PETERSON
10640 CO HIGHWAY D20
ALDEN, IA 50006-4814

Mailing Address
ERIC PETERSON
10640 HIGHWAY D20
ALDEN, IA 50006-4814

Registered Agent in North Dakota
CAPITOL CORPORATE SERVICES, INC.
Commercial Registered Agent
Physical Address
1213 NP AVE
STE 301
FARGO, ND 58102
Mailing Address
1213 NP AVE
STE 301
FARGO, ND 58102

Character of the Business
swine production

Farm/Ranch Owned or Leased Land
This limited liability partnership does not own or lease land in North Dakota that is used for farming/ranching.

Number of Acres	Section	Township	Range	County
None Entered				

Partners

Name of Managing Partner	Complete Mailing Address
Eric Peterson	Eric Peterson 10640 Co. Hwy D20 Alden, IA 50006

Signature

- ☒ I, the undersigned, am authorized to sign this Annual Report, know the contents, and believe the statements contained within to be true. I understand that if I make a false statement, I may be subject to criminal penalties.

B0898-2472 03/24/2026 Received by ND Secretary of State



Eric Peterson

Sign Here

03/24/2026

Date

B0898-2473 03/24/2026 Received by ND Secretary of State



LIMITED LIABILITY PARTNERSHIP REGISTRATION
SECRETARY OF STATE
 SFN 50233 (12-2015)

For Office Use Only	
ID Number:	-FILED-
WFO Number:	
SOS Control ID#: 0007114522	
Filed:	By:
Date Filed: 4/20/2026	

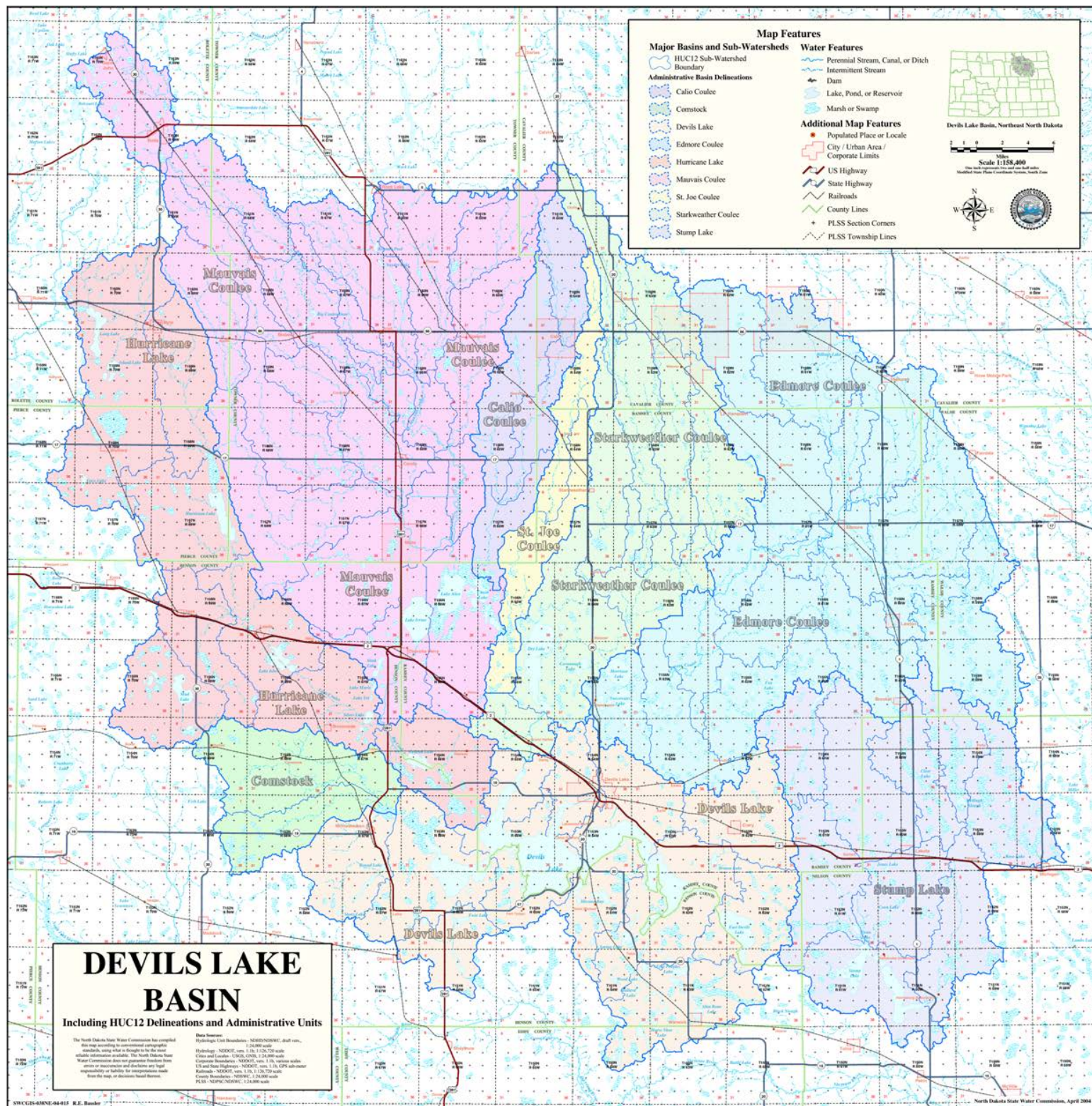
1. FILING FEES

- A. New registration with two managing partners \$35.00
 Each additional managing partner (not to exceed \$250) 3.00
 B. Amended registration 25.00

TYPE OR PRINT LEGIBLY

SEE PAGES 2 AND 3 FOR FILING AND MAILING INSTRUCTIONS For reference, see North Dakota Century Code, Chapter 45-22.

2. Registration is a(n): ☐ New registration ☒ Amended registration		4. Federal ID Number	
3. Name of limited liability partnership DAKOTA SAO II, LLP			
5. Complete mailing address of principal executive office (Street/RR, PO Box, City, State, ZIP+4) Street address MUST be provided; may not be only a post office box. 1213 NP Ave, Ste 301, Fargo, ND 58102			
6. Effective date of registration: (check one) ☒ When Filed with the Secretary of State ☐ Later on (month, day, year): _____			
7. Telephone Number 888-907-2380		8. Toll-Free Telephone Number	
9A. Name of <u>commercial</u> registered agent in <u>North Dakota</u> Capitol Corporate Services, Inc		OR 9B. Name of <u>noncommercial</u> registered agent in <u>North Dakota</u>	
9C. Address of <u>noncommercial</u> registered agent in <u>North Dakota</u> (Street/RR, PO Box, City, State, ZIP+4) Street address MUST be provided; may not be only a post office box. 1213 NP Ave, Ste 301, Fargo, ND 58102			
10. Nature of business transacted in North Dakota Intends to own agricultural real estate and construct and operate livestock feeding facilities			
11. Answer the questions below: (If "yes" to either question, provide the names and addresses of <u>all</u> partners in number 12.) YES NO ☒ ☐ Will the limited liability partnership be engaged in farming or ranching in North Dakota? ☒ ☐ Will the limited liability partnership own or lease land in North Dakota that is used for farming or ranching?			
12. Names, social security/federal ID numbers, and addresses of the managing partners (If number 11 indicates "yes" for either questions, provide information for <u>all</u> partners.)			
Name	Federal ID/Social Security Number	COMPLETE ADDRESS Street/Rural Route Post Office Box City State ZIP+4	
Eric Peterson, Managing Partner		10640 Co Hwy D20, Alden, IA 50006	
Mitchell Baum, Partner		10640 Co Hwy D20, Alden, IA 50006	
13. "The partnership elected to be a limited liability partnership as provided by North Dakota Century Code, Chapter 45-22. The undersigned managing partners have read the foregoing registration, know the contents thereof, and believe the statements made thereon to be true. The undersigned further authorize the Secretary of State to correct numbers 9A, 9B, and 9C if not correctly reflected."			
Signature	Date 4/17/26	Signature	Date
Signature	Date	Signature	Date
Signature	Date	Signature	Date
14. Name of person to contact about this document Eric Peterson		Email Address [REDACTED]	Daytime Telephone Number [REDACTED]



DAKOTA RESOURCE COUNCIL



Date: May 4th, 2026

CONTACT:

Samuel Wagner, Ag and Food Field Organizer Dakota Resource Council 1902 E Divide Ave Bismarck, ND 58503 701-371-5474 sam@drcinfo.com	Rachel Casteel, Senior Regional Representative Socially Responsible Agriculture Project 2093 Philadelphia Pike # 4133 Claymont, DE 19703 rachelc@sraproject.org
---	---

RECIPIENT:

ND Department of Environmental Quality
Division of Water Quality
918 East Divide Ave,
Bismarck ND 58051-1947

Public Comments In Opposition to Permit applications NDAFO-0711

In regards to the expansion of Hexagon II

To the North Dakota Department of Environmental Quality,

In regards to the Hexagon II requesting a permit to build a farrowing operation that will house 5,422 head of gestating pigs with an average weight of 400 lbs, 1,088 head of lactating pigs with an average weight of 450 lbs, 1,188 head of grower pigs with an average weight of 150 lbs, 792 head of nursery pigs with an average weight of 35 lbs, and 792 head of finisher pigs with an average weight of 200 lbs.

Dakota Resource Council promotes sustainable use of North Dakota's natural resources and family-owned and operated agriculture by building member-led local groups that empower people to influence the decision-making processes that affect their lives and communities.

Socially Responsible Agriculture Project (SRAP) is a nonprofit 501(c)(3) organization. For more than 20 years, SRAP has served as a mobilizing force to help communities protect

themselves from the damages caused by industrial livestock operations, and to advocate for a food system built on regenerative practices, justice, democracy and resilience. SRAP offers free support, providing communities across the U.S., including North Dakota, with the knowledge and skills to protect their rights to clean air, water, and soil and to a healthy, just, and vibrant future.

We have the following concerns regarding the permit:

I. Dakota SAO II, LLP is Not Properly Registered in North Dakota so DEQ Cannot Accept, Review, or Hold Hearings a Permit Application for a Non-Entity.

The Secretary of State shows Dakota SAO II, LLP as a “limited liability partnership - domestic” since June 30, 2025. However, in order for LLPs to legally operate in North Dakota and transact business, they must meet the LLP formation requirements and register with the Secretary of State. N.D.C.C. 45-22-03. A registration requires the LLP Managing Partner to disclose the following (among other pieces of information):

(3) A statement indicating whether the limited liability partnership will be engaged in farming or ranching in this state or owning or leasing land in this state which is used for farming or ranching.

(6) The name and address of each managing partner and, if the limited liability partnership will be engaged in farming or ranching in this state or owning or leasing land in this state which is used for farming or ranching, then the names and addresses of all partners.

N.D.C.C. 45-22-03(3)(a)(1)-(8) (emphasis added).

Despite filing registration forms, annual reports, amended registration forms, and amended annual reports since June 30, 2025, we believe that Dakota SAO II, LLP may have still failed to meet the state’s partnership disclosure requirements, and may have conducted certain business without the proper disclosures.

First, Dakota SAO II, LLP registered with the Secretary of State on June 30, 2025 and represented that it “will not be engaging in farming or ranching and will not be owning or leasing land in North Dakota which is used for farming or ranching.” **Exhibit 1.** During the summer 2025, it entered into manure application agreements with local residents, which are part of the DEQ application documents. On March 24, 2026, Dakota SAO II, LLP filed its first annual report where it also stated it “does not own or lease land in North Dakota that is used for farming/ranching.” **Exhibit 1.** On April 20, 2026, Dakota SAO II amended its registration to disclose that “[i]ntends to own agricultural real estate and construct and operate livestock feeding facilities” and that it will be engaged in farming or ranching, and it will own or lease land in North Dakota that is used for farming or ranching. **Exhibit 2.** The commenters believe that

Dakota SAO II, LLP should have made this declaration part of its original registration, and certainly before it entered into manure application agreements, or filed permit applications at the county and state levels.

Second, the registration form disclosed one managing partner; and the amended registration form disclosed two managing partners. But these disclosures are only *part* of what the law requires. N.D.C.C. 45-22-03(3)(a) requires disclosure of *the names and addresses of all partners* for LLPs engaged in farming or ranching. It does not appear that Dakota SAO II, LLP has disclosed this information to the state in its LLP registration or at any point during its Secretary of State filings, the Pierce County proceedings in 2025-2026, or in its amended filings this spring.

By not meeting LLP disclosure requirements, Dakota SAO II, LLP is not properly registered as a LLP in North Dakota. Thus it cannot operate in North Dakota, enter into manure application easements, or file permit applications. Unless and until Dakota SAO II, LLP meets these requirements, DEQ should not be dedicating any resources to reviewing permits applications, holding public hearings, or accepting public comment. At this point, Dakota SAO II, LLP is a non-entity because it has not met the basic registration requirements.

Given the risks to local farmers and community members, ensuring Dakota SAO II, LLP's entity status is critical here. Under North Dakota's partnership law, liabilities incurred by a LLP are solely the obligations of the LLP and LLP partners are not personally liable, directly or indirectly, for obligations under North Dakota LLP law. N.D.C.C. 45-22-08.1(a), (b). This protection from liability means that communities affected by the actions of the LLP must ensure now that the LLP's activities - such as proper formation and registration, undergoing a DEQ permit review processes, siting, constructing, and operating a 6,500 head swine facility - are closely reviewed to be consistent with corporation formation, land use, environmental, and public health laws. North Dakota's Corporate or LLC Farming Law (N.D.C.C. 10-6.1-01 through 1-27) is clearly focused on *corporations* and *LLCs*, but not on partnerships or LLPs. Where the statute does refer to partnerships, it allows them certain exceptions. For example, while Corporations and LLCs are limited to owning 640 acres in North Dakota (N.D.C.C. 10-6.1-12.2(5)(a),(b)), "partnerships" are not subject to this limitation *so long as they meet Title 45*. N.D.C.C. 10-6.1-12.2(5)(c). Dakota SAO II, LLP does not meet Title 45 because it has not disclosed all members of its partnership, and it cannot avail itself of the Corporate or LLC Farming Law provisions. A transparent, rigorous, and thorough approach to ensure the LLP is properly formed and registered is critical for communities to protect themselves against the direct and indirect impacts of this proposal. Without strong oversight, communities run the risk of having limited recourse when, not if, Dakota SAO II, LLP negatively impacts their drinking water, Hurricane Lake, the Wildlife Recreation Area, their roads, and the environment.

Lastly, the Dakota SAO II, LLP application relies in part on the nearly 20 year old application from the 2007 application for Hexagon. For example, Dakota SAO II, LLP relies on

2007 well driller reports, 2007 geologic/hydraulic or soils information and soil boring logs, and soil classifications. This is the information that Dakota SAO II, LLP is then using to run agronomic rate scenarios, nutrient risk assessments, phosphorus index, and assess groundwater and surface water risk potentials, and soil condition needs. Unless more recent investigations confirm the accuracy of the 20 year old data, this information's shelf life has long expired. Using 20 year old stale information is grossly unfair to the public and lacks the diligence DEQ must require of permit applicants. The commenters request that DEQ require current information for its review of any permit application.

II. Site is inappropriate for the proposal

A. Environmental Concerns: Proximity to Hurricane Lake and Waterfowl Production Area

The proposed facility is situated within 4,100 feet of Hurricane Lake Waterfowl Production Area (WPA). This land is federally managed by the U.S. Fish and Wildlife Service for the protection of migratory birds, small wetlands, and prairie pothole ecosystems that are “natural sponges.”¹ The proximity of this operation introduces the risk of phosphorus and nitrogen loading, and overloading the natural system, which can lead to eutrophication that destroys the aquatic ecosystem these protected species rely on. The WPA is also part of the North Dakota WPA network, providing essential protection for federal and state listed threatened and endangered species that use the WPA and the network for natural behaviors including feeding, nesting, breeding, migrating, and rearing young.

The applicant acknowledges in the Permit Application Section 8.C that “the facility location is a flat area with drainage flowing west into the tributary of Lake Hurricane”. Given that the Land Application Map Index identifies “High Risk” runoff areas in close proximity to these drainage pathways, the current Nutrient Management Plan is insufficient. In the event of major rainfall or rapid spring snowmelt, common in Pierce County, the 100-foot setbacks are inadequate to prevent contaminants from reaching the WPA. Therefore, the DEQ must mandate a comprehensive revision of the Nutrient Management Plan to include expanded buffers and enhanced mitigation efforts that go beyond the standard 100-foot setbacks.

B. Environmental Concerns - Proximity to Pierce County Recreation Area and Wildlife Protection Area

The facility would be located less than one mile from the Fish and Wildlife Service Pierce County Waterfowl Production Area. **See Figure 1 below.** Waterfowl Production Areas (WPAs) are part of the National Wildlife Refuge System - which is a network of lands set aside specifically for wildlife. This Refuge System is a living heritage, conserving wildlife and habitat for people today and for generations to come. Pheasant and Duck hunting are the most common

¹ U.S. Fish & Wildlife Service, “*Waterfowl Production Area*”. Available at: <https://www.fws.gov/story/waterfowl-production-areas>. (Last visited May 1, 2026).

types of hunting in the area with dogs being at risk the most going into wetlands with blue algae blooms. Fishing accounts for the majority of the tourism for Devils Lake and features some of the best Northern Pike, Walleye, and Muskie Fishing in the United States, let alone the planet. Boating on the Scenic Lake is still extremely popular. This land is also part of Native Treaties along with reservation borders that are still disputed to this day. This area is dotted with state and federal protected archaeological sites which can include unmarked cemeteries and burials. Without a current survey, there is an immense risk of contaminating the historic fabric of Pierce County, and a loss of cultural heritage. The wetland and grassland habitats on WPAs are managed to provide important resting and breeding grounds for migratory birds, waterfowl, and other wildlife. By providing permanent habitat, this WPA helps sustain the country's waterfowl populations. Additionally, Hurricane Lake National Wildlife Refuge is a protected area in Pierce County, designed to provide crucial habitat and breeding grounds for migratory waterfowl, shorebirds, and grassland-nesting birds. Nearly 800,000 people visit waterfowl production areas each year.

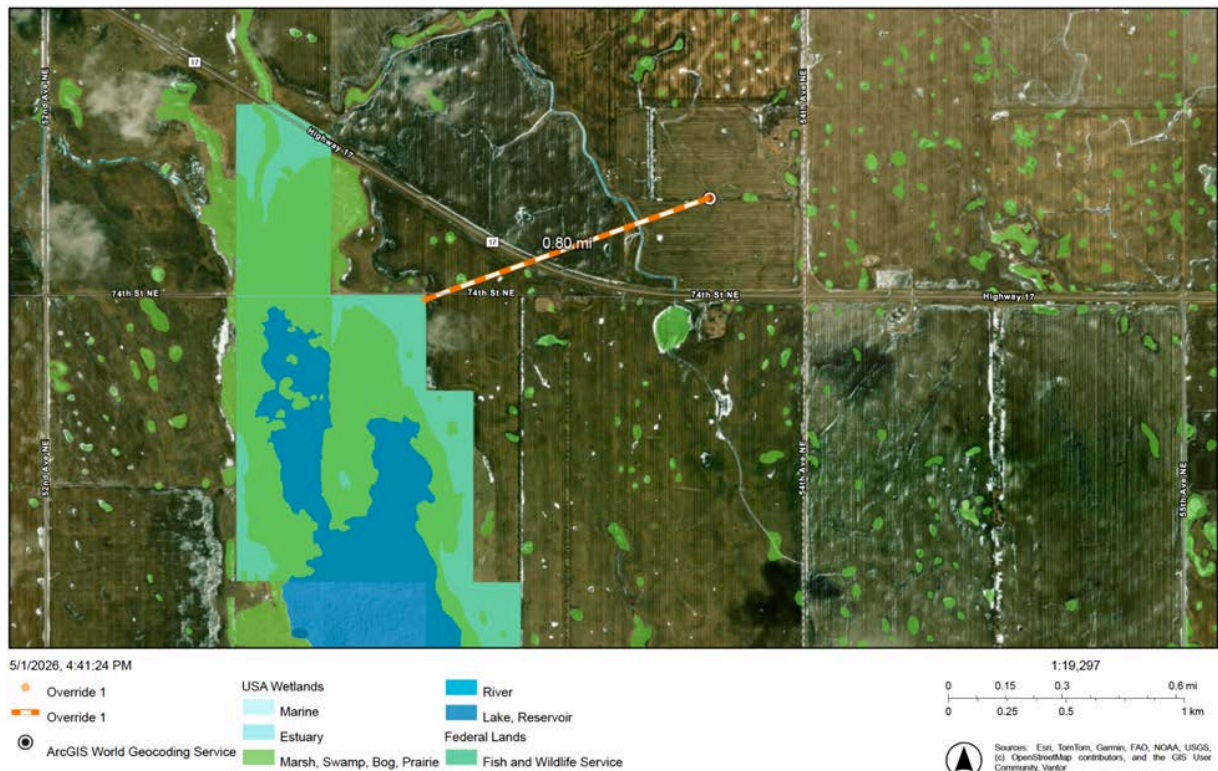


Figure 1 - SRAP Map of Distance from Proposed Facility to the Fish and Wildlife Service Pierce County Waterfowl Production Area

The J. Clark Salyer Wetland Management District covers approximately 8,354 square miles in Renville, Bottineau, Rolette, McHenry, Pierce, and Ward counties; within this wetland management district (WMD), the U.S. Fish and Wildlife Service manages 34,403 acres of waterfowl production areas, 134,008 acres of wetland easements, 98,706 acres of grassland easements, 18,371 acres of Farmers Home Administration conservation easements, and 8,062

acres of easement refuges. The WMD was formed to manage waterfowl production areas and the Wetland and Grassland Easement Program, both aimed at protecting and restoring crucial grasslands and wetlands for waterfowl production. Although waterfowl production areas, easements, and national wildlife refuges account for less than 2 percent of the landscape in the Prairie Pothole Region states, **they are responsible for producing nearly 23 percent of this area's waterfowl**. A critical aspect of protecting waterfowl and enhancing grasslands is the partnership collaboration and voluntary cooperation with private landowners. These areas, similar to the Hurricane Lake WPA, also provide essential protection for federal and state listed threatened and endangered species that use the WPA and the network for natural behaviors including feeding, nesting, breeding, migrating, and rearing young. This makes it even more imperative that DEQ assess the risk holistically, taking into consideration the crucial natural resources that could be detrimentally impacted.

C. Construction in a Drainage Basin

The proposed facility is located directly within the Devils Lake Basin, a subbasin of the Red River of the North Basin. **Exhibit 3.** Both Devils Lake and Stump Lake are the two primary closed-basin lakes located at the southern edge of the basin itself – this means they receive and store runoff from their drainage areas, contributing to dramatically fluctuating water levels that respond to environmental and climatic conditions. Historically, both lakes have overflowed into the Sheyenne River, as well as experiencing extremely dry conditions. In June of 2011, Devils Lake achieved a rise of more than 53 feet, expanding the lake's surface area by over 300 square miles. Since the 1990s, the entire basin has experienced a prolonged wet cycle with flooding that has impacted local communities and residents, inundated thousands of acres of agricultural land, and forced closure and abandonment of critical infrastructure.² Per the application, runoff inclusive of stormwater or precipitation from the land around the barns and site buildings, *will be directed away from the site*. Geologic and historic experience demonstrates this area as a drainage basin highly susceptible to environmental conditions. Runoff and flow will continue to follow the path and flow it historically has, exacerbating an already precarious situation. The Commenters suggest that significantly more due diligence is required by DEQ to confirm that, in fact, the stormwater system for this facility can manage the water quantities anticipated, and the diversion of stormwater is appropriate given the local environment, and that any stormwater runoff impacts are mitigated by the applicant.

D. Groundwater data and supporting documentation warrants further clarification, updated sampling, and a continuous groundwater monitoring plan should be required.

There is currently one private well located on-site and at least three additional wells located within 2 miles from the facility. Given these wells likely draw water from the same

² North Dakota Department of Water Resources, “*Devils Lake Basin Overview*”. Available at https://www.swc.nd.gov/basins/devils_lake/dl_basin.html. (Last visited May 1, 2026).

source, the Spiritwood Aquifer, the lack of a mandatory, long-term Groundwater Monitoring Plan as part of the permit is a significant oversight. A one-time baseline water quality analysis (provided in Permit Application Section 7.A) is insufficient to protect these water sources from the cumulative impact of 1.1 million cubic feet of annual waste storage and application. The applicant's dismissal of a Groundwater Monitoring Plan as "not necessary" is a direct threat to the long-term viability of the local domestic water supply. The DEQ must require the applicant to establish a permanent groundwater monitoring network, consisting of upgradient and downgradient wells, to track nitrate and pathogen levels in real-time. Until a long-term groundwater monitoring plan is integrated into the Nutrient Management Plan, the DEQ cannot fulfill its mandate to prevent the degradation of North Dakota's shared water resources.

In the Permit Application Section 8, Geologic/Hydraulic or Soils Information pg. 2, the applicant states: "Groundwater was not encountered in any of the boreholes. Drain tile was determined to not be necessary." However, following the applicant's maps on pg. 8.A.2., the applicant includes 20 year old information from a prior application, and states "Water depths were only measurable in hole number 4 at a depth of 11.5 feet. A drain tile is planned to lower this depth and minimize the risk on the soil liner." In 2007, the geotechnical engineers also pointed out in their report that "water levels can be expected to fluctuate both yearly and seasonally."

Further, laboratory and permeability tests were conducted on soil samples in 2007. This data informed a predicted seepage rate, which in turn informed the waste storage pond's liner and design at that time two decades ago and for a smaller facility. This specific, critical soil testing and information is completely missing from the 2025 samples provided by the applicant. On page 2 of the Permit Application Section 2, it again states that the "Depth to Water Table at Facility/Control Structure is >36 feet (One soil boring perched table at 11.5 feet)," which is inconsistent – this reflects the water depth measurements taken in 2007, not in 2025.

Commenters request that the applicant clarify the inconsistencies made in the application and given the site geology and facility location, and require additional borings to adequately characterize soil and ground water, and use as data that informs the facility's engineering, including waste storage liners.

E. Feasibility of Water Supply and Impacts on Local Wells

The primary source of water for the facility will be well water and a rural water system. The closest wells indicated by the applicant in the submitted materials (not including the one private well found on-site that has no available documentation) are three test wells established by the applicant – located in the SE/4 of Section 24, T158N, R69W. Two reports show two wells were drilled to depths of 182 feet, however no water was found. The closest town to Cando obtains water from wells which rely on a groundwater supply. How will the facility draw well water when no water was found when drilling the test wells? If there is no well water available,

what source(s) will the facility turn to for its water needs? What are the environmental impacts to the local community of drawing water and importing water from that source?

III. Comment and Questions Regarding the Management of the Facility

Waste Handling:

43. Total Acres Controlled and Available for Land Application

Wetlands: The aerial maps presented show that the site is surrounded by many wetlands. In addition to the marked excluded areas for manure application, there appear to be many areas where manure application would not comply with the rule that **“Manure shall not be applied any closer than 100 feet to any down- gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads or other conduits to surface waters.”** Wetlands are surface water bodies. In our public comments we named fields that appeared to have drains, ditches, or bodies of water near them.

Animal Mortalities:

Provide a brief description of how animal mortalities will be handled.

Per ND Century Code

“ND century code Title 36 Section 36-14-19 subsection 3. states that If the carcass is of an animal which has died of a disease other than is specified in subsections 1 and 2, or from any other cause, it must be burned, buried, composted, or given to a licensed rendering plant within thirty-six hours, or must be disposed of by a method approved by the state veterinarian. If the carcass is buried, it must be buried not less than four feet [1.22 meters] below the surface of the ground and covered with dirt to that depth. No carcass may be disposed of along any public highway or along any stream, lake, or river nor be buried near or adjoining any such place.”

We are concerned about the ability of the farmers with little training to be able to dispose of the hogs that die on their property. Improperly buried livestock can attract wildlife such as foxes and coyotes and could also be a public health concern for disease. Pathogens have been known to be spread from employees disregarding personal protective equipment or safety procedures; runoff of untreated hog waste, or improperly disposed livestock mortality. We feel that due to the soil conditions and proximity to the water supply in the area onsite disposal may not be the best way to dispose of corpses.

First, we would recommend that you require in the permit to only allow landfill disposal of fatalities to improve safety on the facility.

If you decide not to follow that course of action. We would ask that you require in the permit that all personnel employed at the facility be given training in proper disposal procedures that would be available upon request from the DEQ. We would also advise that the DEQ require mortality rates to be monitored and commented on during the 5 year renewal of the permit. DEQ should require that any outbreaks of disease be reported within 24 hours of confirmation of the first known case of infection.

In the permit page 2 section 10. it states that they will notify the DEQ within a “reasonable amount of time”. Can the Department please outline exactly what that means? 1 year? 6 months? 3 months? 30 days? Please outline the standard procedure the department would use to receive, process, respond, and remedy a complaint regarding odor, spills, and groundwater contamination and what type of time table would be expected from a resident complaining.

Water Quality Information

A. Surface water analysis

“Runoff from the site appears to drain to lowlands or pothole wetlands which are a closed source and do not appear to runoff or drain elsewhere. Construction and operation of the current design is not expected to have any adverse effect on surface water quality. There are currently no plans to sample this water. “

The Devils Lake Basin does not have any natural outlets. Any leakage or overflow from this facility will easily contaminate both ground and surface water. Consideration should be given because these surface waters are of recreational and biological value. Private lands have wells in which they draw water. We should not be handwaving that absolutely no testing or sampling of this water is needed.

B. Analysis of livestock waste or runoff

In addition to nitrogen and phosphorus content, swine waste also contains heavy metals, antibiotics, bacteria and viruses. Application fields are a major source of ground water contamination. The nutrient management plan offers a disclaimer for existing nutrients in the field but just allows for full strength applications every year. It handwaves the build up and conversion of organic nitrogen to nitrate. The repeated application of manure waste results in high organic nitrogen transforming to nitrate every year and is not completely accounted for in the nutrient budget.

The application method also reduces the plants’ ability to use all the nutrients. The knifing operation destroys the root system and the plants only uptake the shallow (less the 1’) nutrient with the remainder migrating in soil moisture to ground water. The fall applications are also a major source of contamination, since no plant uptake occurs between fall and spring, but winter precipitation continues to flush nutrients to ground water.

Would the DEQ be in favor of issuing a ban on winter application on the manure from Dec 1st-March 31st? In 2025 Michigan passed a ban on all winter spreading due to complaints from residents and environmental scientists. The Michigan Ban passed last year is Jan 1st-March 19th but North Dakota has a far colder climate than Michigan. We would recommend Dec 1st-to March 31st.

Operation and Maintenance Plan and Requirement

Inspect the concrete storage tank storage ponds for signs of leaking or seepage, excessive settling, excessive vegetation growth or damage due to vehicles or equipment, rodents or erosion. Report any leakage as detailed above and make plans to rectify any problems as soon as possible.

Will the time interval when the pit is empty or at a low level be minimized? The concern is to minimize wall stress by keeping the internal and external pressures as equal as possible. This involves matching external groundwater level to internal manure depth. Has the optimum manure level been established?

2. Monitor the Deep pit concrete levels weekly. Inspect Sewer pipes to ensure they are not plugged or damaged. **What are the contingency plans if this were to occur?**

3. Maintain manure levels below the Freeboard level of the structures by carefully monitoring manure levels in the pit and scheduling manure application times. **See above comment.**

IV. Clarification and Correction of Dakota Resource Council Comments from April 20, 2026

We at the Dakota Resource Council have a mission to ensure sustainable practices in farming and animal agriculture. In the public hearing held on April 20th 2026, we stated that often we do not see organizations like the Farm Bureau, Corn Growers, Soybean Council and Animal Agriculture Alliance lobbying for increased regulations but often lobbying to decrease them. What our organization meant to say is that they advocate for them. Lobbying implies that they are being paid to directly speak to lawmakers which may be true for some of the organizations but not all of them. We would also like to state once again that testimony given that states “We need to approve these facilities so that our soybean processing facilities will have customers” is of no concern to this department and should not be used as a reason to approve these permits.

V. Conclusion

Thank you for your consideration of our comments. We encourage you to deny the permit application for Dakota SAO II, LLP and the Hexagon 2 location.

Sincerely,

Samuel Wagner, Ag and Food Field Organizer
Dakota Resource Council
1902 E Divide Ave
Bismarck, ND 58503
701-371-5474| sam@drcinfo.com

Rachel Casteel, Senior Regional Representative
Socially Responsible Agriculture Project
2093 Philadelphia Pike # 4133
Claymont, DE 19703
rachelc@sraproject.org

Enclosures: Exhibit 1 - Dakota SAO II, LLP Registration (June 30, 2025) and First Annual Report (March 24, 2026)
Exhibit 2 - Dakota SAO II, LLP Amended Registration (April 20, 2026)
Exhibit 3 - Devils Lake Basin Detailed Map

People, Planet, Profit

Within the concept of sustainability, the phrase “People, Planet, Profit” evokes the need to properly balance these three resources. And often that creates a conflict. But to be sustainable, for long-term viability for all three, there needs to be a concerted effort at balancing them out.

When it comes to the ag industry, one state NOT to emulate is Iowa. They do not even pretend to balance these three resources. "Interested in the truth about Iowa's water quality? You won't get it from Iowa's agricultural and political leaders. The state is first in egg and pork production and fifth in the number of feedlot cattle. But this production has come at a cost: soil erosion, the loss of wildlife habitat, a lack of public parks and recreation areas, foul air from animal waste, and especially degraded water. Iowa has over 70,000 miles of streams, and only 15 segments of these meet all the designated uses outlined under the Clean Water Act. In politics, culture, and economics of Iowa agriculture and the state's degraded waters and connects the dots for everyone who wonders why progress toward improvement is so maddeningly slow.” Excerpts from the inside cover flap of *The Swine Republic*(2023), a book written by Dr. Chris Jones from Iowa.

Dr. Jones has a doctorate in analytical chemistry, was a manager of a testing laboratory, an environmental scientist with the Iowa Soybean Association, the lab supervisor at the Des Moines Water Works, and most recently a research engineer at the University of Iowa. And he is a critic of both the ag industry and the Iowa regulatory agencies for their lackadaisical concern about Iowa water quality and their efforts to address it. He knows what he is talking about. But because of his criticism, Iowa ag leaders and Republican officials forced him out of his job.

We do not want to replicate the Iowa experience in North Dakota.

Yet here we are today with North Dakota following the “Iowa plan” to increase the presence of CAFOs in ND, pushed by the same Farm Bureau efforts as took the lead in Iowa. The first effort in both states was for the state legislature to strip away as much local control as possible. The second effort was to consolidate control in the state agency, the Department of Natural Resources in Iowa, the Department of Environmental Quality (DEQ) in ND, and then use political pressure to write rules that were more permissive than regulatory. To wit, only reviewing 5% of CAFO manure application plans per year by the ND DEQ.

On paper, the ND DEQ recognizes the problems of pollution from ag runoff, both from synthetic fertilizers and chemicals as well as from livestock manure. From the **North Dakota Nutrient Reduction Strategy for Surface Waters:**

“Many of North Dakota’s waterbodies are affected by nutrient pollution. It is estimated that **69% of perennial streams** in the State are impaired due to excessive P and 57% due to excessive N (NDDEQ, 2015a). Furthermore, **more than 24% of the State’s lakes and reservoirs are listed as impaired** for fishing and water-based recreation due to excessive nutrients (NDDEQ, 2015b). In addition, a **growing number of lakes and reservoirs in the State are experiencing harmful blue-green algae** (i.e., cyanobacteria) blooms caused by excessive N and P loadings. These blue-green algae blooms can produce harmful toxins, referred to as cyanotoxins, in the water which can pose a risk to human health in drinking water supplies and by primary contact recreational activities such as swimming, skiing, and boating.

“Nutrients originate from a variety of sources including nonpoint sources, such as agriculture and urban runoff, and point sources, such as municipal and industrial wastewater discharges. Once these nutrients enter our rivers and streams, they may be transported far downstream where they may impact other rivers, streams, lakes, and reservoirs both in and outside the State, and internationally. In addition to direct nutrient contributions as the result of runoff, nutrients may enter our groundwater through infiltration where they can contaminate our public and private drinking water supplies.

“In North Dakota, the leading sources of nutrients include industrial and municipal point sources, storm water runoff, and nonpoint sources such as failing septic systems, erosion and runoff from cropland, **runoff from animal feeding operations, and hydrologic modification (e.g., historic wetland drainage and stream channelization)**. Other sources of nutrients include poorly managed pastures and rangeland, riparian grazing, and **tile drainage**.

“To effectively reduce or eliminate the transport of NPS pollutants, including nutrients, to surface and/or groundwater resources, various “source control” measures are implemented within the watershed projects. These source control measures or BMPs are designed to 1) **prevent** pollutants from leaving a specific area, 2) **reduce/eliminate** the introduction of pollutants, 3) **protect** sensitive areas, and/or 4) **prevent interaction between precipitation and pollutants.**”

And from the proposed **2026-2030 Non-Point Source Pollution Management Program:** A priority is “Waterbodies that are fully supporting **all beneficial** uses but are **threatened by potential NPS pollutants.**”

I suggest that if the ND DEQ grants this permit, you should add Hurricane Lake to that list of threatened waterbodies ASAP.

I do not say this lightly. Vandeberg, et al. (2015) In their paper **Spatial assessment of water quality in the vicinity of Lake Alice National Wildlife Refuge, Upper Devils Lake Basin, North Dakota** published in the Environmental Monitor Assessment Journal state that their study of water quality in the Lake Alice Basin, including in around the original Hexagon I swine barns now operated by Summit Ag “shows a strong positive correlation between the nutrients NO₃–NO₂ and TKN (nitrogen) and the percentage of CAFO nutrient management areas within the sub-watersheds and suggests that agricultural operations in these areas may have a potential impact on area.” Further the conclusion states that higher Total Organic Carbon concentrations are correlated with decreasing distance to the CAFO facilities. It concluded: **The greatest threats to the water quality of the Lake Alice National Wildlife Refuge appear to be the high nutrient (NO₃–NO₂ and P) and E. coli concentrations within the aquatic system.** The CAFO nutrient applications are an identified water quality problem causing NPS pollution to Lake Alice which then flows into Devils Lake.

The ND DEQ NPS Pollution Management Program clearly states in its 2025 Annual Report that its goal is to reduce or eliminate NPS pollution.

The Nonpoint Source Pollution Management Program 2025 Annual Report

NDDEQ Account, January 27, 2026

Our Vision

The North Dakota NPS Program vision is to **abate all NPS pollution threats and impairments** to the beneficial uses of the waters of the state.

Our Mission

The North Dakota NPS Management Program mission is to implement a voluntary, incentive-based program that **restores and protects** the chemical, physical, and biological integrity of waters where the beneficial uses are threatened or impaired due to nonpoint sources of pollution.

Our Goals

- Coordinate with the Total Maximum Daily Load Program (TMDL Program) and local partners to assess 15 priority watersheds to document the beneficial use conditions as well as the sources and causes of NPS pollutants impairing beneficial uses of the waterbodies within the watersheds.

- In cooperation with local partners, develop and **implement watershed restoration or protection plans for 15 priority sub-watersheds**. Success of these projects will be defined by restoration of impaired uses; applied best management practices (BMPs) and progress toward pollutant load reductions described in the approved watershed-based plans.
- Through multiple forms of media at the state and local level, **increase public awareness and understanding of water quality and beneficial use impairments associated with NPS pollution as well as the sources and causes of NPS pollution in the state.**

The challenge in ND is that we do not have many (if any?) active watershed districts that develop and maintain plans for water quality. As a result, all the focus is on Bismarck and the ND DEQ. And frankly ND DEQ does not have the resources to accomplish the important goals it has set .

What research has found is that creating a watershed plan should start with grandpas and grandmoms, moms, dads, and children having a multigenerational discussion of “What makes this place and the people where you live unique” and “how does the watershed play a role in this?” This question is an excellent starting point to lead a community discussion on water quality!

Church leaders, school leaders and teachers, county commissioners, city councils, and others in the community should be a part of this. Whether the watershed is considered a resource issue, an environmental concern, or an issue of stewardship and the sacred, adaptive management and collaborative stakeholder involvement is the best way to successfully reduce nutrient pollution in the watershed.

Sadly, our conversation about the quality of the Hurricane Lake Watershed basin was only initiated after being threatened with the building of a 9,000+ head swine barn and the subsequent manure management plan for 3,000+ acres to dispose of the swine manure from this concentrated animal operation (CAFO). And what we heard in public testimony during the Pierce County Planning and Zoning Committee hearing, the Pierce County Commissioner hearing, and the ND DEQ Air and Water Quality hearing is that this proposed swine operation is a threat to Hurricane Lake, Lake Irvine, and to Devils Lake.

One of the real dangers from the potential NPS pollution caused by this facility is Cyanobacteria. From the ND DEQ report: Increased cyanobacteria (also known as blue-green algae) production can lead to an increased level of cyanotoxins in the water column, causing illness and/or death in wildlife, livestock, and humans. **Nearly 30 percent of North Dakota lakes (1,198 lakes) were considered high risk for cyanobacteria** densities which

could cause health problems (i.e., poor condition), while only approximately 17 percent of lakes (693 lakes) were considered to be low risk (i.e., good condition) (Figure V-31). Fifty-two (52) percent of lakes assessed in 2012 (2,085 lakes) were considered at moderate risk for cyanobacteria blooms (i.e., fair condition).

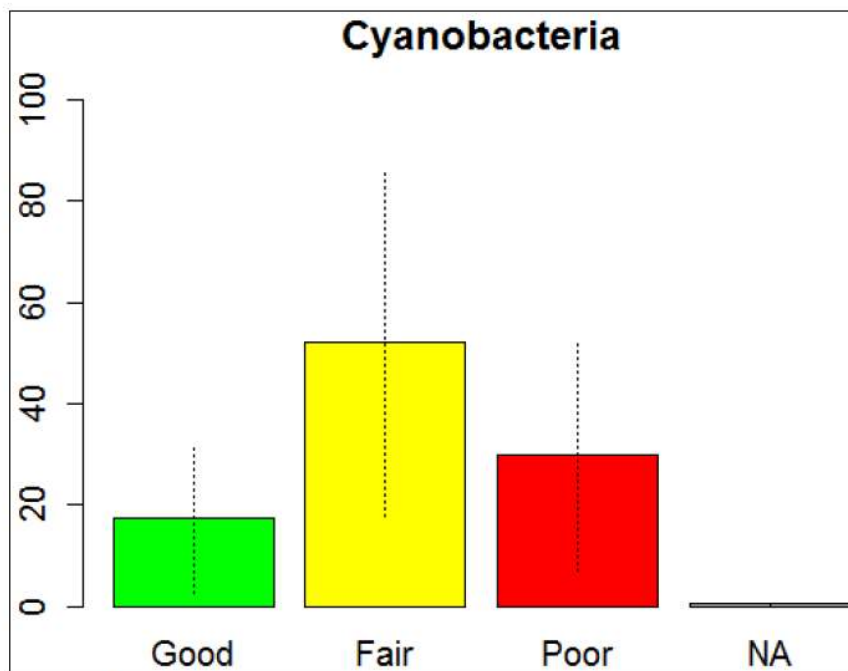


Figure V-31. Cyanobacteria Condition Category Estimates for Lakes in North Dakota. (Lakes designated as Not Assessed (NA) were not sampled for cyanobacteria.)

In addition to the Lake itself, located adjacent to the coulee channel on the northern most end of Hurricane Lake, on the south side of Highway 17, is a cattle watering dugout that gets flooded by the coulee inflows both during spring run off and during large spring or summer rain events. This dugout is located on **ND School Trust Land**, and as such deserves consideration in approving this plan. Will the presence of manure applications within less than 1,000 feet of this dugout affect the future value of this ND Trust Land?

Most of my comments are focused on Hurricane Lake as it faces the most imminent threat from NPS pollution as the land selected for manure management in Pierce County encompasses several waterways flowing directly into the Hurricane Lake. Depending on the yearly weather and the total water inflows, Hurricane Lake can be endorheic if inflows are short. This is problematic for the lake in that NPS pollution has the potential to build up rather than continue to flow through. IS DEQ confident that the environmental risks due to the CAFO's manure management are mitigated sufficiently by these plans to prevent a

cyanobacteria bloom in Hurricane Lake? The lake is frequented by waterfowl hunters and cyanobacteria has been known to kill waterfowl hunting dogs in ND already.

But the focus on Hurricane Lake does not minimize the longer-term potential impact as Hurricane Lake is a part of the Devils Lake Basin. Depending on the inflows, when it spills over it continues to flow south and east through a coulee and eventually into Devils Lake. This flow then transfers pollution into Devils Lake, which *is* considered endorheic.

Runoff from the land selected for manure management in Towner County flows into a coulee that flows to the south and east, eventually ending up in Lake Irvine. This also then flows into Devils Lake, further contributing nutrient pollution in the lake.

As DEQ considers this CAFO permit application, another consideration must be made: If more and more CAFOs are approved in the Devils Lake Basin when will the Manitoba and Canadian governments begin to raise more concerns about poor water quality when Devils Lake is pumped into the Sheyenne/Red River system?

And it bears noting that we have already heard from Spirit Lake Nation that they are deeply concerned about the pollution of the waters of Devils Lake, which is such an integral part of their spiritual and historical legacy.

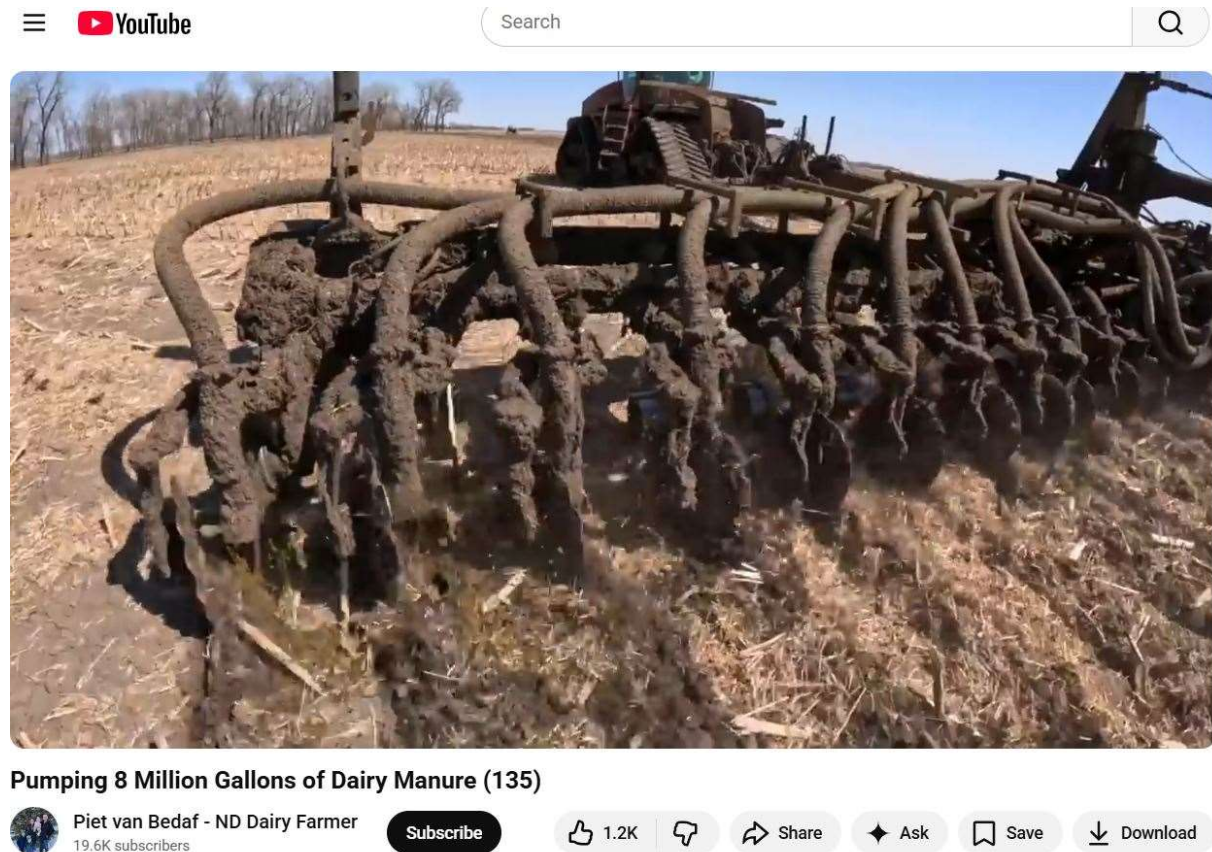
As permit from Dakota SAO II CAFO is evaluated, ND DEQ needs to be confident that it will meet all the very real concerns about NPS pollution that are contained in its **own** documents. Further, it needs to be confident that the implementation of the plan **will not create an NPS pollution** problem, which DEQ documents clearly state as a priority, for Hurricane Lake, Lake Irvine, and Devils Lake.

Concerns with the Plan

I have real concerns that the plan submitted by Dakota SAO, LLP is capable of preventing NPS pollution of this watershed. The first concern is the towed-hose manure injection system. To my knowledge there is no DEQ regulation stipulating the depth, manner, or mode of the manure injection system. Nor did I see any specifications in the manure management plan. Perhaps I have overlooked the documentation.

In the picture below, which is taken from a video clip of manure application on a dairy farm using a quite common towed-hose manure injection system, you can clearly see manure (greenish brown liquid) leaking out of the injection slot and only being partially covered up by the closing disks. Though some of the manure is injected, some of it ends up on the surface. That it does not all go into the ground is also evident by the caked up manure on the applicator. Because a towed-hose system is not easily shut off, the applicator must

either make a generous turn when approaching the end of the field or lift the implement out of the ground, applying liquid manure to the surface.



<https://youtu.be/Oz6glXLsa08?t=652>

The second concern are the extensive drainage ditches, or water conduits, on the land. Almost all of the wetlands in the fields selected for manure management are drained. This has been a significant land management change in the past 20 years and is easily observable on any Google earth or USDA FSA map. It is also a clear indicator that the land operators value Profit over Planet, as wetlands serve valuable ecosystem services above and beyond just holding water. What types of future actions by the CAFO and the land operators will there be if there is a needed choice between Profit or Planet?

Extensive drainage creates two other problems. The small depressions, which are likely already loaded with nutrients, which would normally hold water and allow sediments, including nutrients and manure organic matter, to settle out have been deliberately eliminated, reducing the holding capacity of water and increasing both the volume and velocity of run off. Volume and velocity increase the chance of soil, nutrients, and manure being carried off the targeted locations.

The second problem is the drainage ditches themselves. Based on personal observation, these ditches range from shallow 1-2 foot cuts to cuts that may be as much as 4 feet deep. In either case, the bottom of the drain is firm clay subsoil. The manure injection system will likely not penetrate the subsoil, or the applicator in order to reduce pull through the ditch, may lift the injection implement entirely out of the ground, applying the manure directly in the drainage ditch.

Because these ditches are highly engineered, rainfall or snowmelt will carry the manure directly into the coulees that drain the surface runoff to the watershed. One landowner suggested that the preferred management practice is to run a vertical till coultter in the ditches after application to work the manure into the soil. This now loosened soil means that not only the manure, but also the soil and attached nutrients would be at risk of flowing through these conduits directly into the watershed. This is especially where the increased volume and velocity of runoff due to the loss of the wetlands becomes even more problematic in transferring pollution.

My solution is a towed-**tank** application system that allows the operator to either shut off the applicator when going through the drainage ditch conduits, or to avoid them entirely. A towed-tank system can also be used for variable rate manure application, which I will address later in this document.

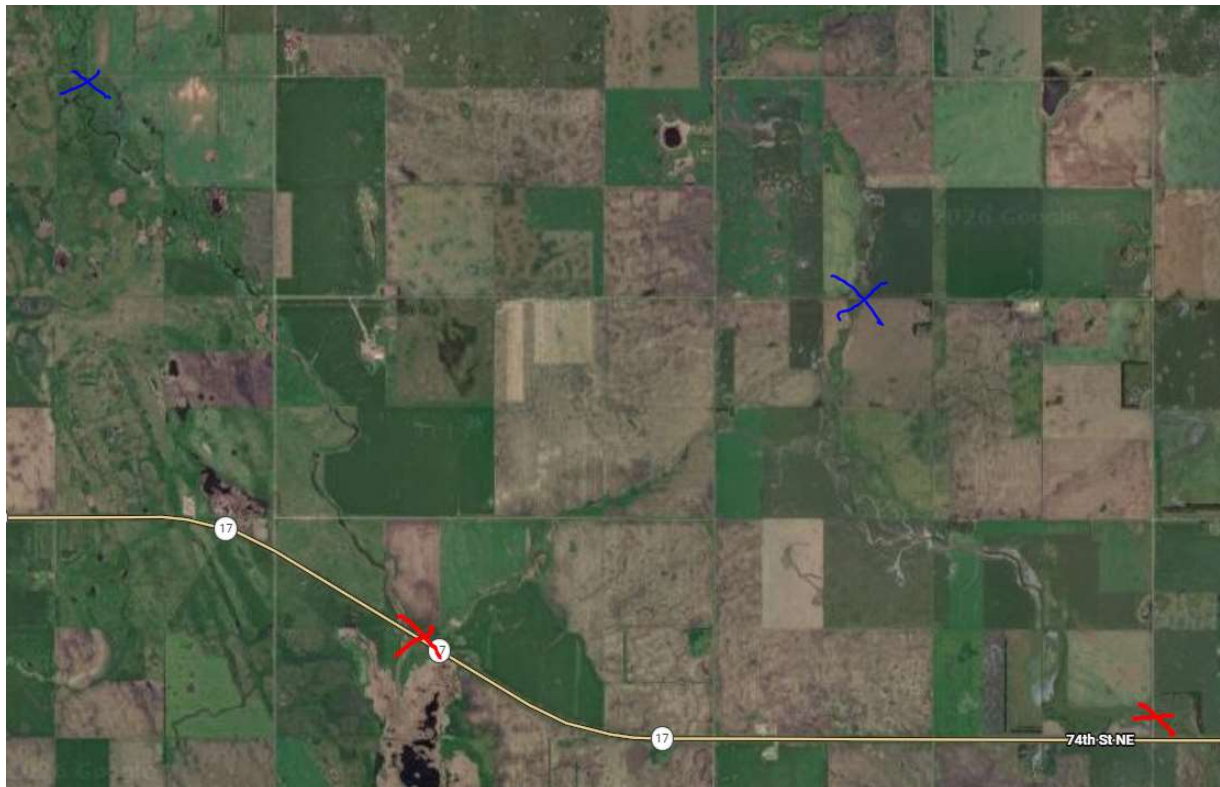
The easiest way to achieve the DEQ goals and mandates regarding NPS pollution is to reject the Dakota SAO II CAFO Permit in its entirety. This would clearly put the Planet, and the People who live on or near, or use these lakes for their livelihoods or for recreation, in first place.

If Profit is allowed to be a motive in this permit application, then DEQ should require a water quality monitoring program, beginning now, to assess if any pollutants are moving off the land and into the greater Devils Lake Basin watershed, such as we know is already happening in the Lake Alice watershed. Ironically, if this were a system where NPS pollution was suspected, the first thing that DEQ would authorize before implementing an EPA 319 watershed pollution abatement plan is a water quality study.

I suggest that if you approve this permit application you include a stipulation that water quality be continuously monitored and paid for by the CAFO operator and/or landowners. This could potentially be contracted with either or both the Pierce County Soil Conservation District and/or Towner County Conservation District, under the guidance of the DEQ NPS Pollution program.

The map below shows where the coulees flowing *into* the CAFOs manure management areas could be sampled, as marked in blue. The coulee *outflow* from the manure management area could also be easily sampled at the two locations marked in red.

Further, the results of these samples should be made publicly available as soon as they are released by the lab.



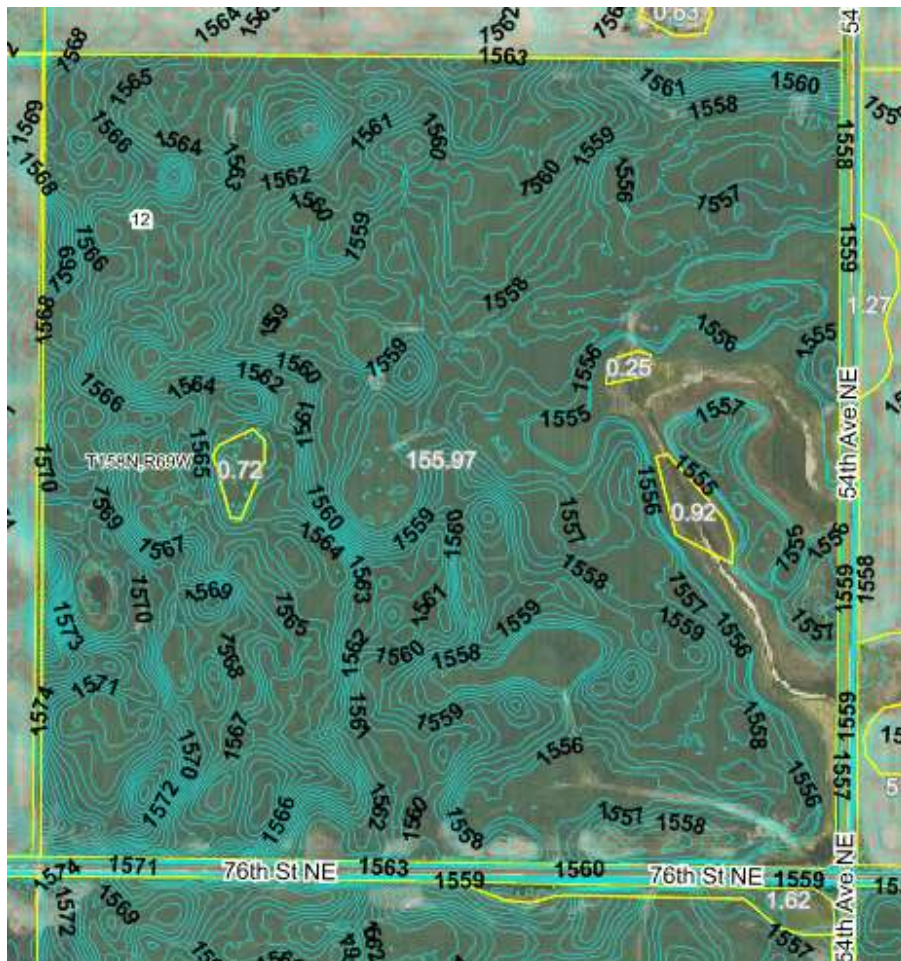
I completed an analysis of the fields included in the plan. Overall, I am pleased to see a much better effort to buffer water ways, especially the drainage ditches which serve as aggregators or conduits of surface water into the coulees than in the original proposal. There are some mistakes with permanent wetlands not excluded from application, and those have been noted. And there are some other areas of land that are low/non-productive soil that should be excluded from manure application because no crops are growing there to use the nutrients leaving it an elevated risk from moving off the field.

The maps are screen shots of presentations on AgriData/Surety Maps.

Field by Field Analysis for Buffers and Setbacks

#5 Union Township W ½ Section 11 – Setbacks look good. Remove the “At Discretion of applicator.” This may need additional buffer in the SW corner as the field is drained in that direction using road ditches and flows through the culvert to the SW and into the coulee.

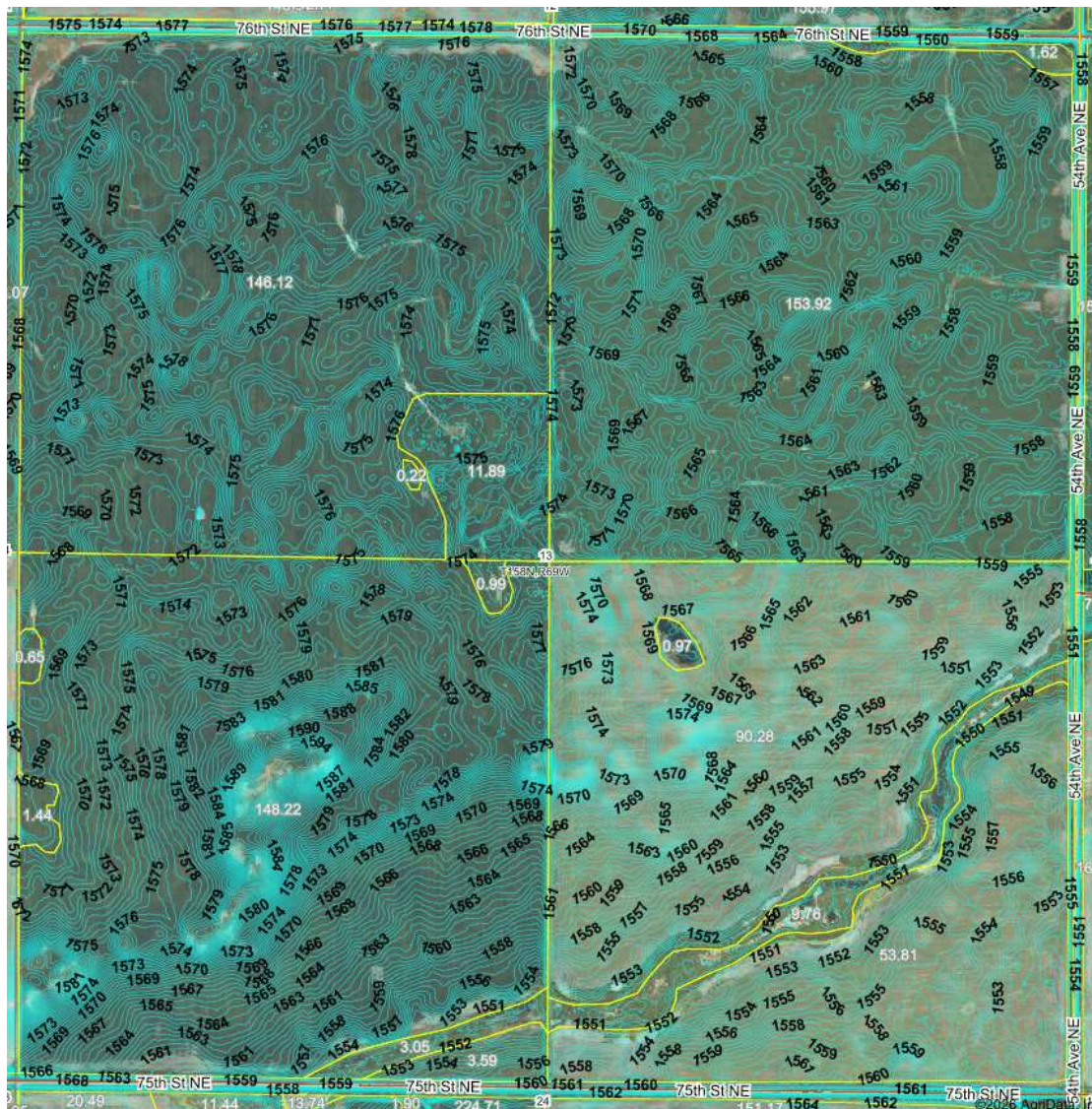
#10 Union 12 SE ¼. I am glad to see recognition of the drainage ditch in the SE corner and the wetland along the road. That drainage ditch reaches further to the west than what is shown as being buffered, so that should be extended. And in reality that wetland along the road is much larger than what is shown as exclusion. Below is the topographic map showing the size based on elevation is much larger than the exclusion zone. It is a large wetland somewhat concentrated by a large drainage ditch.



#14 Union Twshp W ½ and NE ¼ Section 13 – Setbacks look mostly good. Make sure the buffer on the coulee channel on the south side is a full 100 feet from the vegetated channel (not the centerline of the coulee) on both sides.

The road ditch along 54th Avenue on the NE ¼ has a drainage ditch cut into it and should be buffered as well. Actually, due to the salinity along the ditch, it should probably have permanent vegetative buffer.

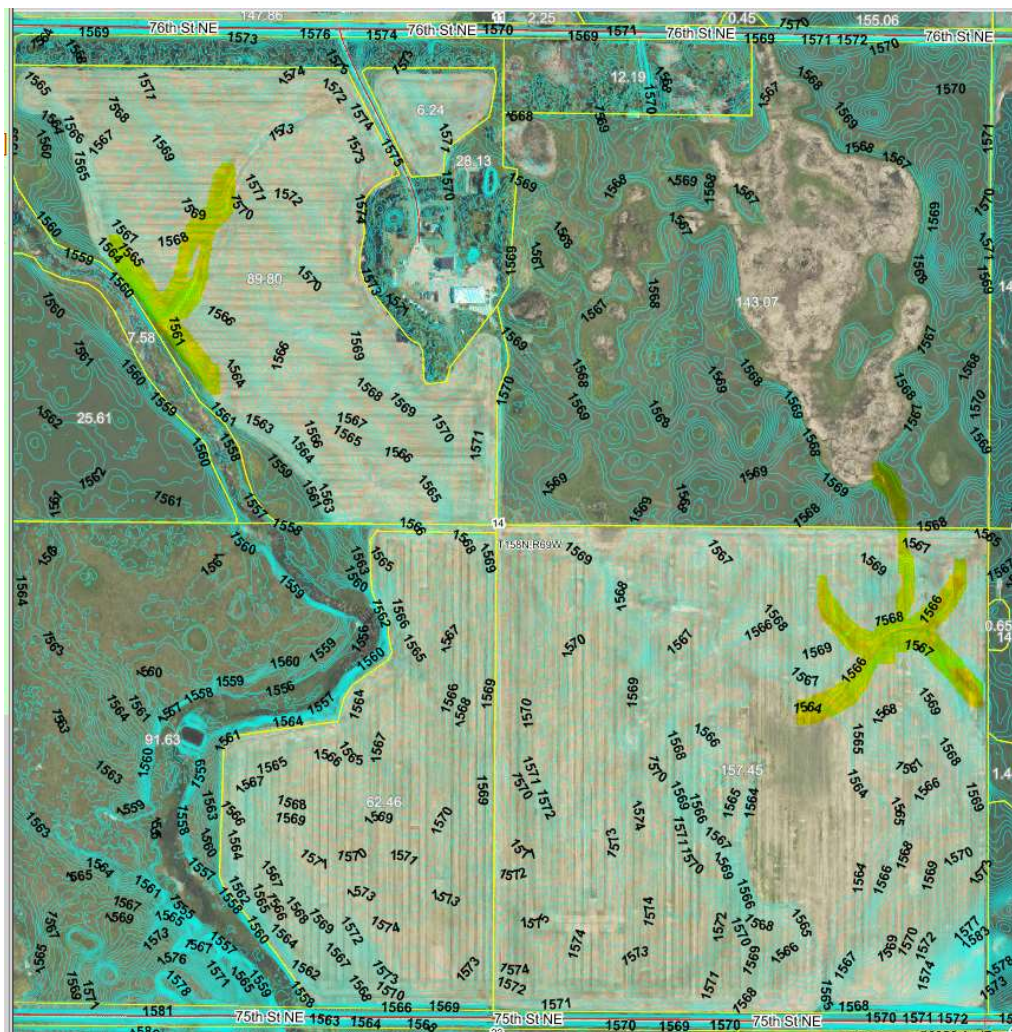
The SW corner has a steep hill that could erode carrying nutrients downhill and into the coulee. The application plan should perhaps include that manure needs to be applied on the contour of the hill. It also has subsurface drainage. Was this accounted for in the N and P application rates?



#1 and #11 Union 14 NW and S ½: There is a drainage ditch in the NW Qtr that should be buffered at least somewhat up from the coulee where it discharges into it.

#13 Grandpas should be fine as long as the buffers are expanded. The idea is that the buffer keeps nutrient away from the normal channel. And the channel includes the grass parts – the 100' buffers need to extend beyond that! Or he can add an additional 35 feet of vegetation.

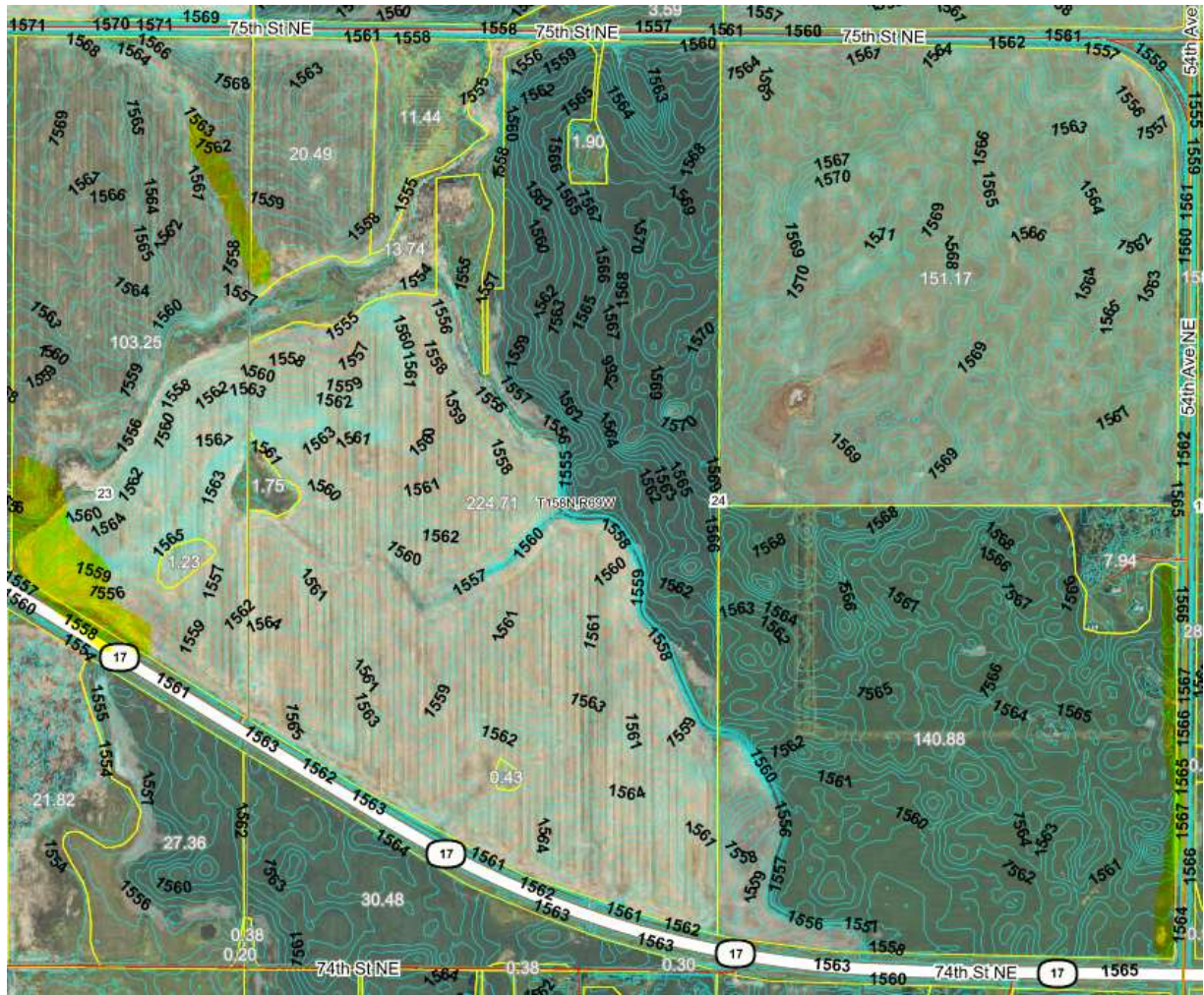
#9 Union 14 SE: Those setbacks from PEM1 Wetlands need to be mandatory not optional. Based on the topo maps, these are clearly areas where water during spring runoff or heavy rains is likely to pound. This is made even more likely by several drainage ditches in the NE corner of the quarter that drain into the largest wetland. It appears that there may also be drainage water coming from a wetland in the NE Qtr that has a US Fish and Wildlife easement on it.



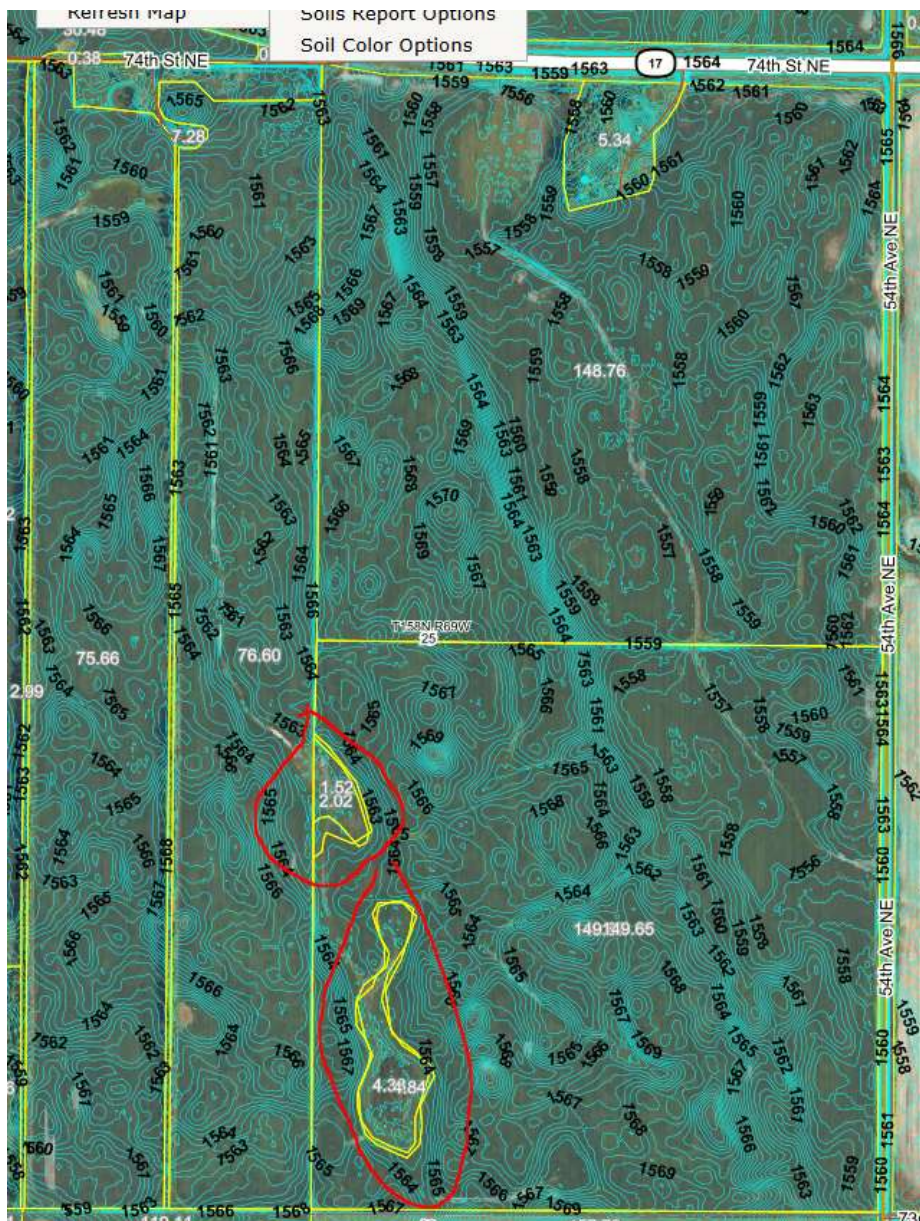
#6A & B Union 23: This is a problematic field. It sits right at the discharge of the coulee into Hurricane Lake. As such, the buffers need to be robust. It appears on the plan that they are not bad, but I would suggest the entire area where the coulee meets the road be excluded from manure application. The soil is very poor and there is often no vegetation growing there, so it would be a wasted application. This area should be put into permanent vegetation, as highlighted on the map below. There is also a fairly major drainage ditch in the northeast portion of this field that should be buffered at least in the area where it enters the coulee.

#1 Union 24 NW, #12 Union 24 S ½, and #1 and #2 Union 24 SE: I am very pleased to see the improvement of the buffer being added to the major drainage ditch running from the SE Qtr NW to the coulee as well as a join drainage ditch. Again, the buffers along the coulee need to be robust, and in several areas should be planted to permanent vegetation due to poor quality land. Note that there is also a drainage ditch cut into the road ditch on the west side of 54th Avenue that needs to be buffered. Further, this ditch is problematic as it would be the overflow outlet from the proposed retention pond in an existing wetland. The ditch empties into the Highway 17 road ditch, which is also problematic.

It is interesting that the operators did not deem the immediately adjacent NE Qtr of Section 24 to be worthy of their manure management program. These fields in the south half of Section 24 are the most at risk of transferring pollution to Hurricane Lake due to their adjacent location. It would make a lot more sense, from an environmental standpoint to approach Mr. Jeff Morrow, the owner of the NE Qtr of Section 24 and the SE Qtr of Section 113 and ask if his land can be used for manure application and remove an equivalent amount from the south and west of Section 24. From a land form perspective, these two quarters are also superior, with better natural drainage and a large coulee buffer in the SE Qtr of 13.

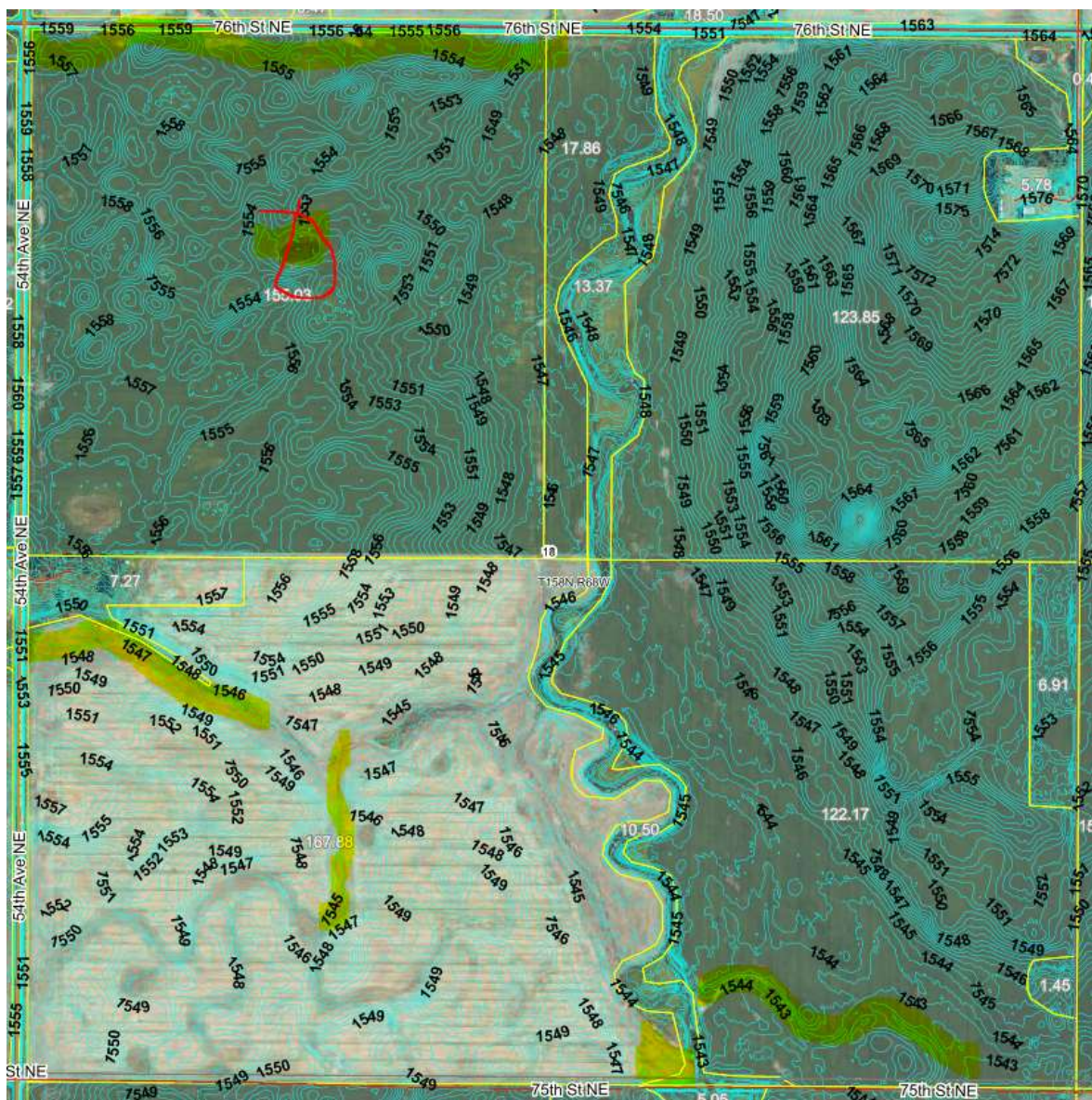


There is also a mistake in that there are two major wetlands along the west edge of the SE Quarter that need to be excluded from any manure application and buffered appropriately. I do not believe they are farmable, even though they have been drained, but they still need to be buffered.

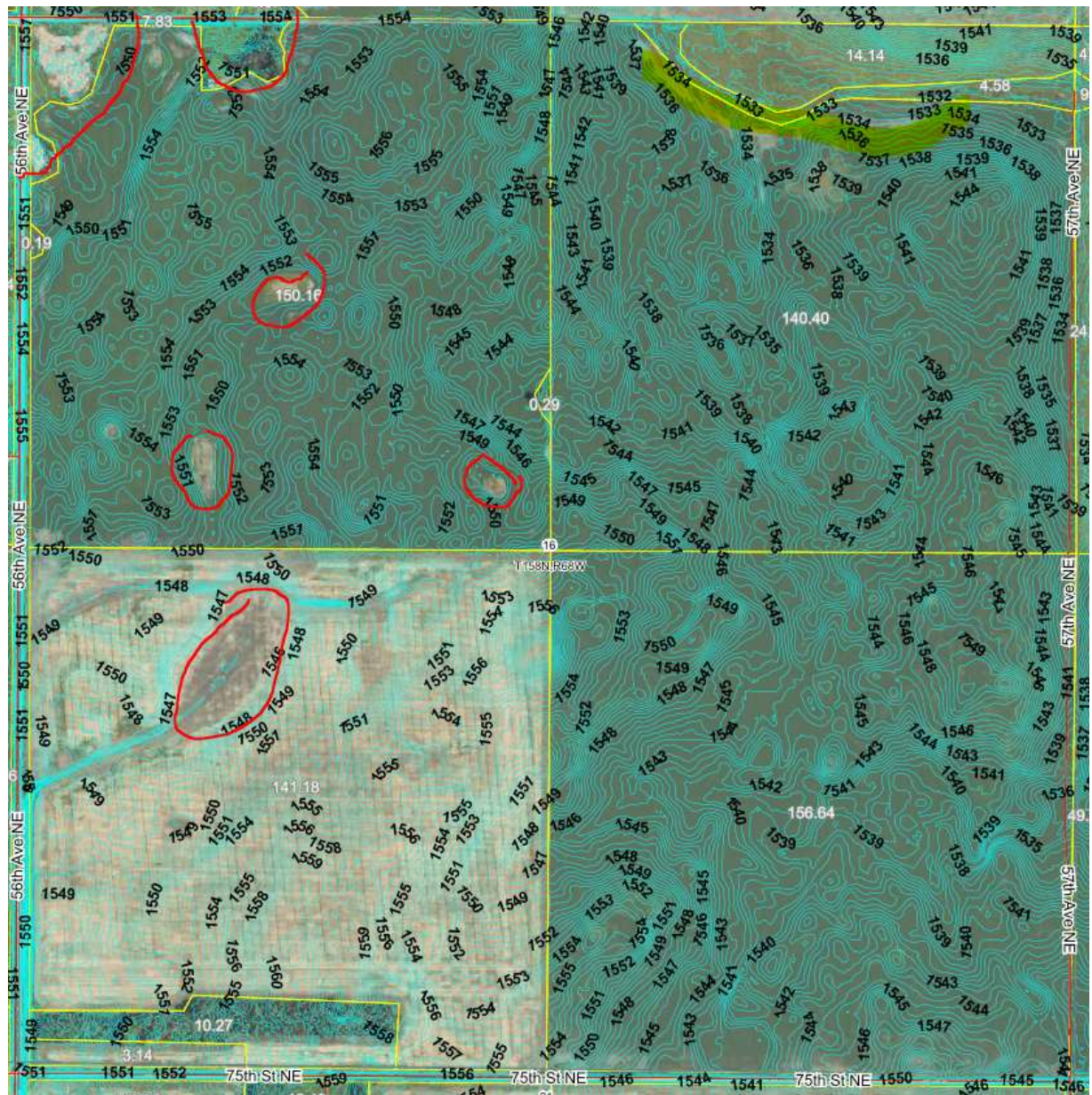


#1 Zion 18: There is a ditch in the road ditch on the north edge of this that carries water that drains in from Section 12 & 13 in Union Twshp. This should be buffered. There is also a permanent wetland in the middle of this field that should be excluded and buffered.

#1 Zion 18 S ½: The buffer on the coulee on the west edge needs to extend farther south, greater than the 100 feet. There is a large area of poor soil where nothing grows. It should be planted with permanent vegetation. See map. The drainage ditch flowing into the coulee from the south should be buffered for at least 300 feet south of the coulee buffer. The coulee on the south edge may have an alternative channel going to the east and then south.



This topographic map shows the area around 56th Ave NE and 57th Ave NE. The map features contour lines indicating elevation, with labels such as 1530, 1535, 1540, 1545, 1550, 1555, and 1560. A red boundary is drawn around a central area, and a blue line is drawn along the bottom edge. The map includes labels for 56th Ave NE, 57th Ave NE, 75th St NE, and 76th St NE. Elevation points are marked with numbers, and a red circle highlights a specific area. The map also shows a road network and a water body in the bottom right corner.



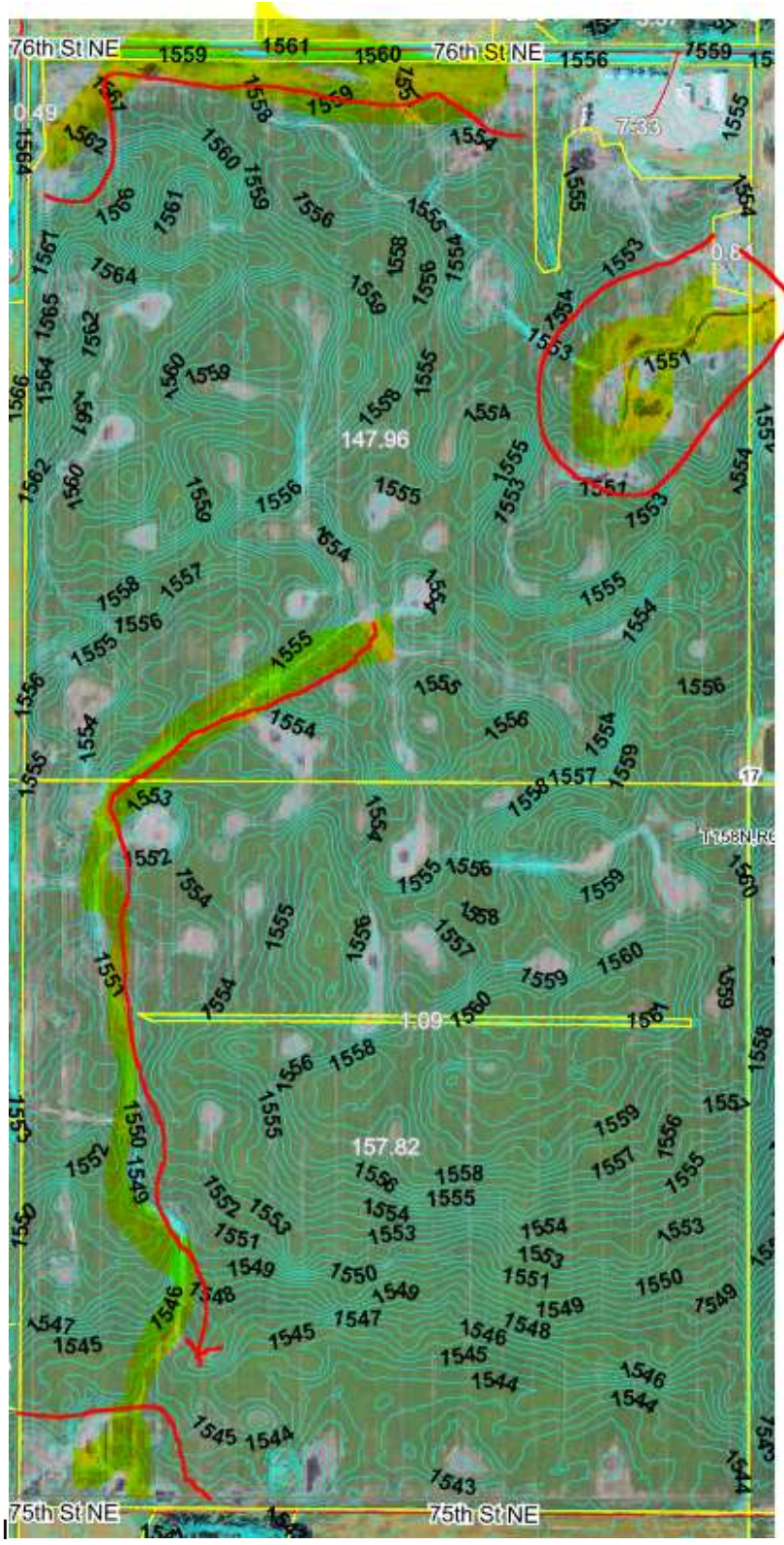
#1 and #2 Zion 21 NW and NE. The buffer on this looks good as it will also cover much of the drained wetlands. I think it should continue to extend to the east as it picks up a lot of field drainage east of where it is cut off on the proposed map.



#1 Zion 8 SW: There are some drainage ditches, but they are relatively small and scattered.

#1 and #2 Zion 17 NW and SW: There are no indicated buffers or exclusions on this map. But a closer look at a map from 2024 shows there likely should be (see below). There is extensive drainage on this half section, and a major conduit going down the west edge of the fields. It discharges across 75th Street NE and flows about 500 feet into the coulee.

There is an area south of the farmstead where there are drained wetlands and little crop growth. Additionally, there are areas on the north edge of the field where it appears that the vegetation is poor, indicating no crop growth to use applied nutrients, so this should also be buffered/excluded.



Discussion of Nitrogen and Phosphorus Application Rate Plans

The manure application plan really concerns me, especially on the fields that are close to Hurricane Lake and drain into it. Swine manure is different than dairy manure. We know that swine manure P₂O₅ (P) levels are at a considerably higher ratio to nitrogen (N) than other manure products. This is a problem because crop nutrient requirements are much higher for N than for P. And there are problems that come from this.

Below are comments under several subsections of the application plans.

3. Soil Sampling

The plan calls for composite soil sampling for the entire field, though several of these fields have varying landscape positions and slopes, along with wetlands (current or former) and adjacent land. Dr. David Franzen's research in the mid-2000s demonstrated the advisability of using "Management Zones" for nutrient inputs. Based on compilations of NDVI imagery from Agri-Data (attached) it is clear that there are probably at least three zones possible for each field in the plan. And the landowners have likely been using some form of zone management already for commercial fertilizer.

To be consistent with Best Management Practices, these fields should be soil sampled by Management Zones, with the manure applied at the lowest rate recommended. Variable rate of application of the remaining needed nutrients can then be applied. This prohibits the over-application of manure, and possible build up of nutrients that could leach, denitrify, or run off.

It should also be noted that the NDVI imagery clearly delineates low or no-yielding areas where no manure should be applied. These areas should be removed from the manure application plan if they have not already. And, better yet, planted to permanent vegetation.

5. b. Nutrient Budget for Land Application

"In addition, communications with the farmer(s) will ensure proper planning of commercial fertilizer applications with liquid manure applications so that excess nutrients will not be applied to the land."

While this makes logical sense, and in fact is the right thing to do, there is no ability of the CAFO operator to enforce this. Nor is there any reporting requirement by the landowner to DEQ, so there is no enforcement from DEQ either. One of the problems with Iowa water quality alleged by Dr. Chris Jones is that farmers do NOT comply with this concept and apply more fertilizer than needed after the manure application is made.

7. Land Application of Liquid Manure

“a.. Careful scheduling of the land application activities will reduce the threat of odor emissions to residents near the facility.

b. Days with low humidity are best for land application.

c. Applications on holidays and weekends when people are most likely to be outdoors will be avoided when possible.

d. The use of either dragline injection or tanker injection for land applications will be the method for liquid applications.”

DEQ needs to develop some reasonable set back requirements from residences for manure application, especially swine manure. There is a very interesting provision in the Manure Application Easement regarding air quality wherein the Grantor (landowner) provides an actual air quality easement to the Grantee (swine CAFO):

Air Quality Easement. Grantor hereby grants to Grantee an odor and air quality easement over the Grantor's Property. For the term of this Agreement, Grantor waives any claim it may have against Grantee based on odor from the Facility Site or based on exceedances of state air quality standards applicable to the operation and use of the Facility Site. Grantor expressly waives the application of any air quality separation distance under State Code and therefore waives application of requirements to “separated locations” under State Code. Grantor further acknowledges and agrees that this air quality easement shall specifically include any health protection ordinance or pursuant to any health protection ordinance enacted by the State and County.

In this case the Grantor has rights. But what about the family of Jeff Morrow who live adjacent, just to the north of, the planned application on the NW Qtr of Section 11? Grantee is seemingly acknowledging the odor (even exceeding ND Air Quality Standards) and possible health issues by requiring the Grantor to provide an easement. What are the rights of the adjacent landowners? Or the people travelling down Highway 17 when manure is applied? And where does a ND business entity get the right to claim an easement for air quality standards that may EXCEED the state's air quality standards or potential health protection ordinances?

While this easement is just for manure applications, it raises the same issue for odor and air quality emissions, including ones that could impact health, coming from the CAFO facility as well. Other than setbacks, what rights does ND law provide to neighbors and travelers affected by these emissions?

13. Setback Requirements.

“a. Manure shall not be applied any closer than 100 feet to any downgradient surface waters, open tile line intake structures, sinkholes, agricultural well heads or **other conduits** to surface waters.”

I assert that any drainage ditch that directly empties into a coulee should be considered a **conduit** for the purposes of meeting the requirements of this section.

“1. A 100’ setback to PEM1 type wetlands (as shown as the color green on field maps) will be enforced at the discretion of the applicator at time of application.”

I disagree that operators should have discretion on this set back. Because these wetlands are poorly drained (normal drainage including vertical translocation) it will be easy for nutrients to build up in them leading to eutrophication. These wetlands may also already have an abundance of nutrients in them. They may look dry, so the temptation of the applicator will be not only to ignore the buffer, but also to apply manure through the wetland itself.

14. Typical Crops Grown and Crop Yields for the Land Application Areas:

- “a. Spring Wheat - 70 bushels/acre
- b. Corn Grain - 140 bushels/acre
- c. Soybeans - 40 bushels/acre
- d. Edible Beans - 2,000 pounds/acre
- e. Barley - 80 bushels/acre”

While not entirely out of line, I would consider these to be aspirational yields. They are at the higher end of either the NASS or RMA county average yields. The yields in the RUSLE 2 CSP planning section (shown below) are more reasonable “average yields.” If the CAFO is going to use composite sampling, then these lower RUSLE 2 yields will be more accurate as a starting point.

RUSLE 2 CSP Record

<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
vegetations\Corn, grain	bushels	106.00
vegetations\Soybean, mw 30 in rows	bu	34.000
vegetations\Wheat, spring 7in rows	bushels	52.000
vegetations\Bean, pinto	lbs	1711.0

Adjust res. burial level: Normal res. burial
General yield level: Management set yield

These nutrient rates are reasonable though they are pushing it a bit.

Dakota SAO II, LLC

Nutrient Management Plan
For ND Livestock Operations

ND Nutrient Planner

Plan Year: 2026																			
Part 1: Field Information										Part 2: Estimated Nutrient Requirement							Part 3: Planned Nutrient Application		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Field #	Legal Description	Spreadable Acres	Irrigated	No-Till > 5 Years	No-Till < 5 Years	Current Soil Tested: Spring 2025				Previous Year		Planning Year (2026)		Nutrient Recommendation (SF-882)			Manure Application Based on	Type of Manure and Equipment Used	
						N lb/Ac (0-2')	Phosphorus (ppm) (Olsen) (0-6")	Potassium (ppm K)	Organic Matter	Crop	Crop Yield, lb, bu, ton/acre	Crop	Crop Yield, lb, bu, ton/acre	N (lb/A)	P ₂ O ₅ (lb/ac) (broadcast)	K ₂ O (lb/ac)		Type of Manure	Application Method
Union 11 F-5	Site 1	137.29				28	4	248	3.3	Edible Beans	2000	Corn, Grain	140	180	73	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 11 F-4	Site 1	129.54				43	3	230	2.8	Edible Beans	2000	Corn, Grain	140	165	80	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 12	Site 2	150.83				24	5	186	3.9	Soybean	40	Wheat	70	95	78	0	No Manure Application	Liquid Manure	Knife Injected
Union 13	Site 3	441.86				34	6	203	4.2	Wheat	70	Soybean	40	0	28	0	No Manure Application	Liquid Manure	Knife Injected
Union 14 NW	Site 4	86.55				31	5	316	3.2	Edible Beans	2000	Corn, Grain	140	177	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 14 SE	Site 4	144.49				29	5	315	3.5	Edible Beans	2000	Corn, Grain	140	179	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Grandpas	Site 4	62.4				29	5	315	3.5	Edible Beans	2000	Corn, Grain	140	179	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 23 F-6A	Site 5	59.9				32	3	318	4	Corn, Grain	140	Soybean	40	0	45	0	No Manure Application	Liquid Manure	Knife Injected
Union 23 F-6B	Site 5	31.07				18	8	331	4.2	Soybean	40	Wheat	70	172	37	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 24 NE Corner	Site 6	69.02				26	10	278	4	Wheat	70	Edible Beans	2000	74	20	0	No Manure Application	Liquid Manure	Knife Injected

But it is the use of the ND Phosphorus Index's alarming allowable phosphorous application rates of 91-150 pounds that creates the real challenge. Because swine manure is disproportionately high in P relative to N, there is a reasonable concern that fields for manure application will have an over-application of phosphorus, and this certainly seems to be the intention of this plan. It should also be noted that this Phosphorus Index tool has a specific disclaimer against using this tool in the manner used in this Plan:

“THE PHOSPHORUS INDEX IS NOT INTENDED TO BE AN EVALUATION SCALE FOR DETERMINING WHETHER LANDUSERS ARE ABIDING WITHIN WATER QUALITY OR NUTRIENT MANAGEMENT STANDARDS THAT HAVE BEEN ESTABLISHED BY LOCAL, STATE, OR FEDERAL AGENCIES.”

Phosphorus Risk Screening Tool								
If animal manure will be applied to this soil map unit, <u>and</u> soil test Phosphorus is > 20 ppm Olsen (or > 20 ppm Mehlich 3 or, > 30 ppm Bray) <u>and</u> runoff water reaches surface water, complete the Phosphorus Index below.								
North Dakota Phosphorus Index								
THE PHOSPHORUS INDEX IS <u>NOT</u> INTENDED TO BE AN EVALUATION SCALE FOR DETERMINING WHETHER LANDUSERS ARE ABIDING WITHIN WATER QUALITY OR NUTRIENT MANAGEMENT STANDARDS THAT HAVE BEEN ESTABLISHED BY LOCAL, STATE, OR FEDERAL AGENCIES.								
Field:	Total Soil Erosion by Wind and Water in (tons/acre/year)	Surface Water Risk & Rating	Soil Test Phosphorus (STP) in parts per million (ppm)	Phosphorus Fertilizer Application Rate (pounds P ₂ O ₅ /acre) from all Sources	Phosphorus (All sources) Application Timing/Method	Distance to Permanent Surface Water or Water Course	Best Management Practices	Phosphorus Index Score
n 11, F	Less than 2 tons/acre/year	N/A	Olsen <20 ppm	91-150 pounds/acre	Injected or Subsurface Applied	200-1000 feet	☐ Cover Crop ☐ Filter Strips ☐ Contour Buffer Strips ☐ Established No-till System (5 years or longer)	4
Union 11, Field 1	Less than 2 tons/acre/year	N/A	Olsen <20 ppm	91-150 pounds/acre	Injected or Subsurface Applied	20-100 feet	☐ Cover Crop ☐ Filter Strips ☐ Contour Buffer Strips ☐ Established No-till System (5 years or longer)	7

Also, I do not see an acknowledgement that there is drain tile in Union Section 13 fields, and possibly others, that is supposed to be included in the Index calculations.

The Nutrient Management Plan created by Dakota SAO, using high rates of manure application, results in P rates that are far in excess of the NDSU recommended rates as shown below. The Phosphorous Index tool used a Application Rate of 91-150 #s of P for calculation, yet the Nutrient Management Plan shows an intention to apply 190#s of P. The Phosphorous Index reports should be recalculated showing the actual planned application rate.

The Spring 2025 soil tests indicated the planned fields for manure application had P ppm levels ranging from 3 to 11 (one at 16), with the most common level being 5 ppm. Based on this, the P application rates would be 60 #s/acre for wheat and 78 #s/acre for corn. The 190 #s of P applied as manure, shown for a portion of the fields in the Nutrient Management Plan below, is more than double the highest NDSU recommended rate, also shown below. This suggests this manure application into “manure disposal plan” rather than nutrient management plan.

Table 25-10. Broadcast fertilizer phosphate recommendations for North Dakota for spring wheat and durum based on soil test (Olsen).

Soil Test Phosphorus, ppm				
VL 0-3	L 4-7	M 8-11	H 12-15	VH 16+
Pounds P ₂ O ₅ /acre				
90	60	35	20	15*

* Wheat seeding always should include a small amount of starter fertilizer in a band regardless of soil test. If starter fertilizer banding is not used, rates in H and VH categories should be zero.

Table 8-9. Corn P recommendations, East River, non-irrigated, pounds P₂O₅ per acre.

Olsen Soil Test Phosphorus, ppm				
VL 0-3	L 4-7	M 8-11	H 12-15	VH 16+
104	78	52	39	10

ita SAO II, LLC

**Nutrient Management Plan
For ND Livestock Operations
Plan Year: 2026**

ND Nutrien

Plan Year: 2026																																																	
Part 3. Planned Nutrient Application										Part 4. Nutrient Application										Part 5. Nutrient Balance																													
1						21		22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42	
Field #	Solids (lbs/ton,) ASAE, 2005, D 384.2			Liquid (lbs/acre-in), PART 651 Table 4-16			Manure Application			Maximum Manure Applied			Manure Applied			Manure Application (lbs/acre)		Commercial Application lbs/acre		Total lbs/acre		Crop Removal (lb/ac)		Soil Nutrient Balance																									
	Organic N	Ammonium N	P ₂ O ₅	Organic N	Ammonium N	P ₂ O ₅	N Credit, (Prior year and year before that) (lbs/acre)	Available N (First Crop Year) lbs/ton or lbs/acre-in	Tons/Acre or acre-in/acre	Tons or Acre-in	Tons or Acre-in per Field	Time Period When Manure Applied	N	P ₂ O ₅	N	P ₂ O ₅	N	P ₂ O ₅	Estimated N	Estimated P ₂ O ₅	Nitrogen Balance lb/ac*	P ₂ O ₅ Balance ppm																											
Union 11 F-S	0	0	0	510	210	524	0	342	0.53	0.37	50.8	Fall	127	194	53	0	180	194	126.2	49.0	81.8	11.2																											
Union 11 F-I	0	0	0	510	210	524	0	342	0.48	0.37	47.9	Fall	127	194	38	0	165	194	126.2	49.0	81.8	10.2																											
Union 12	0	0	0	510	210	524	0	342	0.28	0	0.0		0	0	95	78	95.3	77.9	87.5	39.2	31.8	6.9																											
Union 13	0	0	0	510	210	524	0	342	0.44	0	0.0		0	0	0	28	0	28.4	150.0	32.0	34.0	5.8																											
Union 14 NW	0	0	0	510	210	524	0	342	0.52	0.36	31.2	Fall	123	189	54	0	177	189	126.2	49.0	81.8	12.0																											
Union 14 SE	0	0	0	510	210	524	0	342	0.52	0.36	52.0	Fall	123	189	56	0	179	189	126.2	49.0	81.8	12.0																											
Grandpas:	0	0	0	510	210	524	0	342	0.52	0.36	22.5	Fall	123	189	56	0	179	189	126.2	49.0	81.8	12.0																											

This plan is a one year plan. When looking at the “Part 5: Nutrient Balance” column, it appears to show a significant build up in both N and P residual in the soil **after only one year!** (The top 2 rows are corn, row 3 is wheat, row 4 is soybeans, and rows 5-7 are corn.) The plan also includes soybeans and dry beans, which make for a good rotation with wheat and corn. However, the applied P needs for both of these crops in the following year is very low, meaning the bean rotation crops won’t be using much of the excess P that is applied. What this plan does NOT address then, is the potential buildup of P rates in the soil from repeated applications at these high rates.

Additionally, because this high rate of manure (and P) is applied uniformly across the field, areas of lower yield such as hilltops and areas adjacent to wetlands and waterways, will not be using either the N or the P at that projected crop removal rates. This means that some areas of the field will quickly have excessive rates of P in the soil. Further, the drained wetlands, already loaded with nutrients, will quickly be **over** loaded with nutrients due to these high rates of manure application. Again, a zone management approach to manure application would help to reduce these problems. Or applying manure at lower rates.

Another approach that can be used to reduce P in the manure is changes in feed and/or additives. This Plan does not present this a management strategy it intends to use.

Also, the problem with this much applied P (190#s/acre) is that it is organic, not mineral, P so it is much more susceptible to run-off. See my previous comments regarding drainage causing an increased volume and velocity of water run-off, carrying this organic P with it. And we know that excessive P levels are one of the main drivers of lake eutrophication and blue-green algae blooms. As this water quickly enters Hurricane Lake, the problems will begin.

Additional Environmental and Air Quality Comments

These comments were submitted to the Pierce County Planning and Zoning Committee.

The proposed site is farther east, closer to the county line road than I remember from the first application 20 years ago. This makes odor issues for the Sandy and Gary Larson family even more likely as the barns are now just barely 1.5 miles away from them. Would Summit be willing to move the barns a few hundred feet west so that there is room for a nice buffer of trees and tall grass prairie meadow between the barns and the road to absorb odors and disrupt wind flow? Further, would Summit be willing to add a tall grass prairie meadow to the south side of the barns and add additional trees to create a better odor barrier to traffic on Highway 17?

The NRCS and the Pierce County Soil Conservation District could help with plans for a tall grass prairie and appropriate tree selection. Further, the Soil Conservation District could secure taller trees (3-4 foot) from Lincoln-Oakes Nursey so that the buffer establishes faster.

It would seem from the site plan that was presented, there is sufficient room to leave a good deal of the existing trees in place on the north east corner of the property. (Note: It appears the plan has been revised to accomplish this.) It would be possible to create a windbreak renovation plan that allows new trees to be established so that older trees could eventually be removed, making the site more attractive as people travel down Highway 17 or on the county road. Additional trees on the north side of the property should also be planted. Again, the Soil Conservation District and NRCS would have resources to help plan a windbreak renovation and additional tree rows on the north side.

While an under-building manure storage system limits how much water gets captured compared to a lagoon, it does not eliminate the odor from the manure. Hog barns typically have high capacity ventilation fans, and this will be quite important where manure is stored under the slatted floor. I worked in such a barn (though much smaller) when I was a teenager and there is no getting around the fact that there is an odor! Because the fans are pumping the exhaust air into the atmosphere, they are a continuous source of odors and possible pathogens. This could potentially impact the Sandy and Gary Larson farmstead. Would Summit be willing to place organic filters (straw bales) to capture some of the exhaust air and reduce the odors? This is one of the things the ND Pig Cooperative barns located along Highway 2 west of the Larimore rest area finally did to reduce odor from their barns.

I have a technical concern with the location of the storm water/drain tile basin. It appears it is to be constructed in or near an existing wetland. The problem is that when it overflows it will flow down the county road ditch (which has been deepened and shaped by the landowner) into Highway 17 right away. I am not sure you want that to happen. Instead, the basin should be on the southwest corner of the site, so overflow goes into an existing field drain to a major drainage channel before exiting to the coulee and into Hurricane Lake.

In summary, Summit should be asked if it is willing to stipulate the following in its plan:

- Organic fan filters composed of continually changed straw bales.
- Prairie meadow surrounding the site, particularly on the south and east.
- Additional trees of a variety of species on the south and east sides to create wind and odor disruption along with increasing the site attractiveness.
- Renovation, rather than removal, of a significant portion of the existing windbreak in the northeast corner, along with additional trees on the north edge of the property

- Relocate the storm water/drain tile basin to the southwest corner of the site.

These changes would create a much more attractive facility site, especially since it is located so close to public viewing travelling on Highway 17. It also recognizes the importance of People and the Planet as part of the project.



Conclusion

In conclusion, while I support increased animal agriculture in North Dakota, there are better locations for these large CAFOs to be built. I can not support this project as represented by these plans because of the facility proximity, and especially the fields for manure application proximity, to the north end of Hurricane Lake. There is a very high likelihood that manure will move from the fields into the waterways that run into the lake, contaminating the lake. I am very skeptical the owners, operators, or landowners will work hard to protect the environment, the Planet, or the People. Rather, I am quite sure they will work to maximize Profit over all other concerns.

Our last, and only, line of defense is the ND Department of Environmental Quality to both ensure that all concerns are met to prevent pollution in the first place and are regularly

monitored to bolster the regulatory impact on this plan. With the apparent preference of the ND Industrial Commission members to support business and Profits first, I fear that the political pressure to use a “Sargeant Schulz” approach to regulating animal agriculture is incredibly high.

I support animal agriculture in ND that enhances our communities and the overall well-being of the People of our region. I think the additional jobs that animal agriculture can bring would be a tremendous asset to our communities. Employees and their families can add children to our school systems and provide staff for other businesses, along with their shopping and community involvement. Carrington has found that a 1,600 head dairy operation has been a real benefit and by all accounts is being managed in a sound environmental manner with great respect from the local community.

There is an excellent swine barn example, too, in this article *8 reasons why you never heard of this new North Dakota hog farm*, Farm Progress, November 2017. Some comments in the article stand out: “They picked a good site.” “They worked closely with the neighbors.” “They listened to people from the community. Developers agreed to make changes in the project to address people’s concerns.” “They also beefed up biosecurity measures and aesthetics.” “They did a good job of explaining who they are.” This Ransom County cooperative worked hard to balance People, Planet, and Profit by focusing on the first two, even if it meant a little less Profit. This is not what we have seen from Dakota SAO II and the people involved!

<https://www.farmprogress.com/livestock/8-reasons-why-you-never-heard-of-this-new-north-dakota-hog-farm>

One of the philosophies that we have adopted on our farm is a 100-year time horizon. How will what we do today influence our land and natural resources for the next 100 years? It seems like a long time, but if my father were still alive, he would be having his 99th birthday in a few days. Much of the land that we farm has been in our family for over 130 years. 100 years is a realistic timeframe to consider the impact of our actions.

I have been told that Native Americans use a “seven generations” framework for evaluating how today’s decisions affect future generations. I like that, especially since we are working to be the stewards of this land once occupied by Native Americans. Seven generations is a little more than 100 years, so these two philosophies are quite similar.

In a few short weeks, ND will open an incredible Theodore Roosevelt Presidential Library. This library was designed to reflect the ideals of our 26th president, and I hope to experience it someday.

One of the quotes that I hope to find prominently displayed is this one:

“Here is your country. Cherish these natural wonders, cherish the natural resources, cherish the history and romance as a sacred heritage, for your children and your children’s children forever. Do not let selfish men or greedy interests skin your country of its beauty, its riches, or its romance.” Theodore Roosevelt

All three of these philosophies are similar. They focus on the incredible importance of People and the Planet we all live on together. The pursuit of Profit is not dismissed, only the pursuit of it by “selfish men or greedy interests.” I would define such men by their lack of concern for People and Planet.

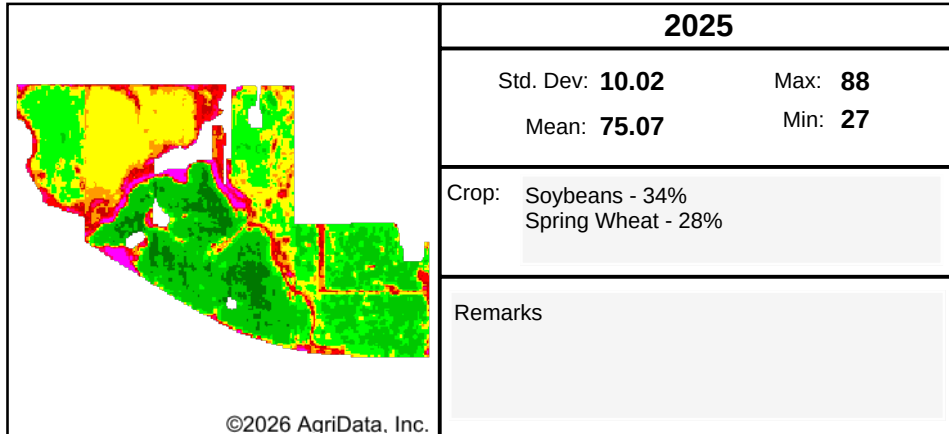
People, Planet, Profit – these three remain. The decision of the ND Department of Environmental Quality will have an impact not only today, but for the next seven generations. Choose wisely.

Thank you for your consideration of our comments.

Sincerely,

Paul and Diane Overby,
Lee Farms
5237 78th Street NE
Wolford, ND 58385
701-351-0913
lffpc@utma.com

Max Plant Growth(NDVI) Multi-year



Client:

Farm:

Field:

Date: 4/30/2026

Acres: 561.11

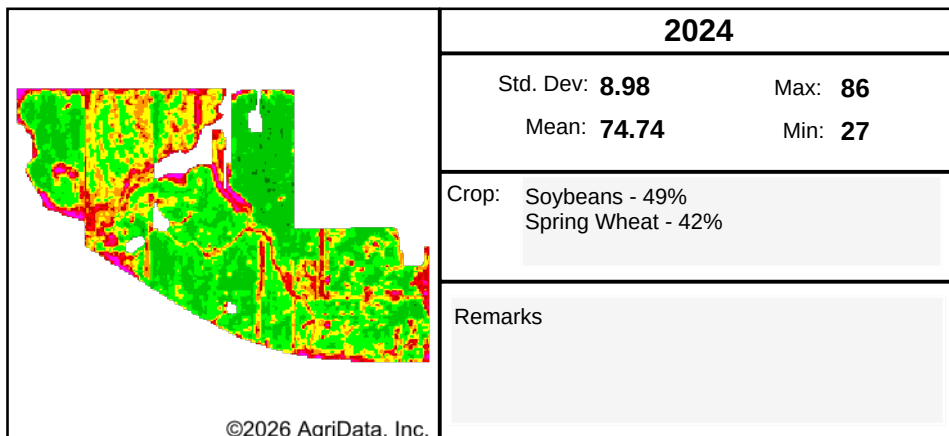
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County: Pierce

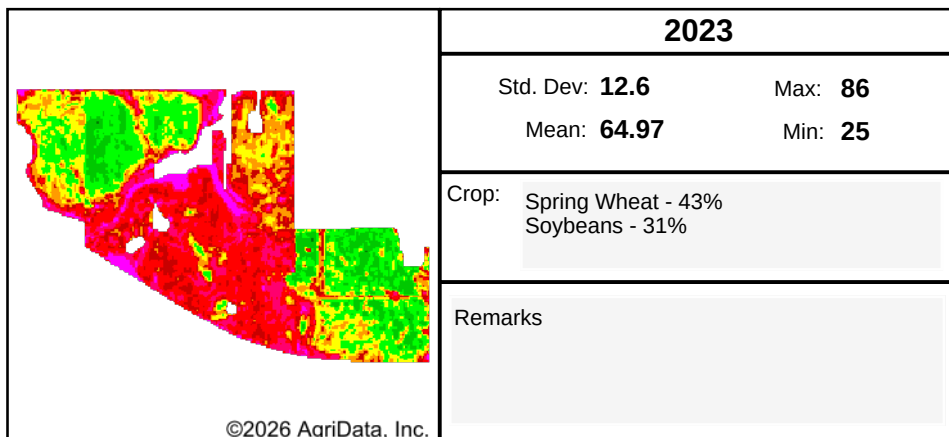
Location: 24-158N-69W

Township: North Pierce

Boundary Center: 48.494234, -99.509668



Low RELATIVE BIOMASS High	Value
	86 - 120
	81 - 85
	76 - 80
	71 - 75
	66 - 70
	61 - 65
	51 - 60
	41 - 50
	21 - 40
	1 - 20
	0 - 0



Soils Weighted Average

Productivity Index: 73.5

Elevation (feet)

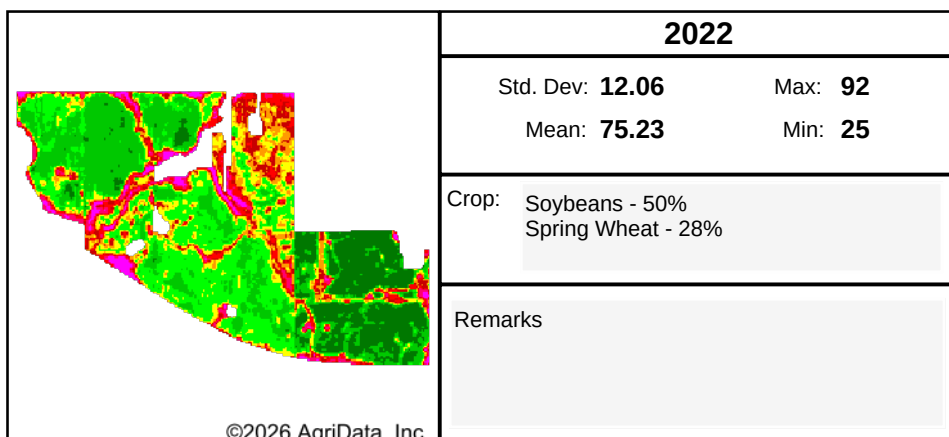
Min: 1,552.8

Max: 1,574.4

Range: 21.6

Mean: 1,562.4

Std Dev: 3.9



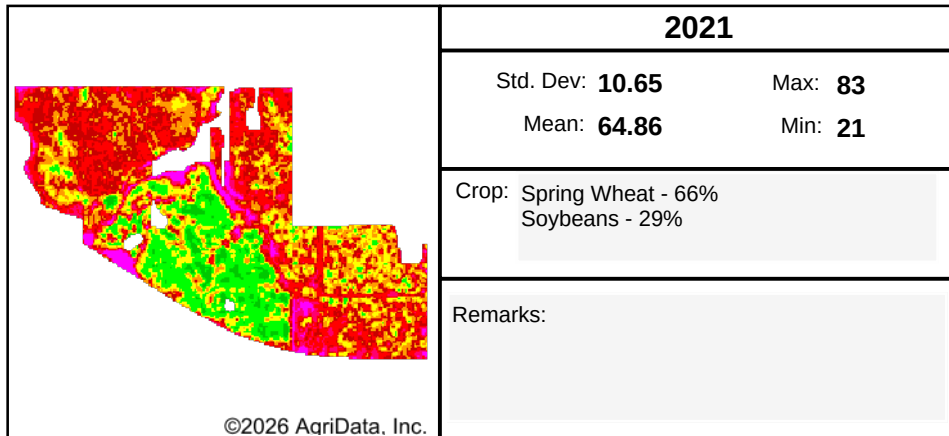
Maps Provided By:



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www.AgriDataInc.com

Max NDVI Multi-year



Client:

Farm:

Field:

Date: 4/30/2026

Acres: 561.11

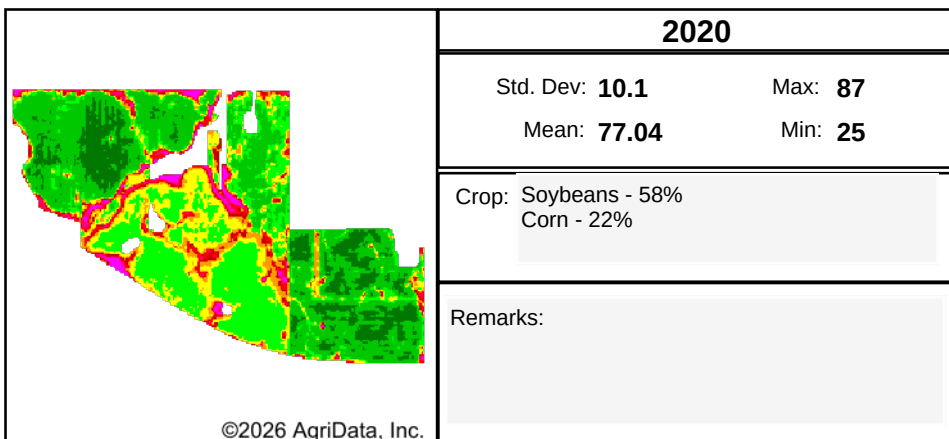
State: ND

County: Pierce

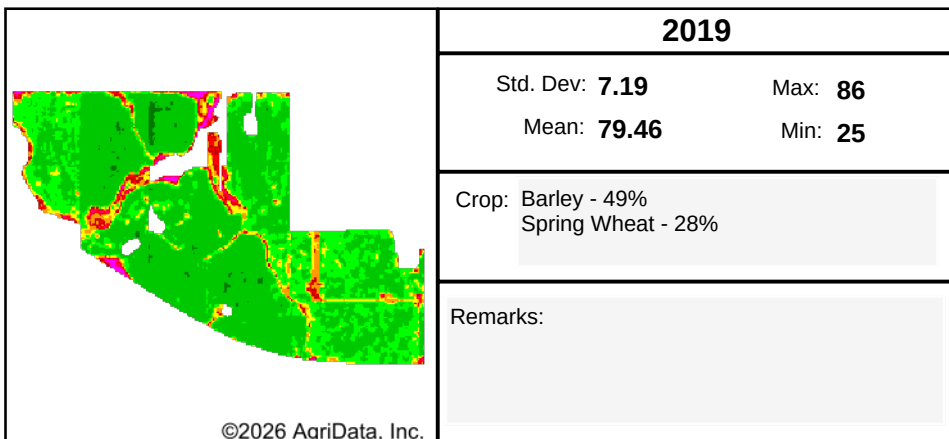
Location: 24-158N-69W

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Low Relative Biomass High	Value
	86 - 120
	81 - 85
	76 - 80
	71 - 75
	66 - 70
	61 - 65
	51 - 60
	41 - 50
	21 - 40
	1 - 20
	0 - 0



Soils Weighted Average

Productivity Index: 73.5

Elevation (feet)

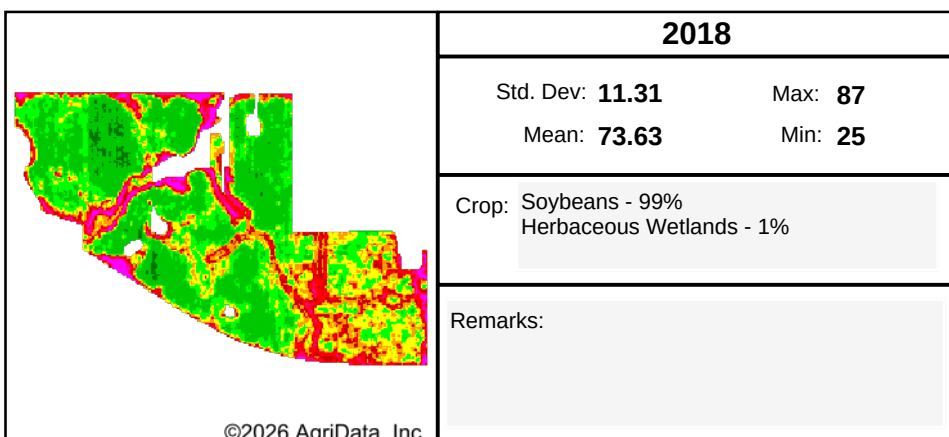
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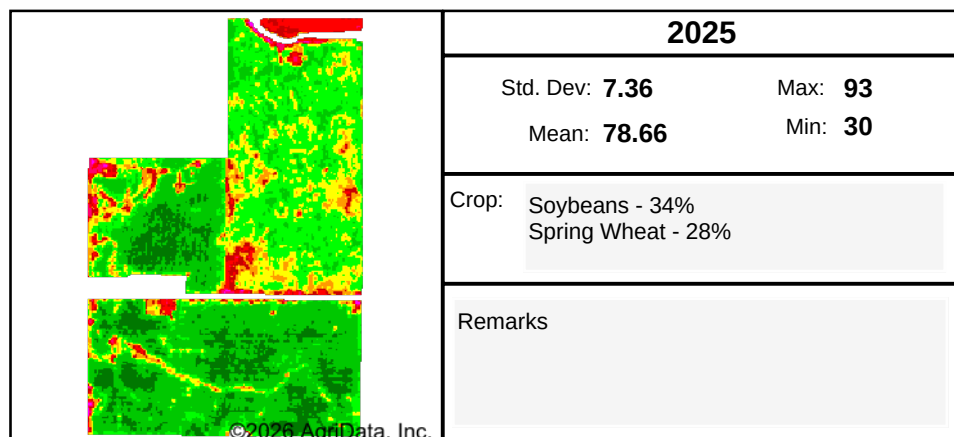
Std Dev: 3.9



Maps Provided By:



Max Plant Growth(NDVI) Multi-year



Client:

Farm:

Field:

Date: 4/30/2026

Acres: 761.95

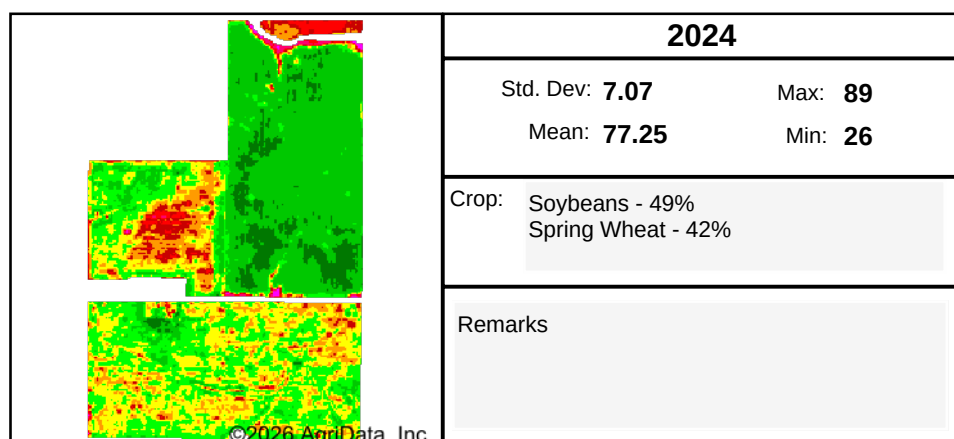
State: ND

County: Towner

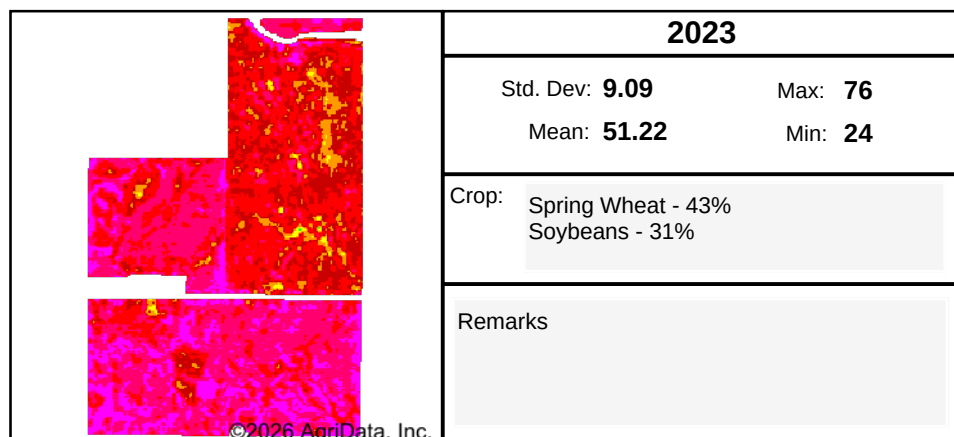
Location: 16-158N-68W

Township: Zion

Boundary Center: 48.504891, -99.438674



Low RELATIVE BIOMASS High	Value
	86 - 120
	81 - 85
	76 - 80
	71 - 75
	66 - 70
	61 - 65
	51 - 60
	41 - 50
	21 - 40
	1 - 20
	0 - 0



Soils Weighted Average

Productivity Index: 73.1

Elevation (feet)

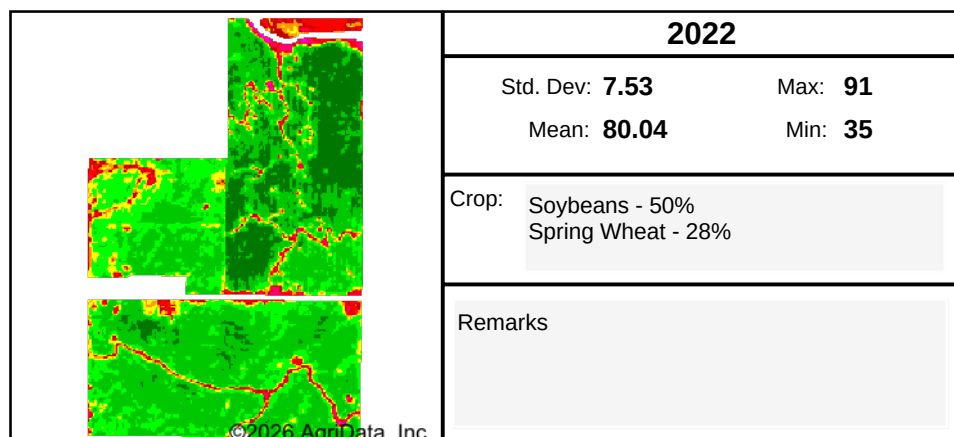
Min: 1,531.3

Max: 1,563.3

Range: 32.0

Mean: 1,544.8

Std Dev: 6.1



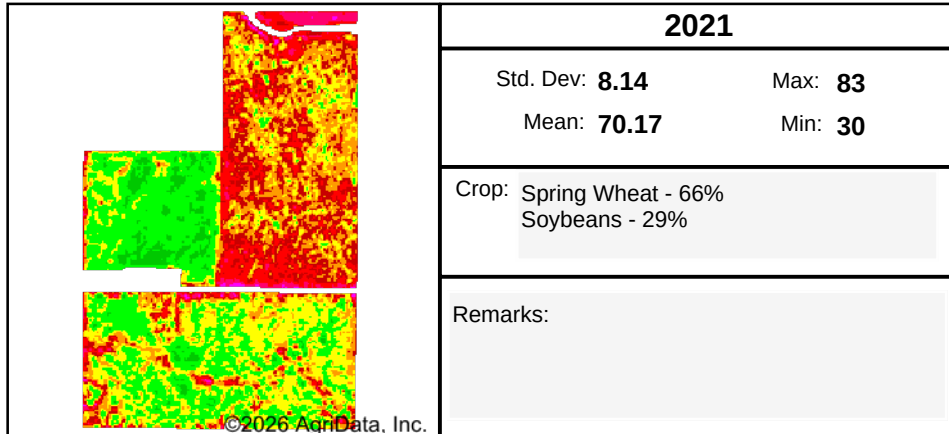
Maps Provided By:



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www.AgriDataInc.com

Max NDVI Multi-year



Client:

Farm:

Field:

Date: 4/30/2026

Acres: 761.95

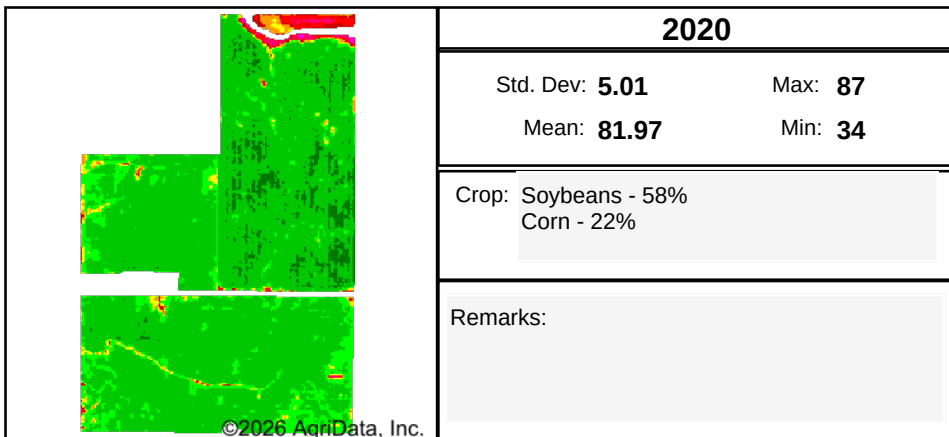
State: ND

County: Towner

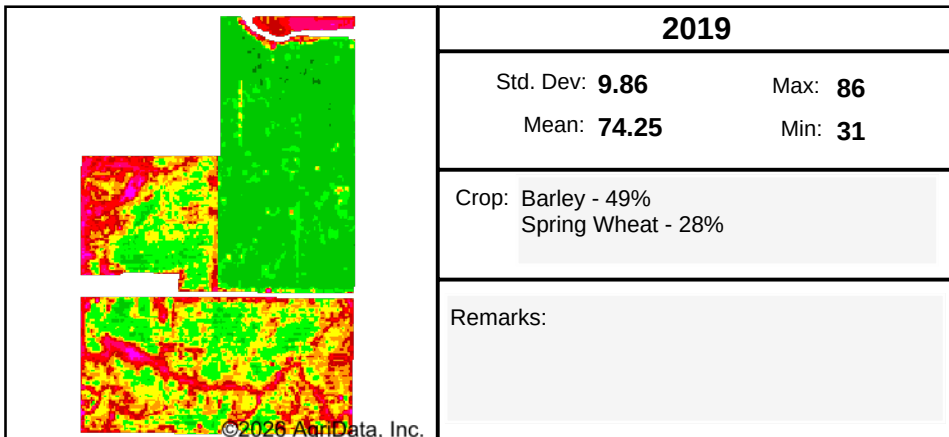
Location: 16-158N-68W

Township: Zion

Boundary Center: 48.504891, -99.438674



Low Relative Biomass High	Value
	86 - 120
	81 - 85
	76 - 80
	71 - 75
	66 - 70
	61 - 65
	51 - 60
	41 - 50
	21 - 40
	1 - 20
	0 - 0



Soils Weighted Average

Productivity Index: 73.1

Elevation (feet)

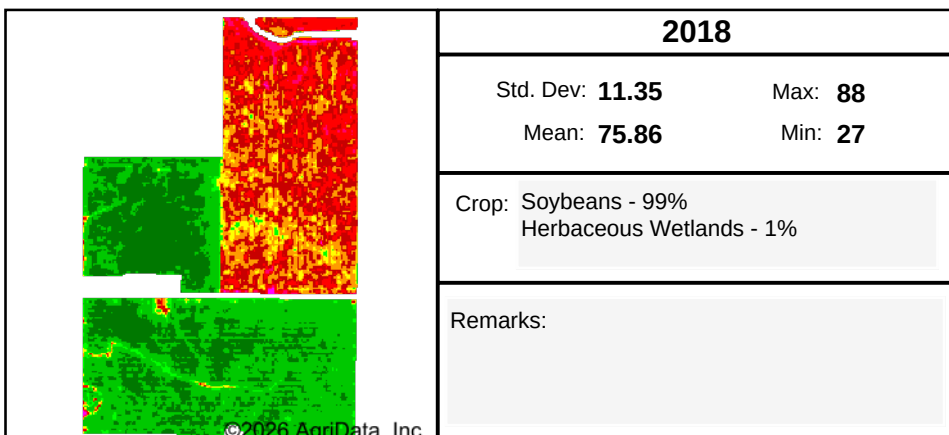
Min: 1,531.3

Max: 1,563.3

Range: 32.0

Mean: 1,544.8

Std Dev: 6.1



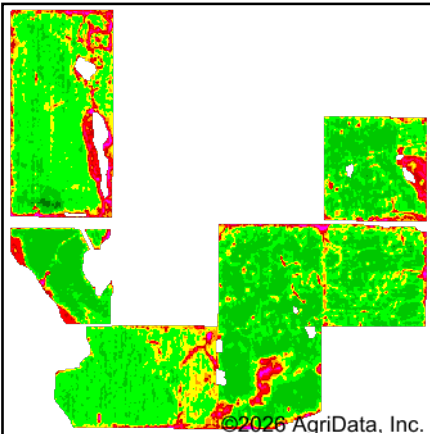
Maps Provided By:



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Max Plant Growth(NDVI) Multi-year



2025	
Std. Dev: 7.68	Max: 87
Mean: 76.67	Min: 27
Crop: Soybeans - 34% Spring Wheat - 28%	
Remarks	

Client:

Farm:

Field:

Date: 4/30/2026

Acres: 1235.29

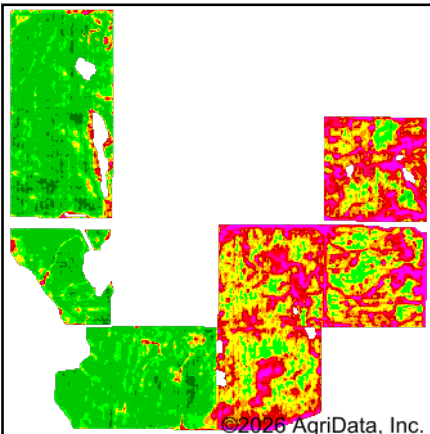
State: ND

County: Pierce

Location: 12-158N-69W

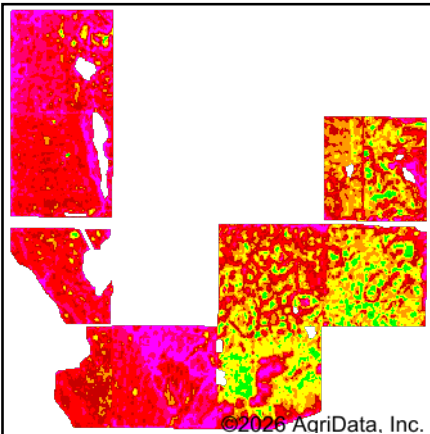
Township: North Pierce

Boundary Center: 48.515989, -99.514987



2024	
Std. Dev: 13.18	Max: 89
Mean: 71.84	Min: 24
Crop: Soybeans - 49% Spring Wheat - 42%	
Remarks	

Low RELATIVE BIOMASS High	Value
	86 - 120
	81 - 85
	76 - 80
	71 - 75
	66 - 70
	61 - 65
	51 - 60
	41 - 50
	21 - 40
	1 - 20
	0 - 0



2023	
Std. Dev: 11.12	Max: 82
Mean: 58.73	Min: 26
Crop: Spring Wheat - 43% Soybeans - 31%	
Remarks	

Soils Weighted Average

Productivity Index: 70.9

Elevation (feet)

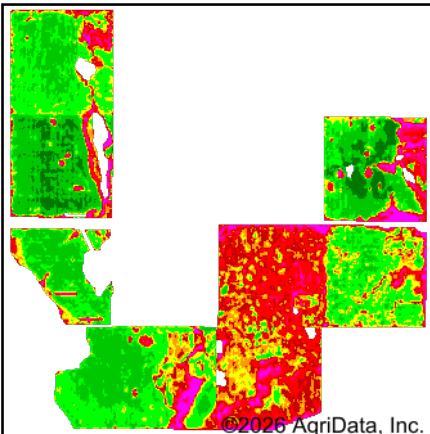
Min: 1,551.0

Max: 1,598.7

Range: 47.7

Mean: 1,570.0

Std Dev: 7.0



2022	
Std. Dev: 12.38	Max: 90
Mean: 71.59	Min: 23
Crop: Soybeans - 50% Spring Wheat - 28%	
Remarks	



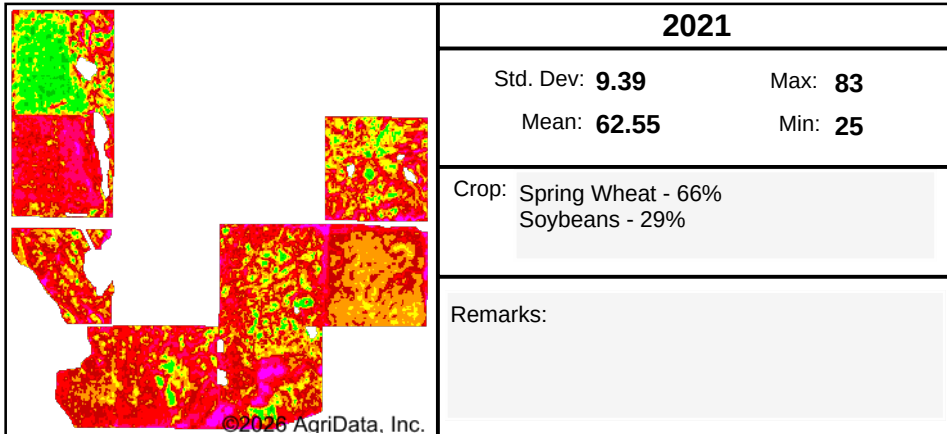
Maps Provided By:



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Max NDVI Multi-year



Client:

Farm:

Field:

Date: 4/30/2026

Acres: 1235.29

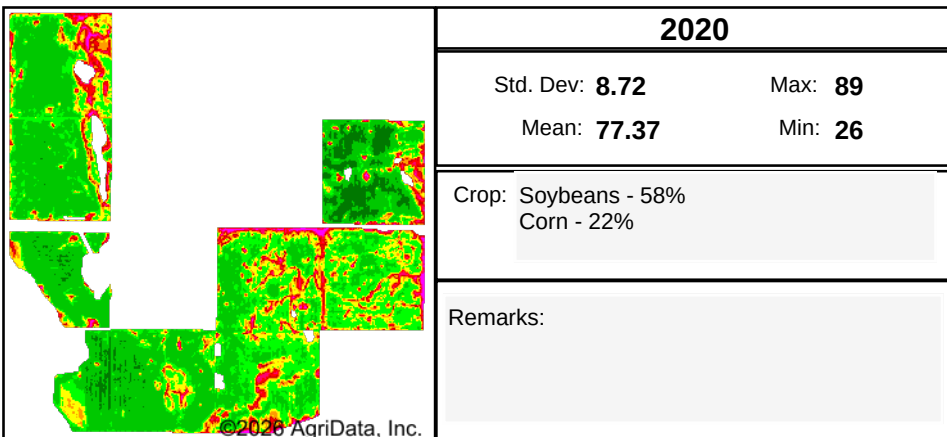
State: ND

County: Pierce

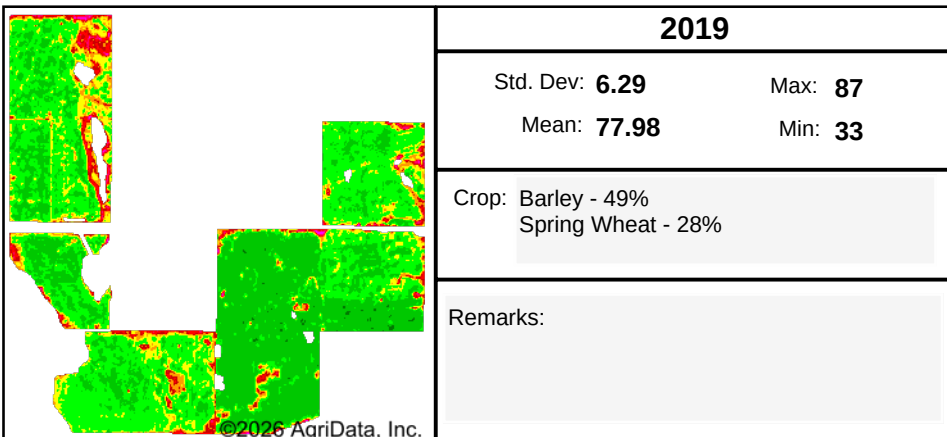
Location: 12-158N-69W

Township: North Pierce

Boundary Center: 48.515989, -99.514987



Low Relative Biomass High	Value
	86 - 120
	81 - 85
	76 - 80
	71 - 75
	66 - 70
	61 - 65
	51 - 60
	41 - 50
	21 - 40
	1 - 20
	0 - 0



Soils Weighted Average

Productivity Index: 70.9

Elevation (feet)

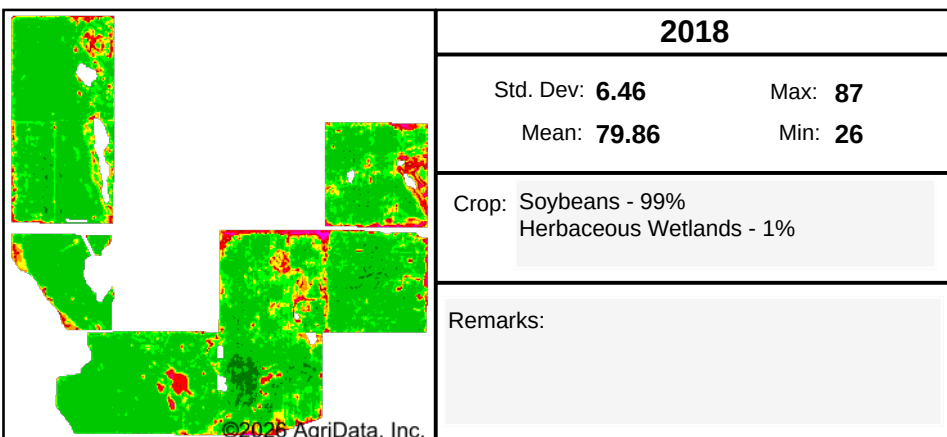
Min: 1,551.0

Max: 1,598.7

Range: 47.7

Mean: 1,570.0

Std Dev: 7.0



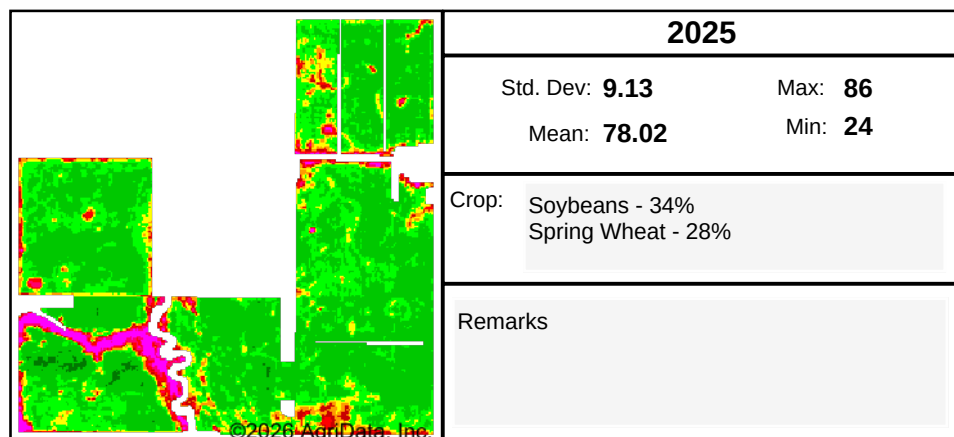
Maps Provided By:



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Max Plant Growth(NDVI) Multi-year



Client:

Farm:

Field:

Date: 4/30/2026

Acres: 903.06

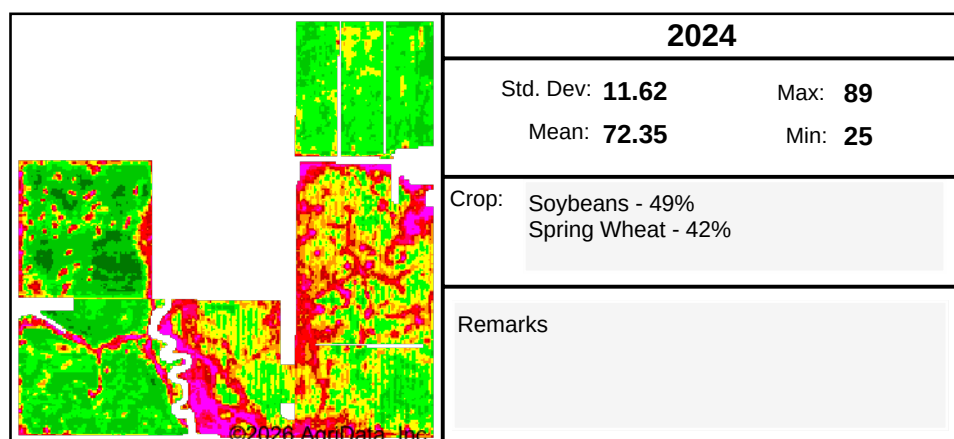
State: ND

County: Towner

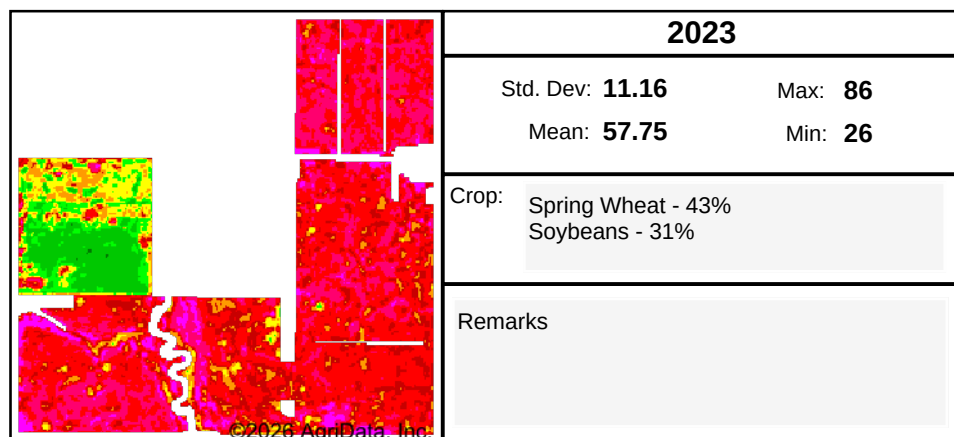
Location: 18-158N-68W

Township: Zion

Boundary Center: 48.512193, -99.476800



Low RELATIVE BIOMASS High	Value
	86 - 120
	81 - 85
	76 - 80
	71 - 75
	66 - 70
	61 - 65
	51 - 60
	41 - 50
	21 - 40
	1 - 20
	0 - 0



Soils Weighted Average

Productivity Index: 70.3

Elevation (feet)

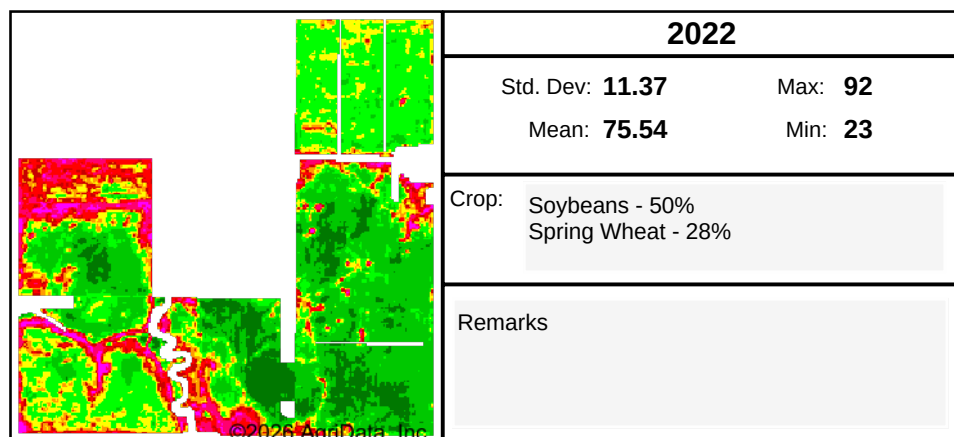
Min: 1,541.5

Max: 1,582.3

Range: 40.8

Mean: 1,554.6

Std Dev: 7.7



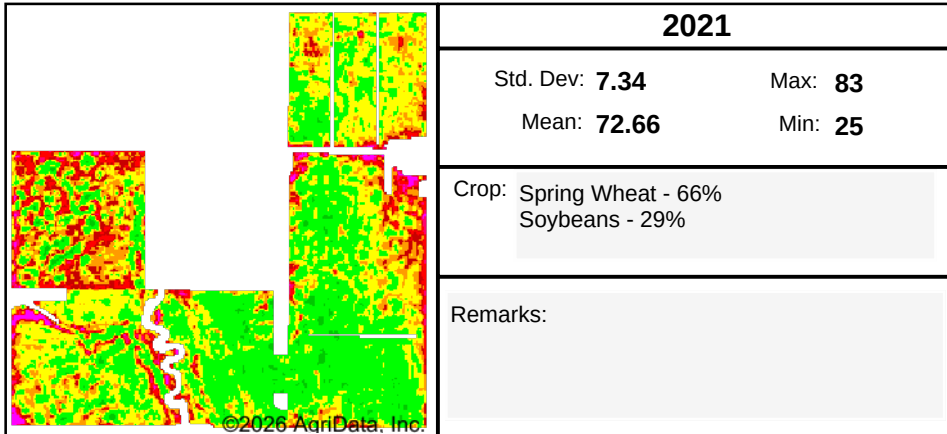
Maps Provided By:



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Max NDVI Multi-year



Client:

Farm:

Field:

Date: 4/30/2026

Acres: 903.06

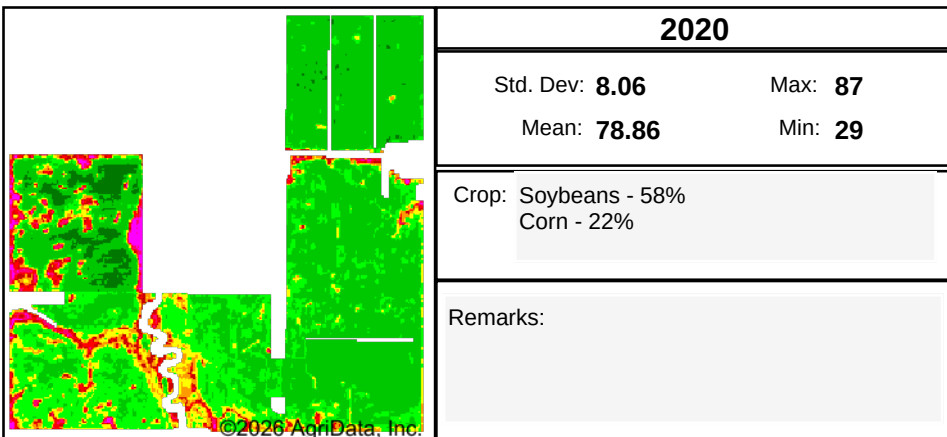
State: ND

County: Towner

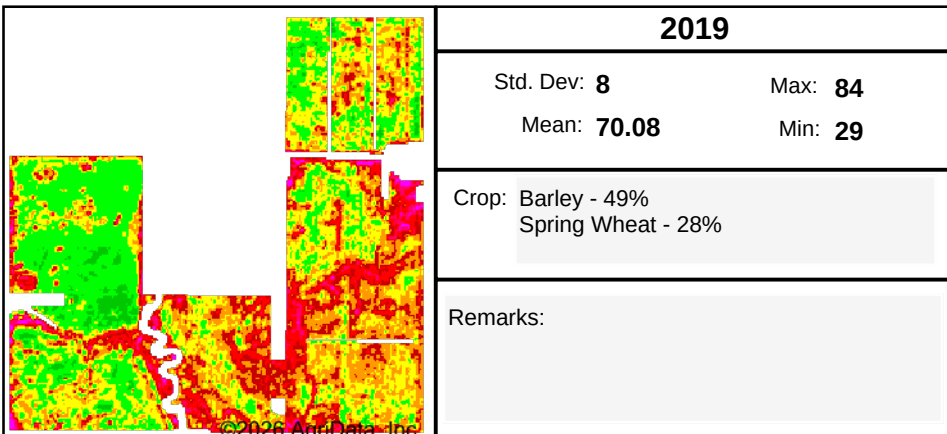
Location: 18-158N-68W

Township: Zion

Boundary Center: 48.512193, -99.476800



Low Relative Biomass High	Value
	86 - 120
	81 - 85
	76 - 80
	71 - 75
	66 - 70
	61 - 65
	51 - 60
	41 - 50
	21 - 40
	1 - 20
	0 - 0



Soils Weighted Average

Productivity Index: 70.3

Elevation (feet)

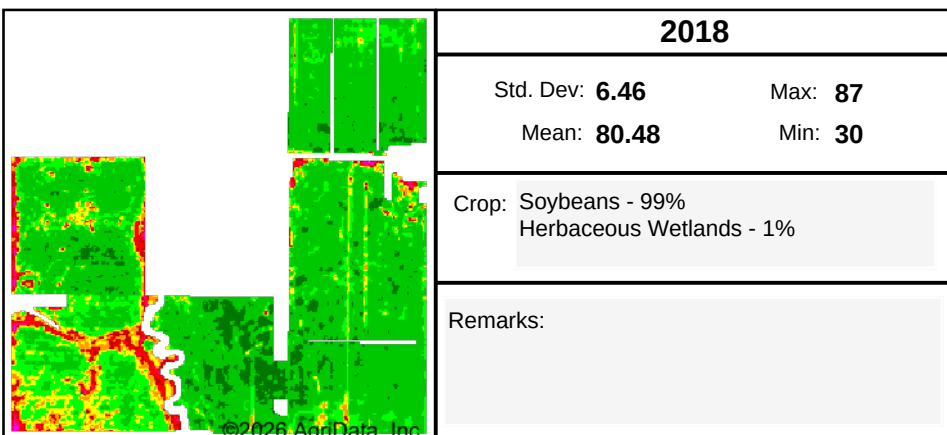
Min: 1,541.5

Max: 1,582.3

Range: 40.8

Mean: 1,554.6

Std Dev: 7.7



Maps Provided By:



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0007114522

**LIMITED LIABILITY PARTNERSHIP
REGISTRATION**

SECRETARY OF STATE

(See SFN 50233)

For Office Use Only

-FILED-

SOS Control ID#: 0007114522

Date Filed: 6/30/2025

FILING FEE:

- Registration with up to two managing partners: \$35
- Each additional managing partner: \$3 (not to exceed \$250)

Limited Liability Partnership Name Dakota SAO II, LLP					
Principal Executive Office Address 1213 NP AVE STE 301 FARGO, ND 58102					
Mailing Address ERIC PETERSON 10640 HIGHWAY D20 ALDEN, IA 50006-4814					
Registered Agent in North Dakota CAPITOL CORPORATE SERVICES, INC. Commercial Registered Agent Physical Address 1213 NP AVE STE 301 FARGO, ND 58102 Mailing Address 1213 NP AVE STE 301 FARGO, ND 58102					
Formation Date The limited liability partnership shall be effective when filed with the Secretary of State.					
Nature of Business Own agricultural real estate and construct and operate livestock feeding facilities.					
Partners Farm/ranch statement This partnership will not be engaged in farming or ranching in North Dakota and will not be owning or leasing land in North Dakota which is used for farming or ranching. <table border="1"><thead><tr><th>Name of Managing Partner</th><th>Complete Mailing Address</th></tr></thead><tbody><tr><td>Eric Peterson</td><td>Eric Peterson 10640 Co. Hwy D20 Alden, IA 50006</td></tr></tbody></table>		Name of Managing Partner	Complete Mailing Address	Eric Peterson	Eric Peterson 10640 Co. Hwy D20 Alden, IA 50006
Name of Managing Partner	Complete Mailing Address				
Eric Peterson	Eric Peterson 10640 Co. Hwy D20 Alden, IA 50006				
Signature ☒ I, the undersigned and a managing partner, affirm that this partnership elects to be a limited liability partnership. I have read this registration, know the contents, and believe the statements contained within to be true. I understand that if I make a false statement, I may be subject to criminal penalties. <i>Eric Peterson</i> _____ Sign Here					
_____ Date					



CONSENT TO USE BUSINESS NAME
SECRETARY OF STATE
SFN 59250 (05-2016)

For Office Use Only

ID Number:	
WO Number:	
Filed:	By:

FILING FEE: \$10.00

1. Name of the business or organization currently registered with the North Dakota Secretary of State that is granting consent to use a business name that is the same or is deceptively similar

Dakota SAO, LLP

2. Proposed business name for which consent is being granted

Dakota SAO II, LLP

3. "I (We), the owner(s), or the person(s) authorized to sign on behalf of the business named in number 1, hereby grant consent to the business name defined in number 2 and accept responsibility to monitor or enforce any restrictions or limitations agreed to by the business named in number 2. I (We) understand that if I (we) make a false statement in this document, I (we) may be subject to criminal penalties."

Signature 	Title Manager	Date 6/30/2025
Signature	Title	Date

4. Name of person to contact about this document

Meagan Herrin


--

B0803-7372 06/30/2025 Received by ND Secretary of State

The Securities and Exchange Commission has not necessarily reviewed the information in this filing and has not determined if it is accurate and complete.
The reader should not assume that the information is accurate and complete.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
**Intentional misstatements or omissions of fact constitute
federal criminal violations. See 18 U.S.C. 1001.**

OMB APPROVAL	
OMB Number:	3235-0076
Estimated average burden hours per response:	4.00

FORM D

Notice of Exempt Offering of Securities

1. Issuer's Identity

CIK (Filer ID Number)	Previous Names	☒ None	Entity Type
0002032003			☐ Corporation
Name of Issuer			☐ Limited Partnership
Dakota SAO, LLP			☐ Limited Liability Company
Jurisdiction of Incorporation/ Organization			☐ General Partnership
NORTH DAKOTA			☐ Business Trust
Year of Incorporation/Organization			☒ Other (Specify)
☐ Over Five Years Ago			
☒ Within Last Five Years (Specify Year) 2024			Limited Liability Partnership
☐ Yet to Be Formed			

2. Principal Place of Business and Contact Information

Name of Issuer			
Dakota SAO, LLP			
Street Address 1		Street Address 2	
10640 COUNTY HIGHWAY D20			
City	State/Province/Country	ZIP/PostalCode	Phone Number of Issuer
ALDEN	IOWA	50006	515-854-9820

3. Related Persons

Last Name	First Name	Middle Name
Peterson	Eric	
Street Address 1	Street Address 2	
10640 County Highway D20		
City	State/Province/Country	ZIP/PostalCode
Alden	IOWA	50006
Relationship: ☒ Executive Officer ☒ Director ☐ Promoter		

Clarification of Response (if Necessary):

[Managing Partner](#)

4. Industry Group

☒ Agriculture	Health Care	☐ Retailing
☐ Banking & Financial Services	☐ Biotechnology	☐ Restaurants
☐ Commercial Banking	☐ Health Insurance	☐ Technology
☐ Insurance	☐ Hospitals & Physicians	☐ Computers
☐ Investing	☐ Pharmaceuticals	☐ Telecommunications
☐ Investment Banking	☐ Other Health Care	☐ Other Technology
☐ Pooled Investment Fund	☐ Manufacturing	☐ Travel
Is the issuer registered as an investment company under the Investment Company Act of 1940?	☐ Real Estate	☐ Airlines & Airports
☐ Yes ☐ No	☐ Commercial	☐ Lodging & Conventions
☐ Other Banking & Financial Services	☐ Construction	☐ Tourism & Travel Services
☐ Business Services	☐ REITS & Finance	☐ Other Travel
☐ Energy	☐ Residential	☐ Other
☐ Coal Mining	☐ Other Real Estate	
☐ Electric Utilities		
☐ Energy Conservation		
☐ Environmental Services		
☐ Oil & Gas		
☐ Other Energy		

5. Issuer Size

Revenue Range	OR	Aggregate Net Asset Value Range
☐ No Revenues		☐ No Aggregate Net Asset Value
☐ \$1 - \$1,000,000		☐ \$1 - \$5,000,000
☐ \$1,000,001 - \$5,000,000		☐ \$5,000,001 - \$25,000,000
☐ \$5,000,001 - \$25,000,000		☐ \$25,000,001 - \$50,000,000
☐ \$25,000,001 - \$100,000,000		☐ \$50,000,001 - \$100,000,000
☐ Over \$100,000,000		☐ Over \$100,000,000
☒ Decline to Disclose		☐ Decline to Disclose
☐ Not Applicable		☐ Not Applicable

6. Federal Exemption(s) and Exclusion(s) Claimed (select all that apply)

☐ Rule 504(b)(1) (not (i), (ii) or (iii))	☐ Investment Company Act Section 3(c)
☐ Rule 504 (b)(1)(i)	☐ Section 3(c)(1) ☐ Section 3(c)(9)

- | | | |
|---|--|---|
| ☐ Rule 504 (b)(1)(ii) | ☐ Section 3(c)(2) | ☐ Section 3(c)(10) |
| ☐ Rule 504 (b)(1)(iii) | ☐ Section 3(c)(3) | ☐ Section 3(c)(11) |
| ☒ Rule 506(b) | ☐ Section 3(c)(4) | ☐ Section 3(c)(12) |
| ☐ Rule 506(c) | ☐ Section 3(c)(5) | ☐ Section 3(c)(13) |
| ☐ Securities Act Section 4(a)(5) | ☐ Section 3(c)(6) | ☐ Section 3(c)(14) |
| | ☐ Section 3(c)(7) | |

7. Type of Filing

- ☒ New Notice Date of First Sale [2024-06-13](#) ☐ First Sale Yet to Occur
- ☐ Amendment

8. Duration of Offering

Does the Issuer intend this offering to last more than one year? ☐ Yes ☒ No

9. Type(s) of Securities Offered (select all that apply)

- | | |
|--|---|
| ☒ Equity | ☐ Pooled Investment Fund Interests |
| ☐ Debt | ☐ Tenant-in-Common Securities |
| ☐ Option, Warrant or Other Right to Acquire Another Security | ☐ Mineral Property Securities |
| ☐ Security to be Acquired Upon Exercise of Option, Warrant or Other Right to Acquire Security | ☐ Other (describe) |

10. Business Combination Transaction

Is this offering being made in connection with a business combination transaction, such as a merger, acquisition or exchange offer? ☐ Yes ☒ No

Clarification of Response (if Necessary):

11. Minimum Investment

Minimum investment accepted from any outside investor \$[15,000](#) USD

12. Sales Compensation

Recipient	Recipient CRD Number ☒ None	
(Associated) Broker or Dealer ☒ None	(Associated) Broker or Dealer CRD Number ☒ None	
Street Address 1	Street Address 2	
City	State/Province/Country	ZIP/Postal Code
State(s) of Solicitation (select all that apply) Check "All States" or check individual States	☐ All States ☐ Foreign/non-US	

13. Offering and Sales Amounts

Total Offering Amount \$5,000,000 USD or ☐ Indefinite

Total Amount Sold \$3,865,000 USD

Total Remaining to be Sold \$1,135,000 USD or ☐ Indefinite

Clarification of Response (if Necessary):

14. Investors

☐ Select if securities in the offering have been or may be sold to persons who do not qualify as accredited investors, and enter the number of such non-accredited investors who already have invested in the offering.

Regardless of whether securities in the offering have been or may be sold to persons who do not qualify as accredited investors, enter the total number of investors who already have invested in the offering:

15. Sales Commissions & Finder's Fees Expenses

Provide separately the amounts of sales commissions and finders fees expenses, if any. If the amount of an expenditure is not known, provide an estimate and check the box next to the amount.

Sales Commissions \$0 USD ☐ Estimate

Finders' Fees \$0 USD ☐ Estimate

Clarification of Response (if Necessary):

16. Use of Proceeds

Provide the amount of the gross proceeds of the offering that has been or is proposed to be used for payments to any of the persons required to be named as executive officers, directors or promoters in response to Item 3 above. If the amount is unknown, provide an estimate and check the box next to the amount.

\$0 USD ☐ Estimate

Clarification of Response (if Necessary):

Signature and Submission

Please verify the information you have entered and review the Terms of Submission below before signing and clicking SUBMIT below to file this notice.

Terms of Submission

In submitting this notice, each issuer named above is:

- Notifying the SEC and/or each State in which this notice is filed of the offering of securities described and undertaking to furnish them, upon written request, in the accordance with applicable law, the information furnished to offerees.*
- Irrevocably appointing each of the Secretary of the SEC and, the Securities Administrator or other legally designated officer of the State in which the issuer maintains its principal place of business and any State in which this notice is filed, as its agents for service of process, and agreeing that these persons may accept service on its behalf, of any notice, process or pleading, and further agreeing that such service may be made by registered or certified mail, in any Federal or state action, administrative proceeding, or arbitration brought against the issuer in any place subject to the jurisdiction of the United States, if the action, proceeding or arbitration (a) arises out of any activity in connection with the offering of securities that is the subject of this notice, and (b) is founded, directly or indirectly, upon the provisions of: (i) the Securities Act of 1933, the Securities Exchange Act of 1934, the Trust Indenture Act of 1939, the Investment Company Act of 1940, or the Investment Advisers Act of 1940, or any rule or regulation under any of these statutes, or (ii) the laws of the State in which the issuer maintains its principal

place of business or any State in which this notice is filed.

- Certifying that, if the issuer is claiming a Regulation D exemption for the offering, the issuer is not disqualified from relying on Rule 504 or Rule 506 for one of the reasons stated in Rule 504(b)(3) or Rule 506(d).

Each Issuer identified above has read this notice, knows the contents to be true, and has duly caused this notice to be signed on its behalf by the undersigned duly authorized person.

For signature, type in the signer's name or other letters or characters adopted or authorized as the signer's signature.

Issuer	Signature	Name of Signer	Title	Date
Dakota SAO, LLP	/s/ Eric Peterson	Eric Peterson	Managing Partner	2024-07-31

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

* This undertaking does not affect any limits Section 102(a) of the National Securities Markets Improvement Act of 1996 ("NSMIA") [Pub. L. No. 104-290, 110 Stat. 3416 (Oct. 11, 1996)] imposes on the ability of States to require information. As a result, if the securities that are the subject of this Form D are "covered securities" for purposes of NSMIA, whether in all instances or due to the nature of the offering that is the subject of this Form D, States cannot routinely require offering materials under this undertaking or otherwise and can require offering materials only to the extent NSMIA permits them to do so under NSMIA's preservation of their anti-fraud authority.



North Dakota
Livestock Alliance

701.712.1488
amber@ndlivestock.org
ndlivestock.org

ND Livestock Alliance
PO Box 369
Bismarck, ND 58502

ND Department of Environmental Quality
Water Quality Division
4201 Normandy Street
Bismarck, ND 58503-1324

Date: April 20, 2026

Submitted to the ND Department of Environmental Quality,

The North Dakota Livestock Alliance (NDLA) is writing this comment in support of the Hexagon 2 permit application #NDAFO0711, due to their compliance with the Animal Feeding Operations Rules of the ND Department of Environmental Quality (NDDEQ), the State Water Quality Standards and the Conditional-Use Permit requirements of Pierce County.

NDLA is confident that the NDDEQ animal feeding permit review process successfully protects the environment and natural resources of our state. The engineer-designed plan, including manure storage systems, composting and nutrient management plan, gives today's farmers and ranchers extremely beneficial use of manure while ensuring the land and water is sustained for generations to come. The natural nutrients contained in manure are valuable fertilizer for crops and the organic matter is crucial to improving soil health. Access to manure also reduces North Dakota crop producers' dependency on commercial fertilizers, giving them more control over one of their most expensive and fluctuating input costs. These benefits combine to increase crop yields and bolster the next generation of ND farmers.

The NDLA Governing Board of Directors is the ND Pork Council, ND Corn Utilization Council, ND Farmers Union, Midwest Dairy – ND Division, ND Corn Growers Association, ND Soybean Council, ND Farm Bureau, Agtegra Cooperative and the ND Ethanol Council. We work with all species of animal agriculture and all herd sizes across the state. Since NDLA's founding in 2017, we have worked with 5 new hog barns that have been successfully permitted and are operating across the state.

Respectfully Submitted,

Amber Wood

Amber Wood
Executive Director

NDLA is a non-profit organization with the vision to strengthen North Dakota's rural communities, farm and ranch families, businesses and natural resources through animal agriculture

**FACT SHEET FOR STATE AFO PERMIT
NDAFO-0711**

**Hexagon II
Bisbee, ND**

DATE OF THIS FACT SHEET – March 12, 2026

INTRODUCTION

The North Dakota Department of Environmental Quality (department) has been designated the state water pollution control agency for all purposes of the Federal Water Pollution Control Act, as amended [33 U.S.C. 1251, et seq.], and is hereby authorized to take all action necessary or appropriate to secure to this state the benefits of the act and similar federal acts. The department's authority and obligations for the control of pollution from animal feeding operations in the North Dakota Administrative Code (NDAC) chapter 33.1-16-03.1 which was promulgated pursuant to the North Dakota Century Code (NDCC) chapter 61-28. The State of North Dakota is delegated primacy of the Animal Feeding Operation program by EPA. The Rules and Regulations for the Control of Pollution from Certain Livestock Enterprises were first issued in 1972 and updated in 1989, 2005, and 2018.

The following rules or regulations apply to feedlot operations permits:

- Operations requiring a permit (NDAC Section 33.1-16-03.1-05),
- Authority for issuing Feedlot Permits (NDAC Section 33.1-16-03.1-01),
The Department of Environmental Quality has been authorized to provide and administer this chapter relating to the control of pollution from animal feeding operations under the provisions of North Dakota Century Code Section 61-28-04.
- Procedures the department follows for issuing Feedlot permits (NDAC Chapter 33.1-16-03.1),
- Standards of Quality for Waters of the State (NDAC Chapter 33.1-16-02.1)

According to the NDAC section 33.1-16-03.1-13, if the department determines a significant degree of public interest exists regarding new or expanding facilities, it shall issue a public notice requesting comment on applications for both individual permits and general state animal feeding operation permits. The department shall provide a period of not less than thirty days during which time interested persons may submit comments.

For more information regarding preparing and submitting comments about the fact sheet and permit, please see **APPENDIX A – PUBLIC INVOLVEMENT INFORMATION**. Following the public comment period, the department may make changes to the draft permit. The department will summarize the responses to comments and changes to the permit in **APPENDIX D – RESPONSE TO COMMENTS**.

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BACKGROUND INFORMATION

Table 1– General Facility Information

Applicant:	Dakota SAO, LLP
Facility Name and Address:	Hexagon II 54 th Ave NE and 74 th St NE Bisbee, ND 58317
Permit Number:	NDAFO-0711
Permit Type:	CAFO
Hydrologic Code:	09020201 – Devils Lake

FACILITY DESCRIPTION

Hexagon II is located 9.5 miles east of Wolford, ND in Pierce County. The facility is located in the SE ¼ of Section 24, Township 158 North, Range 69 West, 5th Prime Meridian. The site coordinates are Latitude 48.493356°N, Longitude -99.493946°W.

An application submitted to the department on November 26th, 2025, indicates the facility will have a maximum of 9,282 head of swine, equivalent to 3,475 animal units (a.u.). This facility will have three deep pit confinement barns: one gestation barn, one farrowing barn, and one gilt development unit (GDU).

GROUNDWATER AND SURFACE WATER**Geology:**

The facility lies within the Western Young Drift Section of the Central Lowlands physiographic province.

The local geology can be described as part of the McHenry End Moraine of the Coleharbor Formation consisting of a non-sorted, non-stratified mixture of boulders, cobbles, pebbles, and sand in a matrix of silt and clay. The surface geology is characterized as collapsed glacial sediment; gently undulating (1 to 2-degree maximum slope angles); Supraglacial sediment with hummocky topography.

The site can be characterized as offshore sediment of yellowish brown to dark gray silt and clayey silt with some sand in places, previously part of Glacial Lake Cando.

Slope:

The slope is 0 - 3% on-site. Slope is used to calculate the runoff quantities and design runoff velocities.

Runoff:

The proposed facility is an indoor confinement operation. Any stormwater or precipitation from the land around the barns and site buildings will be directed away from the site.

Elevation:

According to the United States Geological Survey Quadrangle maps, this facility is at an approximate elevation of 1,570 feet.

Site Drainage:

Subsurface drain tile and clean water diversions are to route stormwater to a basin south of the gestation barn. Perimeter drain tile will be heavy duty perforated corrugated agricultural drain pipe. Monitoring ports for the drain tile will be installed. This basin outlets to the south. There is no defined drainage off-site.

Water Bodies:

The nearest water body is Hurricane Lake located 1.5 miles southwest of the site.

Soils:

The primary soils at the site, as indicated by National Resource Conservation Service (NRCS) web soil survey, include Hamerly-Wyard-Tonka complex, Balaton-Souris-Svea loams, and Balaton-Souris loams. These soils consist mostly of fine-grained lean silt and sand material (ML). (See Appendix C, Table 5)

Aquifers:

The facility does not overlie a surficial aquifer or a sensitive groundwater area. The operation's location lies about 1.2 miles to the northeast of a small finger of the Spiritwood Aquifer system. The Spiritwood Aquifer System occupies buried bedrock valleys and consists of sand and gravel beds that are inter-bedded with silt, clay and till, causing the ground water to generally exist under confined conditions.

Public and Private Wells:

There are no public wells or irrigation wells located within two miles of the site. Within two miles of the site there are three private wells. Wells in the general area range from 79 feet to 174 feet deep. (See Appendix C, Table 4)

MANURE HANDLING AND DISPOSAL

Facility Operation:

The facility design incorporates three deep pit confinement barns with slatted floors and deep pit manure storage. Livestock resides within the facility for 365 days a year.

two deep pit, and one shallow pit.

Manure Handling:

According to the design plan, manure will drain into the deep pits through slatted floors. These deep pits have associated pumpout ports. Manure will then be land applied seasonally as described in the nutrient management plan.

Expected Manure Quantities:

The amount of manure estimated to be produced at the facility is detailed in the table below.

Table 2 - Manure Quantities from Design Plans

Livestock Types	Number (Head)	Average Weight (lbs)	Manure Production (ft ³ /day)	Wash Water (ft ³ /day)
Pigs, Gestating	5,422	400	889	781
Pigs, Lactating	1,088	450	475	157
Pigs, Growers	1,188	150	196	171
Pigs, Nursery	792	35	39	29
Pigs, Finishers	792	200	174	114
Daily Total	9,282	3,475 a.u.	1,773	1251
270 Day Total			478,761	337,789
Manure Storage Required for Storage Period			816,550 ft ³ /year	

Mortality Disposal:

The owners have chosen composting or landfiling for the facility's disposal method, with a particle reduction system. The composting barn is to be located north of the barns at the facility site. Animal mortality shall be handled as outlined in the North Dakota Livestock Program Design Manual, Section 6.4:

"Livestock mortality shall be disposed of in a manner acceptable to the Board of Animal Health and in accordance with NDCC Section 36-14-19. Livestock mortality shall be disposed of in areas that will not discharge into waters of the state and where they will not detrimentally impact air quality. Livestock mortality shall not be disposed of in any structure used to store or treat liquid manure, process wastewater, or storm water unless the department-approved system is designed for such a purpose."

ODOR CONTROL**Potential Sources:**

A source of potential odors are the barns and containment pond. Odors from the barns may be minimized with good housekeeping practices. Land application may present a source of short-term odor events. However, land application is exempt from state odor restrictions (NDAC Section 33.1-15-16-02(3)). The county regulates the nature, scope, and location of this operation. The county setback is one mile. The facility received zoning approval from Pierce County on November 13, 2025. There are three residences in proximity to the site, ranging from 1.43 to 2 miles in distance.

CONSTRUCTION SPECIFICATIONS**Manure Storage Structures:**

two deep pit and 1 shallow pit.

The proposed facility has three deep pit storage structures that hold manure and wastewater. A pump station sits between the barns. The gestation barn has four

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pumpouts at each corner. The GDU/farrowing barns have two pumpouts on the south corner. A section of drain tile surrounds the barns. This serves to relieve hydrostatic pressure from the deep pits. The following table shows the dimensions of the pits and the evaluation of design capacity.

Table 3 - Required Manure Storage

Deep Pit Location	Dimensions	Storage Volume
Gestation Barn	2 cells x 544' x 101.6' x 9.7'	1,064,400 ft ³
GDU Barn	~5 cells x 108.2' x 51.3' x 9.7'	265,048 ft ³
Farrowing/Nursery	16 cells x 107.8' x ~41.8' x 1.7'	119,771 ft ³
Loadout Area	3 cells of different dimensions	5,112 ft ³
The facility has capacity to store manure generated with 1,454,331 ft ³ of storage.		

Soil Summary:

The location is suitable based on soil survey and ground water survey information. The soils borings indicate that the Unified Soil Classification for the subsoil at the site is generally lean clay (CL) to a relative depth of 36 feet. (Appendix C, Table 6)

10" thick, w/#5 vertical rebar @ 12" OC. and #4 Horizontal rebar @ 12" O.C.

Non-Earthen Manure Storage Structures

The deep pits under the barn floors have 4-inch floors with #4 rebar 18 inches on center. The barns will have 4-inch precast concrete slats. Pit perimeter walls are 8 inches thick with #5 rebar 18 inches on center. Wall joints have keyways and water stops to prevent seepage. Concrete used on site is to be rated for 4,000 pounds per square inch (PSI) of compressive strength for walls and floors.

Manure Transfer Components:

The proposed deep pits have pumpouts at each end. A pumpstation will be located between the barns. 10" PVC crossover pipes allow drainage to gestation barn from farrowing barn. Manure line cleanouts and manholes will be installed.

Earth Fill:

The design plans indicate all organic material and topsoil is to be removed from areas with fill and replaced with compacted mineral earth fill. Organic materials or frozen soil were not used in fill material. Rock larger than 6 inches are not to be used in the fill material. Compaction is to be performed for each 8-inch lift to meet a standard of 95% Standard Proctor Density.

Groundwater Monitoring Plan:

Implementing ground water monitoring wells is not recommended for the operation at this time.

Operation and Maintenance Plan:

Any discharge from the waste management system or land application sites must be reported as soon as possible, but no later than twenty-four hours after the discharge was discovered. The discharge must be reported to the State of North Dakota.

All inspections should be documented on the forms included with the operations manual or other suitable forms. Documentation must be maintained on site and be made available to the department when requested.

Travel of vehicles and livestock should be confined to designated areas to prevent erosion and enhance vegetation.

Maintain grades around containment structures to assure positive surface drainage away from the structures in all directions. Fill any settled areas which may collect water.

Any damage discovered to any facility component must be repaired as soon as possible to original specifications.

Manage vegetation growth on and near facility components so that adequate component inspection is possible.

Maintain the overall system (i.e. pens, diversion channels, settling basins and risers) to ensure that all contaminated runoff enters the containment structures.

NUTRIENT MANAGEMENT PLAN AND MANURE APPLICATION

General Conditions:

Managing and applying manure to ensure surface waters are not impacted and minimize nuisance concerns for nearby residents is a requirement. Factors to consider when choosing methods of management and application include but are not limited to: the volume of manure, the topography, location of surface and ground water sources, and distance from neighboring residents. Applicable records, listed below, must be taken and be available upon request.

Application Rates:

Liquid manure and wastewater are to be pumped out of deep pits and injected into fields. Manure application on fields would be at agronomic rates. This rate is dependent on crop variety grown, crop yield goals, and soil test results. Manure is land applied at a rate not to exceed nitrogen levels recommended for the crop of the following production year.

Record Keeping:

The facility is required to make the following records available to the department for review upon request for a minimum of 5 years from the date they are created:

- Document routine visual inspections of the production area and containment structures.
- How, when, and where the manure, litter, or process wastewater was reused or disposed of.

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- Weather conditions at the time and 24 hours prior to manure application.
- Mortalities management and practices used.
- The date, time, and estimated volume of any overflow outside of the containment area.
- Annual nutrient sampling of: manure, litter and/or process wastewater and soil samples where manure has been applied that year.
- An explanation of how the manure application rates were determined with calculations of the planned and actual total nitrogen and phosphorus to be applied to each field.
- The crops grown and crop yields for all fields where manure was applied.
- If manure, litter, or process wastewater is transferred to other persons or entities; the recipient's name and address, approximate amount transferred, and the date of the transfer should be documented.
- Any actions taken to correct deficiencies.

Land Application of Manure:

The endpoint for all manure produced at the proposed facility is land application on fields identified in the submitted nutrient management plan. The table below details the quantity of manure and nutrients estimated to be produced on the facility.

Table 4 - Expected Manure Volumes and Nutrients

	Daily	365 Days
Volume of Manure	1,773 ft ³	1,103,855 ft ³
Nitrogen (N)	800 lbs/day	292,069 lbs.
Phosphorus (P ₂ O ₅)	619 lbs/day	226,041 lbs.
Potassium (K ₂ O)	599 lbs/day	218,677 lbs.
Loss from Storage	22.5%	
Loss from Land Application Method	2%	

Estimate of land needed for manure application:

When estimating land needed for manure application, if the nutrient management plan's phosphorus risk assessment indicates a medium to low risk of movement of phosphorus, facilities are allowed to apply at agronomic nitrogen rates in accordance with the phosphorus index. If the nutrient management plan's phosphorus risk assessment indicates a high potential for movement or if a soil test shows phosphorus levels in the high range, the facility is required to apply manure at agronomic phosphorus rates.

Table 5-Nutrients and Rates

Nutrient	Rate
Phosphorus (with 20% not available)	~50.8 lbs. P ₂ O ₅ /acre
Nitrogen (with 24.5% losses)	~103 lbs. N/acre

Anticipated crops grown: barley, wheat, corn grain, soybean, edible beans

Risk assessment for phosphorus: low

Amount of land estimated for spreading at nitrogen rates: 2,154 acres

Amount of land estimated for spreading at nitrogen rates: 3,560 acres

Amount of land identified by applicant for land application: 3,631 acres

The department realizes that the nitrogen in manure is not all available to the crops in the first year and therefore the manure will typically be applied at rates higher than the rates listed above. However, organic nitrogen becomes available the following year(s) so the manure cannot be applied at the same rate in subsequent years. These figures are used to estimate the total acres that would be needed over several years of application using proper rotation of cropland and/or calculating nitrogen that is carried over to the following years.

Disclaimer:

This design review is intended to assess a livestock facility's ability to contain, divert, store, and properly apply manure and/or runoff water to meet department requirements, to prevent detrimental impacts on the quality of waters of the state, and to minimize the potential for odor concerns from livestock facilities. It does not include an assessment of the structural integrity of livestock facilities or manure handling structures such as those made of concrete, metal, wood, plastic, or other material.

PERMIT ISSUANCE PROCEDURES

Permit Actions:

This permit may be modified, revoked and reissued, or terminated for cause. This includes the establishment of limitations or prohibitions based on changes to Water Quality Standards, the development and approval of waste load allocation plans, the development or revision to water quality management plans. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Proposed Permit Issuance:

This proposed permit application meets all statutory requirements for the department to authorize a State Animal Feeding Operation Permit. The permit application includes limits and conditions to protect human health and aquatic life, and the beneficial uses of waters of the State of North Dakota. The department proposes to issue this permit for a term of five (5) years.

APPENDIX A – PUBLIC INVOLVEMENT INFORMATION

The department proposes to issue a permit to **Hexagon II**. This fact sheet describes the facility and the department's rationale for requiring permit conditions.

The department will place a Public Notice of Draft on **March 21, 2026**, in the **Rugby, Pierce County Tribune** to inform the public and to invite comment on the proposed draft North Dakota State AFO Permit and fact sheet.

The Notice;

- Indicates where copies of the draft Permit and Fact Sheet are available for public evaluation.
- Offers to provide assistance to accommodate special needs.
- Urges individuals to submit their comments before the end of the comment period.
- Informs the public of the location and time of the scheduled public hearing.

You may obtain further information from the department by telephone, 701.328.5210, or by writing to the address listed below.

North Dakota Department of Environmental Quality
Division of Water Quality
4201 Normandy Street, 3rd Floor
Bismarck, ND 58503

The primary author of this permit and fact sheet is Cameron Gilley.

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**North Dakota Department of Environmental Quality Public Notice
Issue of a State Animal Feeding Operation Permit**

Public Notice Date: 3/21/2026

Public Notice Number: ND-2026-008

Purpose of Public Notice

The Department intends to take public comments to ensure the following State Animal Feeding Operation Permit follows the authority of Section 61-28-04 of the North Dakota Century Code.

Permit Information

Site Name: Hexagon 2

Application Date: 11/26/2025 Application Number: NDAFO0711

Applicant Name: Dakota SAO II, LLP

Mailing Address: 10640 County Highway D20 Alden IA 50006

Telephone Number: (515) 520-7181

Proposed Permit Expiration Date: March 31, 2031

Facility Description

The permit application is for a proposed swine barn located 9.5 miles east of Wolford, ND in Pierce County. The site is in the SE ¼ of Section 24, Township 158 North, Range 69 West, 5th Prime Meridian. The application indicates the facility would have a maximum of 9,282 head of swine, equivalent to 3,475 animal units.

Public Hearing

A public hearing will be held to take comments and record oral comments regarding the proposed permit. The public hearing will be held **April 20, 2026**, from 5:00 p.m. to 8:00 p.m. at the following location

Pierce County Courthouse
240 2nd St SE
Rugby, ND 58368

Tentative Determinations

The submitted application and supporting documentation have been reviewed by the Department. They assure that State Water Quality Standards will be protected, and the system will be constructed and can be operated in compliance with the North Dakota state requirements for storage and handling of manure and wastewater for an Animal Feeding Operation.

Information Requests and Public Comments

Copies of the application, draft permit, and related documents are available for review. Comments or requests should be directed to the ND Department of Environmental Quality, Division of Water Quality, 4201 Normandy Street, 3rd Floor; Bismarck, ND 58503-1324 or by calling 701.328.5210.

All comments received by **May 5, 2026**, will be considered prior to finalizing the permit.

The NDDEQ will consider every request for reasonable accommodation to provide an accessible meeting facility or other accommodation for people with disabilities, language interpretation for people with limited English proficiency (LEP), and translations of written material necessary to access programs and information. Language assistance services are available free of charge to you.

To request accommodations, contact NDDEQ Non-discrimination Coordinator at 701-328-5210 or deqEJ@nd.gov. TTY users may use Relay North Dakota at 711 or 1-800-366-6888.

APPENDIX B – DEFINITIONS

DEFINITIONS Standard Permit (BP 2019.09.23)

1. “Animal feeding operation” means a lot or facility, other than an aquatic animal production facility, where the following conditions are met:
 - a. Animals, other than aquatic animals, have been, are, or will be stabled or confined and fed or maintained for a total of forty-five days or more in any twelve-month period; and
 - b. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.
2. “Bedding material” means an absorbent substance applied to dirt or concrete flooring systems, including wood shavings, wood chips, sawdust, shredded paper, cardboard, hay, straw, hulls, sand, and other similar, locally available materials.
3. “Best management practices” means schedules of activities, prohibitions of practices, conservation practices, maintenance procedures, and other management strategies to prevent or reduce the pollution of waters of the state. Best management practices also include treatment requirements, operating procedures, and practices to control production area and land application area runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
4. “Concentrated animal feeding operation” means an animal feeding operation that is defined as a large, medium, or small concentrated animal feeding operation or any animal feeding operation designated as a concentrated animal feeding operation under section 33.1-16-03.1-04. For purposes of determining animal numbers, two or more feeding operations under common ownership are considered to be a single animal feeding operation if they adjoin each other or if they use a common area or system for the disposal of wastes.
5. “Earthen storage pond” or “pond” means a topographic depression either below or above ground level, manmade excavation, or diked area formed primarily of earthen materials, although it may be lined with man-made materials or other seepage control materials, and used to store manure, process wastewater and runoff from the production area of a facility.
6. “Engineer” means a professional engineer registered to practice in the state of North Dakota.
7. “Facility” is an animal feeding operation.
8. “General permit” means a general state animal feeding operation permit. This is a permit issued to cover multiple facilities of the same or similar type, without requiring each facility to be covered under an individual permit.
9. “Large concentrated animal feeding operation” means any animal feeding operation that stables or confines as many as or more than the numbers of animals, not including unweaned young, specified in any of the following categories:
 - a. Seven hundred mature dairy cows, whether milked or dry;
 - b. One thousand veal calves;

- c. One thousand cattle other than mature dairy cows or veal calves. "Cattle" includes, but is not limited to, heifers, steers, bulls, and cow/calf pairs;
 - d. Two thousand five hundred swine, each weighing 55 pounds or more;
 - e. Ten thousand swine, each weighing less than 55 pounds;
 - f. Five hundred horses;
 - g. Ten thousand sheep or lambs;
 - h. Fifty-five thousand turkeys;
 - i. Thirty thousand laying hens or broilers, if the animal feeding operation uses a liquid manure handling system;
 - j. One hundred twenty-five thousand chickens (other than laying hens), if the animal feeding operation uses other than a liquid manure handling system;
 - k. Eighty-two thousand laying hens, if the animal feeding operation uses other than a liquid manure handling system;
 - l. Thirty thousand ducks, if the animal feeding operation uses other than a liquid manure handling system; or
 - m. Five thousand ducks, if the animal feeding operation uses a liquid manure handling system.
10. "Litter" means a mixture of fecal material, urine, animal bedding material, and sometimes waste feed.
11. "Manure" means fecal material and urine, animal-housing wash water, bedding material, litter, compost, rainwater, or snow melt that comes in contact with fecal material and urine, and raw or other materials commingled with fecal material and urine or set aside for disposal.
12. "Manure handling system" means all of the water pollution control structures used at the production area of a facility.
13. "Manure storage pond" means an earthen storage pond that stores liquid manure and process wastewater from indoor confined animal feeding operations.
14. "Manure storage structure" means any water pollution control structure used to contain or store manure or process wastewater. It includes earthen manure storage ponds; runoff ponds; concrete, metal, plastic, or other tanks; and stacking facilities.
15. "Medium animal feeding operation" means any animal feeding operation that stables or confines the numbers of animals, not including unweaned young, specified within any of the following ranges:
- a. Two hundred to six hundred ninety-nine mature dairy cows, whether milked or dry;
 - b. Three hundred to nine hundred ninety-nine veal calves;
 - c. Three hundred to nine hundred ninety-nine cattle other than mature dairy cows or veal calves. "Cattle" includes, but is not limited to, heifers, steers, bulls, and cow/calf pairs;
 - d. Seven hundred fifty to two thousand four hundred ninety-nine swine, each

- weighing 55 pounds or more;
 - e. Three thousand to nine thousand nine hundred ninety-nine swine, each weighing less than 55 pounds;
 - f. One hundred fifty to four hundred ninety-nine horses;
 - g. Three thousand to nine thousand nine hundred ninety-nine sheep or lambs;
 - h. Sixteen thousand five hundred to fifty-four thousand nine hundred ninety-nine turkeys;
 - i. Nine thousand to twenty-nine thousand nine hundred ninety-nine laying hens or broilers, if the animal feeding operation uses a liquid manure handling system;
 - j. Thirty-seven thousand five hundred to one hundred twenty-four thousand nine hundred ninety-nine chickens (other than laying hens), if the animal feeding operation uses other than a liquid manure handling system;
 - k. Twenty-five thousand to eighty-one thousand nine hundred ninety-nine laying hens, if the animal feeding operation uses other than a liquid manure handling system;
 - l. Ten thousand to twenty-nine thousand nine hundred ninety-nine ducks, if the animal feeding operation uses other than a liquid manure handling system; or
 - m. One thousand five hundred to four thousand nine hundred ninety-nine ducks, if the animal feeding operation uses a liquid manure handling system.
16. “Medium concentrated animal feeding operation” means a medium animal feeding operation that meets either one of the following conditions:
- a. Pollutants are discharged into waters of the state through a manmade ditch, flushing system, or other similar manmade device; or
 - b. Pollutants are discharged directly into waters of the state which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.
17. “North Dakota Livestock Program Design Manual” means the guidelines established for use by the department in the review and permitting process for animal feeding operations.
18. “Nutrient management plan” means a written description of the equipment, methods and schedules by which:
- a. Manure, litter, and process wastewater is beneficially reused in an environmentally safe manner such as being applied to land at appropriate agronomic rates as nutrients or fertilizers; and
 - b. Water pollution and air pollution, including odors, are controlled sufficiently to protect the environment and public health.
19. “Open lot” means livestock pens, feeding or holding areas at the production area of an animal feeding operation which are outside and not under roof, and where rain can fall directly on the lot area.
20. “Open manure storage structure” means an earthen pond or storage tank for holding liquid manure which is not covered so rainfall can fall directly into the pond or tank.

21. "Operation and maintenance plan" means a written description of the equipment, methods, and schedules for:
 - a. Inspection, monitoring, operation, and maintenance of the animal feeding operation, including manure storage structures, water pollution control structures, and the production area; and
 - b. Controlling water pollution and air pollution, including odors sufficient to protect the environment and public health. It includes emergency response actions for spills, discharges or failure of a collection, storage, treatment, or transfer component.
22. "Operator" means an individual or group of individuals, partnership, corporation, joint venture, or any other entity owning or controlling, in whole or in part, one or more animal feeding operations.
23. "Overflow" means the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structure.
24. "Pollutant" means "wastes" as defined in North Dakota Century Code section 61-28-02, including dredged spoil, solid waste, incinerator residue, garbage, sewage, sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.
25. "Process wastewater" means water directly or indirectly used in the operation of the animal feeding operation for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other animal feeding operation facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts, including manure, litter, feed, milk, eggs, or bedding material.
26. "Production area" means those areas of an animal feeding operation used for animal confinement, manure storage, raw materials storage, and waste containment. The animal confinement area includes open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milking rooms, milking centers, cattle yards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes lagoons, runoff ponds, storage sheds, stockpiles, under-house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes feed silos, silage bunkers, and bedding materials. The waste containment area includes settling basins, areas within berms, and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility and any area used in the storage, handling, treatment, or disposal of mortalities.
27. "Runoff" means rainwater or snow melt that comes in contact with manure at an open lot or open manure storage area and, therefore, is defined as manure.
28. "Runoff pond" means an earthen storage pond that is used to collect and store runoff from an open lot or from a manure storage area.
29. "Seepage" means the volume of flow through a manure storage structure.
30. "Sensitive groundwater area" means vulnerable hydrogeologic settings as determined by

the department such as glacial outwash deposits or alluvial or aeolian sand deposits that are critical to protecting current or future underground sources of drinking water. Areas designated as sensitive groundwater areas by the department include alluvial or aeolian sand deposits shown on Geologic Map of North Dakota (Clayton, 1980, North Dakota geological survey) and glacial drift aquifers listed in North Dakota Geographic Targeting System for Groundwater Monitoring (Radig, 1997, North Dakota department of health), or most recent editions of these publications, with DRASTIC scores greater than or equal to 100 based on methodology described in DRASTIC: A Standardized System For Evaluating Groundwater Pollution Potential (Aller et al, 1987, United States environmental protection agency).

31. "Small animal feeding operation" means any animal feeding operation that stables or confines less than the numbers of animals specified for a medium animal feeding operation.
32. "Small concentrated animal feeding operation" means a small animal feeding operation designated as a concentrated animal feeding operation under section 33.1-16-03.1-04.
33. "State animal feeding operation permit" means a permit issued by the department under this chapter to an animal feeding operation.
34. "Surface water" means waters of the state that are located on the ground surface, including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, and all other bodies or accumulations of water on the surface of the earth, natural or artificial, public or private.
35. "Unconfined glacial drift aquifer" means a glacial drift aquifer that does not have an impervious soil layer which acts to prevent or minimize movement of water into, through, or out of the aquifer.
36. "Water pollution control structure" means a structure built or used for handling, holding, transferring, or treating manure or process wastewater, so as to prevent it from entering the waters of the state. The term also includes berms, ditches, or other structures used to prevent clean water from coming in contact with manure.
37. "Water quality standards" means the water quality standards contained in chapter 33.1-16-02.1.

APPENDIX C – DATA AND TECHNICAL CALCULATIONS

Table 4 - Water Commission Well Data:

Location	Use	Depth (ft)	Dia.	Aquifer
15806829 BAA	Domestic	174	4"	-
15806829B	Domestic/Stock	174	4"	-
15806831BAB	Domestic	79	24"	-

Table 5 - Soil Survey Data:

Map unit	Name	Description	Bedrock Depth	Seasonal Water Table	Unified Soil Class	Ksat $\mu\text{m/s}$	Lagoon Restrictions
F1102A	Hamerly-Wyard-Tonka complex, 0-3% slope	Very deep, somewhat poorly drained to poorly drained soils that formed in calcareous loamy till. Permeability is moderate to moderately slow in the lower horizons. These soils are on flats on lake plains and on convex slopes surrounding shallow depressions and on slight rises on till plains, swales and depressions on glacial till plains, and closed basins and depressions on till and glacial lake plains. These soils are formed in local alluvium from glacial till, formed in local alluvium over till or glaciolacustrine deposits.	0- 6"	0-1.5'	ML	7.8430	Very limited:
F1152B	Balaton-Souris-Svea loams, 0-4% slope	Very deep, moderately well drained soils that formed in calcareous loamy glacial till and fine-loamy till. Permeability is moderate. These soils are on moraines and till plains and on linear and convex slopes on ground moraines.	0- 6"	0-3.2'	ML	7.8235	Very limited:
F1169B	Balaton-Souris loams, 0-4% slope	Very deep, moderately well drained soils formed in calcareous loamy glacial till and in fine-loamy till. Permeability is moderate. These soils are on moraines and till plains, and on linear and convex slopes on ground moraines.	0- 6"	0-2.00'	ML	7.8495	Very Limited:

ML - silt and fine sand, CL - Lean Clay, OL - Organic Layer

Table 6 - Soil Boring Information:

Depth	SB 1	SB 2	SB 3	SB 4	SB 5	SB 6	SB 7	SB 8	SB 9	SB10	SB11	SB12
Elev.	498.5	500.25	499	496.75	500	499	498	498.5	498.5	498	496.75	497.25
0 - 1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
1 - 2	OL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
2 - 3	OL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
3 - 4	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
4 - 5	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
5 - 6	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
6 - 7	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
7 - 8	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
8 - 9	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
9 - 10	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
10 - 11	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
11 - 12	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
12 - 13	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
13 - 14	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
14 - 15	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
15 - 16	CL	CL	CL	CL-ML	CL	CL	CL	CL	-	-	-	-
16 - 17	CL	CL	CL	CL-ML	CL	CL	CL	CL	-	-	-	-
17 - 18	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
18 - 19	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
19 - 20	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
20 - 21	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
21 - 22	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
22 - 23	CL	CL	CL	SP	CL	CL	CL	CL	-	-	-	-
23 - 24	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
24 - 25	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
25 - 26	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
26 - 27	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
27 - 28	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
28 - 29	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
29 - 30	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
30 - 31	CL	CL	CL	CL	CL	CL	CL	CL	-	-	-	-
31 - 32	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-
32 - 33	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-
33 - 34	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-
34 - 35	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-
35 - 36	CL	CL	CL	CL	CL	CL	-	CL	-	-	-	-

FACT SHEET FOR STATE AFO PERMIT NDAFO-0711
HEXAGON II – BISBEE, ND
EXPIRATION DATE: May 31, 2031
Page 19 of 19

APPENDIX D – RESPONSE TO COMMENTS

Comments received during a public comment period will be placed here.

DRAFT

April 8, 2026

Cameron Gilley
NDDEQ
Bismarck, ND

Subject: Environmental Review –Animal Feeding Operation Permit – NDAF00711 – Hexagon 2 – Pierce

Dear Cameron Gilley,

The North Dakota Parks and Recreation Department (NDPRD) has completed its review of the proposed Animal Feeding Operation Permit for Hexagon 2 Facility in Pierce County, North Dakota.

NDPRD's review scope includes:

- Properties owned, leased, or managed by NDPRD.
- Properties protected under Section 6(f) of the Land and Water Conservation Fund (LWCF).
- Plant species of concern and significant ecological communities documented through NDPRD surveys, federally listed species data, and information provided by partner agencies with jurisdictional authority.

Findings:

- NDPRD Managed Lands: The proposed project does not occur on or adjacent to properties owned, leased, or managed by NDPRD.
- LWCF Section 6(f) Compliance: The proposed project does not appear to affect properties protected under Section 6(f) of the LWCF.
- Biological Resources: A review of internal records indicates no documented occurrences of species of concern or significant ecological community resources within the project area. Site-specific field verification may be conducted, as appropriate, prior to project implementation to confirm existing conditions.

Notice Regarding Natural Heritage Data: As of January 1, 2026, the North Dakota Parks and Recreation Department (NDPRD) has discontinued its annual Biotics database license and data-sharing agreement with NatureServe. Consequently, NDPRD will no longer include standard Natural Heritage Program data in responses to solicitations of views or environmental review documents.

Our reviews are now limited to internal data regarding managed lands and specific species of concern. For comprehensive ecological data or statewide species occurrences, we encourage you to refer to the NatureServe Explorer webpage. NatureServe is the definitive source for information on rare and



endangered species and ecosystems in the Americas. Their online guide provides information on the 100,000 species and ecosystems tracked across the network.

Resource Link: <https://explorer.natureserve.org/>

We appreciate your commitment to conserving rare plants, animals, and ecological communities, and your cooperation in the inter-agency environmental review process. For further information, please contact me at (701) 328-5370, (701) 220-3377 (cell), or kgduttenehner@nd.gov.

Thank you for the opportunity to comment on this proposed project.

Sincerely,

A handwritten signature in black ink that reads "Kathy Duttenehner". The signature is written in a cursive, flowing style.

Kathy Duttenehner
Chief, Natural Resources Division

604 E Boulevard Ave Dept. 750 | Bismarck, ND 58505

PHONE: 701-328-5357 | FAX: 701-328-5363 | EMAIL: parkrec@nd.gov | WEBSITE: www.parkrec.nd.gov

Appendix A – Studies/Articles-Bibliography

Studies/Articles - Bibliography

American Public Health Association. Precautionary Moratorium on New and Expanding Concentrated Animal Feeding Operations. November 4, 2019. 20194. <https://www.apha.org/policy-and-advocacy/public-health-policy-briefs/policy-database/2020/01/13/precautionary-moratorium-on-new-and-expanding-concentrated-animal-feeding-operations>

Ayala-Ramirez M, MacNeill N, McNamee LE, McGrath JA, Akhtari FS, Curry MD, Dunnon AK, Fessler MB, Garantziotis S, Parks CG, Fargo DC, Schmitt CP, Motsinger-Reif AA, Hall JE, Miller FW, Schurman SH. Association of distance to swine concentrated animal feeding operations with immune-mediated diseases: An exploratory gene-environment study. *Environ Int.* 2023 Jan;171:107687. doi: 10.1016/j.envint.2022.107687. Epub 2022 Dec 9. PMID: 36527873; PMCID: PMC10962257.

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Kravchenko J, Rhew SH, Akushevich I, Agarwal P, Lyerly HK. Mortality and Health Outcomes in North Carolina Communities Located in Close Proximity to Hog Concentrated Animal Feeding Operations. *N C Med J.* 2018 Sep-Oct;79(5):278-288. doi: 10.18043/ncm.79.5.278. PMID: 30228132. North Dakota Department of Water Resources. Flood History & Response: Devils Lake. December 2025. https://www.swc.nd.gov/pdfs/dl_fact_sheet.pdf

Pohl E, Lee SR. Local and Global Public Health and Emissions from Concentrated Animal Feeding Operations in the USA: A Scoping Review. *Int J Environ Res Public Health.* 2024 Jul 13;21(7):916. doi: 10.3390/ijerph21070916. PMID: 39063493; PMCID: PMC11276819.

Schultz AA, Peppard P, Gangnon RE, Malecki KMC. Residential proximity to concentrated animal feeding operations and allergic and respiratory disease. *Environ Int.* 2019 Sep;130:104911. doi: 10.1016/j.envint.2019.104911. Epub 2019 Jun 22. PMID: 31238264.

Son JY, Deziel NC, Bell ML. Density of animal feeding operations, including concentrated animal feeding operations (CAFOs), and cancer incidence: A county-level ecological study across three U.S. states. *Environ Res.* 2026 Jun 15;299:124298. doi: 10.1016/j.envres.2026.124298. Epub 2026 Mar 17. PMID: 41856233; PMCID: PMC13051506.

Appendix B – Nutrient Management Plan Addendum

Dakota SAO II LLP NMP: Land Application Field Summary											
Field Name	Site #	Field #	Overall Acres	Setback Acres	Application Acres	Quarter	Section	Township	Range	Farm-Tract	Operation/owner via onx
Union 11	1	5	155.12	17.83	137.29	NW 1/4	11	158	69	Farm 6330-Tract 5196	CBS Family Farms/slaubaugh Brooks
Union 11	1	1	139.31	9.77	129.54	Sw 1/4	11	158	69	Farm 6425-Tract 5277	CBS Family Farms/slaubaugh Brooks
Union 12	2	10	159.46	8.63	150.83	SE 1/4	12	158	69	Farm 5532-Tract 3117	EMS Family HoldingsLLC
Union 13	3	4	155.18	13.23	141.95	NE,NW,Sw 1/4	13	158	69	Farm 5532-Tract 3118	slaubaugh Larry
Union 13	3	14	306.03	6.11	299.92	NE,NW,Sw 1/4	13	158	69	Farm 5532-Tract 3118	slaubaugh Larry
Union 14 NW	4	1,11	86.64	0.09	86.55	NW 1/4	14	158	69	Farm 6330-Tract 5197	slaubaugh Brooks/carlan
Union 14 SE	4	9	155.90	11.41	144.49	SE 1/4	14	158	69	Farm 6330-Tract 5197	slaubaugh Brooks/carlan
Grandpas	4	13	63.43	1.03	62.40	SW 1/4	14	158	69	Farm 6330-Tract 5198	slughbaugh Larry
Union 23 Mom + Dad	5	6A	63.38	3.48	59.90	NE 1/4	23	158	69	Farm 5532-Tract 3896	Slaughbaugh Carlan & Rhonda
Union 23 Mom + Dad	5	6B	34.10	3.03	31.07	E 1/4	23	158	69	Farm 5532-Tract 3896	Slaughbaugh Carlan & Rhonda
Union 23 Mom + Dads	5	2	0.00	0	0.00	Se 1/4	23	158	69	Farm 5532-Tract 3896	Slaughbaugh Carlan & Rhonda
Union 24 NE Corner	6	3	78.22	9.2	69.02	E 1/2, NW 1/4	24	158	69	Farm 7089-Tract 3537	Slaughbaugh Carlan & Rhonda
Union 24 shalf	6	12A,12B,12C	139.37	11.89	127.48	mid Nw,se 1/4	24	158	69	Farm 7089-Tract 3537	Slaughbaugh Carlan & Rhonda
Union 24 Nw Corner	6	1,2	32.82	3.42	29.40	Nw 1/4	24	158	69	Farm 7089-Tract 3118	Slaughbaugh Carlan & Rhonda
Union 24	6	2	51.33	0.47	50.86	Mid W 1/4	24	158	69	Farm 7089-Tract 4117/T5604	Hexagon Farm L.L.P
Union 24	6	3	1.07	0	1.07	Mid W 1/4	24	158	69	Farm 7089-Tract 4118	Slaughbaugh Carlan & Rhonda
Union 24 SE	6	1A,1B,1C	70.18	7.74	62.44	SE 1/4	24	158	69	Farm 7089-Tract 4119	Slaughbaugh Carlan & Rhonda
Union 25 SE	7	4	156.75	6.48	150.27	SE 1/4	25	158	69	Farm 7089-Tract 3862	Slabaugh Larry & Elle
Union 25 NE	7	1	149.72	13.7	136.02	NE 1/4	25	158	69	Farm 5979-Tract 1566	Bulman Reggie
Zion 18	8	1	155.02	0	155.02	NW 1/4	18	158	68	Farm 873, Tract 1568	slaubaugh Larry & Ellen Mae
Zion 18 Shalf West Coulee	8	1	174.84	23.02	151.82	SW 1/4	18	158	68	Farm 4551, Tract 1567	Bulman, Lee & Lori
Zion 18 Shalf East Coulee	8	2	130.85	6.21	124.64	SE 1/4	18	158	68	Farm 4551, Tract 1567	Bulman, Lee & Lori
Zion 19 NW	9	1	157.11	0	157.11	NW 1/4	19	158	68	Farm 7089-Tract 3008	Slabaugh Larry & Elle
Zion 16 NE	10	1	139.30	2.96	136.34	NE 1/4	16	158	68	Farm 4547-Tract 1571	Westlind Reed
Zion 16 SE	10	2	156.59	17.08	139.51	SE 1/4	16	158	68	Farm 4547-Tract 1579	Westlind Reed
Zion 16 SW	10	3	148.96	14.64	134.32	SW 1/4	16	158	68	Farm 4547-Tract 3297	Westlind Reed
Zion 21 NW	11	1	153.58	14.1	139.48	NW 1/4	21	158	68	Farm 4547-Tract 3298	Westlind Reed
Zion 21 NE	11	2	155.68	2.55	153.13	NE 1/4	21	158	68	Farm 4547-Tract 3837	Westlind Reed
Zion 8 SW	12	1	156.10	0	156.10	SW 1/4	8	158	68	Farm 4547-Tract 1569	Westlind Reed
Zion 17 NW	13	1	152.39	0	152.39	NW 1/4	17	158	68	Farm 4547-Tract 1569	Westlind Reed
Zion 17 SW	13	2	160.67	0	160.67	SW 1/4	17	158	68	Farm 4547-Tract 1558	Westlind Reed
Total			3839.10	208.07	3631.03						

Nutrient Management Plan
For ND Livestock Operations

Plan Year: 2026																			
Part 1: Field Information										Part 2: Estimated Nutrient Requirement							Part 3: Planned Nutrient Application		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Field #	Legal Description	Spreadable Acres	Irrigated	No-Till > 5 Years	No-Till < 5 Years	Current Soil Tested: Spring 2025				Previous Year		Planning Year (2026)		^{1,2} Nutrient Recommendation (SF-882)			Manure Application Based on	Type of Manure and Equipment Used	
						N lb/Ac (0-2')	Phosphorus (ppm)(Olsen) (0-6")	Potassium (ppm K)	Organic Matter	Crop	Crop Yield, lb, bu, ton	Crop	Crop Yield, lb, bu, ton/acre	N (lb/A)	P ₂ O ₅ (lb/ac) (broadcast)	K ₂ O (lb/ac)		Type of Manure	Application Method
Union 11 F-5	Site 1	137.29				28	4	248	3.3	Edible Beans	2000	Corn, Grain	140	180	73	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 11 F-1	Site 1	129.54				43	3	230	2.8	Edible Beans	2000	Corn, Grain	140	165	80	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 12	Site 2	150.83				24	5	186	3.9	Soybean	40	Wheat	70	95	78	0	No Manure Application	Liquid Manure	Knife Injected
Union 13	Site 3	441.86				34	6	203	4.2	Wheat	70	Soybean	40	0	28	0	No Manure Application	Liquid Manure	Knife Injected
Union 14 NW	Site 4	86.55				31	5	316	3.2	Edible Beans	2000	Corn, Grain	140	177	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 14 SE	Site 4	144.49				29	5	315	3.5	Edible Beans	2000	Corn, Grain	140	179	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Grandpas	Site 4	62.4				29	5	315	3.5	Edible Beans	2000	Corn, Grain	140	179	67	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 23 F-6A	Site 5	59.9				32	3	318	4	Corn, Grain	140	Soybean	40	0	45	0	No Manure Application	Liquid Manure	Knife Injected
Union 23 F-6B	Site 5	31.07				18	8	331	4.2	Soybean	40	Wheat	70	172	37	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 24 NE Corner	Site 6	69.02				26	10	278	4	Wheat	70	Edible Beans	2000	74	20	0	No Manure Application	Liquid Manure	Knife Injected
Union 24 shalf	Site 6	127.48				18	8	331	4.2	Soybean	40	Wheat	70	172	37	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected
Union 24 NW Corner	Site 6	29.4				32	3	318	4	Corn, Grain	140	Soybean	40	0	45	0	No Manure Application	Liquid Manure	Knife Injected
Union 24 F-2&3	Site 6	51.93				21	11	275	3.8	Barley	80	Edible Beans	2000	79	20	0	No Manure Application	Liquid Manure	Knife Injected
Union 24 SE	Site 6	62.44				21	11	275	3.8	Barley	80	Edible Beans	2000	79	20	0	No Manure Application	Liquid Manure	Knife Injected
Union 25 SE	Site 7	150.27				12	6	262	4	Wheat	70	Edible Beans	2000	88	30	0	No Manure Application	Liquid Manure	Knife Injected
Union 25 NE	Site 7	136.02				12	6	262	4	Wheat	70	Edible Beans	2000	88	30	0	No Manure Application	Liquid Manure	Knife Injected
Zion 18	Site 8	155.02				15	3	254	3.4	Barley	80	Edible Beans	2000	85	45	0	No Manure Application	Liquid Manure	Knife Injected
Zion 18 East Coulee	Site 8	124.64				11	16	232	3.4	Soybean	40	Wheat	70	179	0	0	1.0 x Crop N Removal	Liquid Manure	Knife Injected

Nutrient Management Plan
For ND Livestock Operations

Part 1: Field Information										Part 2. Estimated Nutrient Requirement							Part 3. Planned Nutrient Application		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Field #	Legal Description	Spreadable Acres	Irrigated	No-Till > 5 Years	No-Till < 5 Years	Current Soil Tested: Spring 2025				Previous Year		Planting Year (2026)		Nutrient Recommendation (SF-882)			Manure Application Based on	Type of Manure and Equipment Used	
						N lb/Ac (0-2'	Phosphorus (ppm)(Olsen) (0-6")	Potassium (ppm K)	Organic Matter	Crop	Crop Yield, lb, bu, ton	Crop	Crop Yield, lb, bu, ton/acre	N (lb/A)	P ₂ O ₅ (lb/ac) (broadcast)	K ₂ O (lb/ac)		Type of Manure	Application Method
Zion 18 West Coulee	Site 8	151.82				32	6	192	3.1	Wheat	70	Soybean	40	0	28	0	No Manure Application	Liquid Manure	Knife Injected
Zion 19 NW	Site 9	157.11				27	6	216	3.7	Wheat	70	Edible Beans	2000	73	30	0	No Manure Application	Liquid Manure	Knife Injected
Zion 16 NE	Site 10	136.34				19	6	189	3.9	Wheat	70	Edible Beans	2000	81	30	0	No Manure Application	Liquid Manure	Knife Injected
Zion 16 SE	Site 10	139.51				19	6	189	3.9	Wheat	70	Edible Beans	2000	81	30	0	No Manure Application	Liquid Manure	Knife Injected
Zion 16 SW	Site 10	134.32				57	11	281	4.7	Soybean	40	Wheat	70	133	23	0	No Manure Application	Liquid Manure	Knife Injected
Zion 21 NW	Site 11	139.48				51	16	459	4.9	Edible Beans	2000	Wheat	70	139	0	0	No Manure Application	Liquid Manure	Knife Injected
Zion 21 NE	Site 11	153.13				51	16	459	4.9	Edible Beans	2000	Wheat	70	139	0	0	No Manure Application	Liquid Manure	Knife Injected
Zion 8 SW	Site 12	156.1				45	18	217	4.6	Soybean	40	Wheat	70	145	0	0	No Manure Application	Liquid Manure	Knife Injected
Zion 17 NW	Site 13	152.39				19	4	242	3.2	Wheat	70	Soybean	40	0	40	0	No Manure Application	Liquid Manure	Knife Injected
Zion 17 SW	Site 13	160.67				19	4	242	3.2	Wheat	70	Soybean	40	0	40	0	No Manure Application	Liquid Manure	Knife Injected
Total =		3,631.0																	

References: Estimating Manure Nutrient Availability: MF-2562
North Dakota Fertilizer Recommendation Tables and Equations, SF 882 (Revised)
North Dakota Manure Fertilizer Use Recommendations, NM-1629

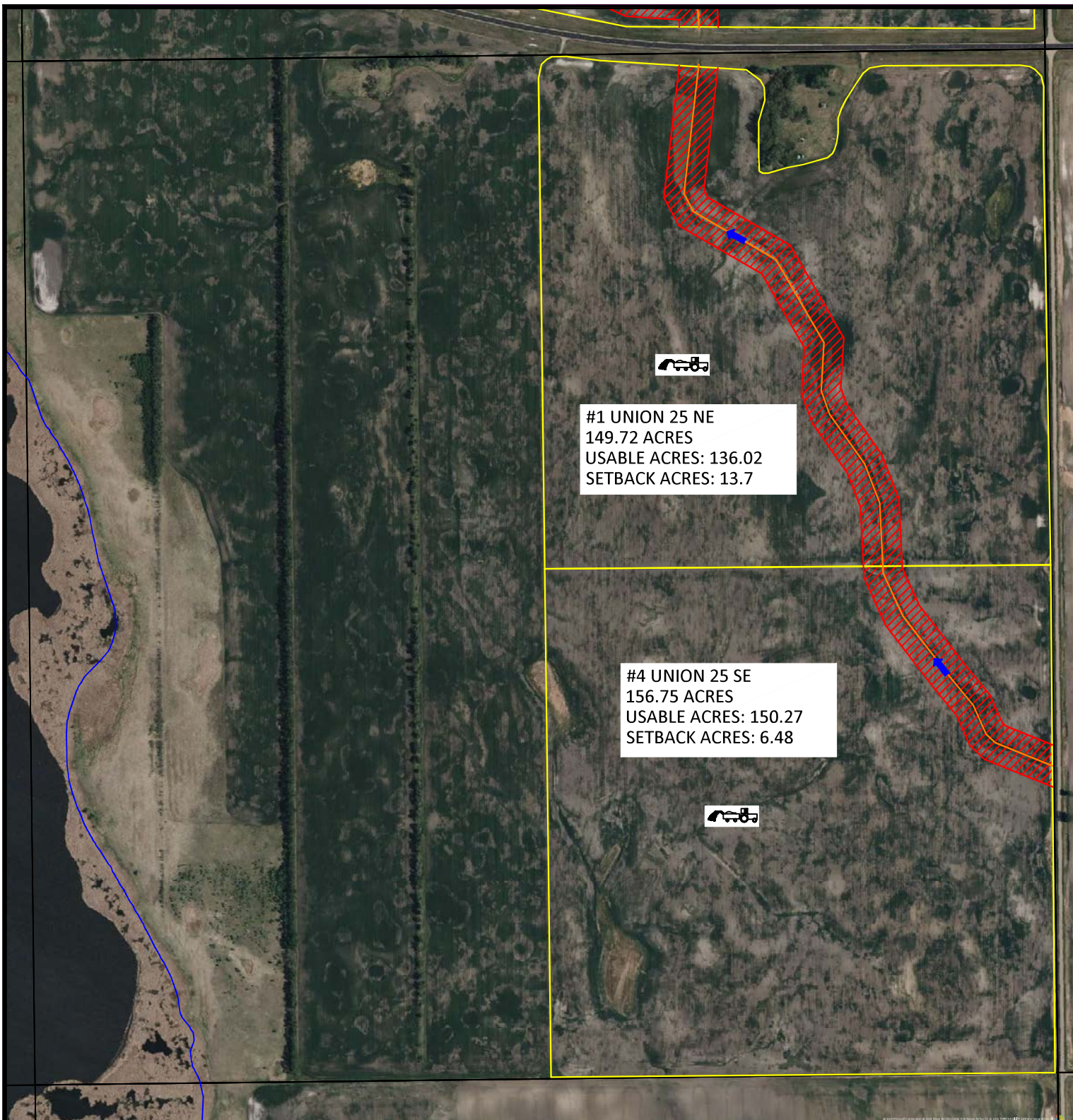
¹It is recommended to band 15 lbs P₂O₅ for Wheat with the starter fertilizer.
²Reduce P₂O₅ and K₂O by 1/3 if fertilizer is banded
*= value used for next year N soil test

Nutrient Management Plan
For ND Livestock Operations
Plan Year: 2026

Part 3. Planned Nutrient Application										Part 4. Nutrient Application										Part 5. Nutrient Balance					
1	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42			
Field #	Solids (lbs/ton,) ASAE, 2005, D 384.2			Liquid (lbs/acre-in), PART 651 Table 4-16			Manure Application		Maximum Manure Applied	Manure Applied			Manure Application (lbs/acre)		Commercial Application lbs/acre		Total lbs/acre		Crop Removal (lb/ac)		Soil Nutrient Balance				
	Organic N	Ammonium N	P ₂ O ₅	Organic N	Ammonium N	P ₂ O ₅	N Credit, (Prior year and year before that) (lbs/acre)	Available N (First Crop Year) lbs/ton or lbs/acre-in	Tons/Acre or acre-in/acre	Tons or Acre-in	Tons or Acre-in per Field	Time Period When Manure Applied	N	P ₂ O ₅	N	P ₂ O ₅	N	P ₂ O ₅	Estimated N	Estimated P ₂ O ₅	Nitrogen Balance lb/ac*	P ₂ O ₅ Balance ppm			
Union 11 F-5	0	0	0	510	210	524	0	342	0.53	0.37	50.8	Fall	127	194	53	0	180	194	126.2	49.0	81.8	11.2			
Union 11 F-1	0	0	0	510	210	524	0	342	0.48	0.37	47.9	Fall	127	194	38	0	165	194	126.2	49.0	81.8	10.2			
Union 12	0	0	0	510	210	524	0	342	0.28	0	0.0		0	0	95	78	95.3	77.9	87.5	39.2	31.8	6.9			
Union 13	0	0	0	510	210	524	0	342	0.44	0	0.0		0	0	0	28	0	28.4	150.0	32.0	34.0	5.8			
Union 14 NW	0	0	0	510	210	524	0	342	0.52	0.36	31.2	Fall	123	189	54	0	177	189	126.2	49.0	81.8	12.0			
Union 14 SE	0	0	0	510	210	524	0	342	0.52	0.36	52.0	Fall	123	189	56	0	179	189	126.2	49.0	81.8	12.0			
Grandpas	0	0	0	510	210	524	0	342	0.52	0.36	22.5	Fall	123	189	56	0	179	189	126.2	49.0	81.8	12.0			
Union 23 F-6A	0	0	0	510	210	524	0	342	0.44	0	0.0		0	0	0	45	0	45.2	150.0	32.0	32.0	3.7			
Union 23 F-6B	0	0	0	510	210	524	0	342	0.50	0.36	11.2	Fall	123	189	49	0	172	189	87.5	39.2	102.5	15.5			
Union 24 NE Corner	0	0	0	510	210	524	0	342	0.22	0	0.0		0	0	74	20	74	20	100.0	26.0	0.0	9.7			
Union 24 shalf	0	0	0	510	210	524	0	342	0.50	0.36	45.9	Fall	123	189	49	0	172	189	87.5	39.2	102.5	15.5			
Union 24 NW Corner	0	0	0	510	210	524	0	342	0.44	0	0.0		0	0	0	45	0	45.2	150.0	32.0	32.0	3.7			
Union 24 F-2&3	0	0	0	510	210	524	0	342	0.23	0	0.0		0	0	79	20	79	20	100.0	26.0	0.0	10.7			
Union 24 SE	0	0	0	510	210	524	0	342	0.23	0	0.0		0	0	79	20	79	20	100.0	26.0	0.0	10.7			
Union 25 SE	0	0	0	510	210	524	0	342	0.26	0	0.0		0	0	88	30	88	30	100.0	26.0	0.0	6.2			
Union 25 NE	0	0	0	510	210	524	0	342	0.26	0	0.0		0	0	88	30	88	30	100.0	26.0	0.0	6.2			
Zion 18	0	0	0	510	210	524	0	342	0.25	0	0.0		0	0	85	45	85	45	100.0	26.0	0.0	4.0			
Zion 18 East Coulee	0	0	0	510	210	524	0	342	0.52	0.36	44.9	Fall	123	189	56	0	179	189	87.5	39.2	102.5	23.5			

Nutrient Management Plan For ND Livestock Operations

Part 3. Planned Nutrient Application										Part 4. Nutrient Application										Part 5. Nutrient Balance					
1		21	22	23	24	25	26	27	28		29	30	31	32	33	34	35	36	37	38	39	40		41	42
Field #	Solids (lbs/ton,) ASAE, 2005, D 384.2				Liquid (lbs/acre-in), PART 651 Table 4-16			Manure Application		Maximum Manure Applied	Manure Applied			Manure Application (lbs/acre)	Commercial Application lbs/acre	Total lbs/acre	Crop Removal (lb/ac)		Soil Nutrient Balance						
	Organic N	Ammonium N	P ₂ O ₅	Organic N	Ammonium N	P ₂ O ₅	N Credit, (Prior year and year before that) (lbs/acre)	Available N (First Crop Year) lbs/ton or lbs/acre-in	Tons/Acre or acre-in/acre	Tons or Acre-in	Tons or Acre-in per Field	Time Period When Manure Applied	N	P ₂ O ₅	N	P ₂ O ₅	N	P ₂ O ₅	Estimated N	Estimated P ₂ O ₅	Nitrogen Balance lb/ac*	P ₂ O ₅ Balance ppm			
Zion 18 West Coulee	0	0	0	510	210	524	0	342	0.44	0	0.0		0	0	0	28	0	28.4	150.0	32.0	32.0	5.8			
Zion 19 NW	0	0	0	510	210	524	0	342	0.21	0	0.0		0	0	73	30	73	30	100.0	26.0	0.0	6.2			
Zion 16 NE	0	0	0	510	210	524	0	342	0.24	0	0.0		0	0	81	30	81	30	100.0	26.0	0.0	6.2			
Zion 16 SE	0	0	0	510	210	524	0	342	0.24	0	0.0		0	0	81	30	81	30	100.0	26.0	0.0	6.2			
Zion 16 SW	0	0	0	510	210	524	0	342	0.39	0	0.0		0	0	133	23	133	23.4	87.5	39.2	102.5	10.2			
Zion 21 NW	0	0	0	510	210	524	0	342	0.41	0	0.0		0	0	139	0	139	0	87.5	39.2	102.5	14.0			
Zion 21 NE	0	0	0	510	210	524	0	342	0.41	0	0.0		0	0	139	0	139	0	87.5	39.2	102.5	14.0			
Zion 8 SW	0	0	0	510	210	524	0	342	0.42	0	0.0		0	0	145	0	145	0	87.5	39.2	102.5	16.0			
Zion 17 NW	0	0	0	510	210	524	0	342	0.44	0	0.0		0	0	0	40	0	39.6	150.0	32.0	19.0	4.4			
Zion 17 SW	0	0	0	510	210	524	0	342	0.44	0	0.0		0	0	0	40	0	39.6	150.0	32.0	19.0	4.4			
Note: Column 28, shows the estimated manure application for each field for the Plan year										Total Nutrient Removal from Crops (lbs)=										414,883	126,694				
Total Estimated Liquid Effluent for Spreading =								304.1	Acre-Inch		Total Planned Liquid Effluent for spreading =								306.3	Acre-Inch		Columns 39 and 40 show the Soil Nutrient Balance after the inputs and the crop nutrient uptake.			
Total Estimated Manure for Spreading =								0.00	Tons		Total Planned Manure for spreading =								0.0	Tons					



Land Application Area

Manure Application Fields

100' Setback or Exclusion Area
Or 35' Buffer Setback

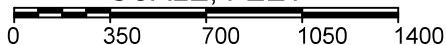
Dakota SAO II LLP

WATER RISK ASSESSMENT MAP

SITE #7

SECTION 25, T 158 N, R 69 W
YORK, ND

SCALE, FEET



"L" LEACHING - High Risk

"R" RUNOFF - High Risk

Public Roads (right-of-way) Setback:
25 feet (surface applied)
10 feet (incorporated or injected)

Date: 7/29/25

Scale: 1" = 700'

Drawn By: KJS

Checked By: NAP

Page: 10C.3.7



#4 Union 25 SE

Add setback shown in red.

Legend

Setback

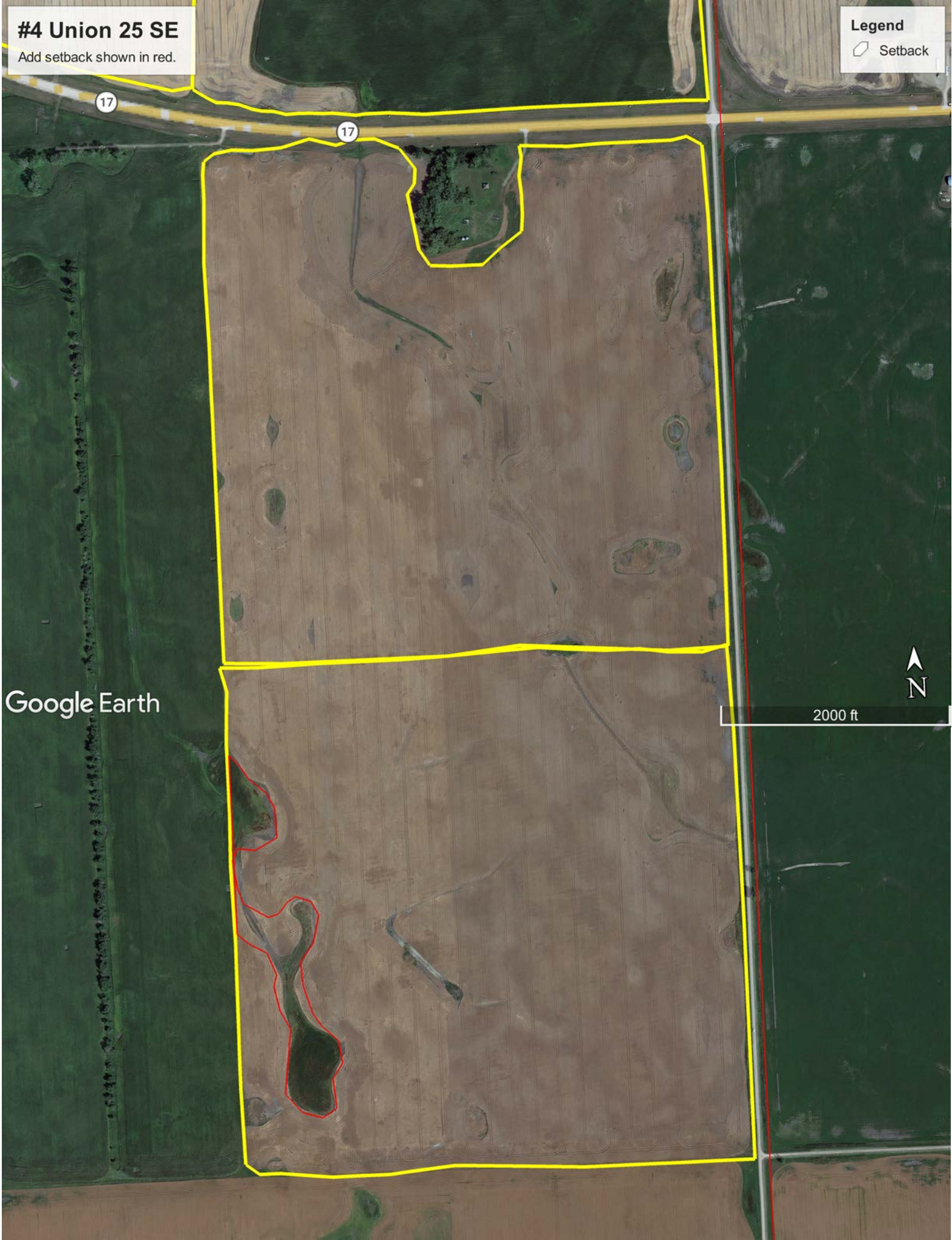
17

17

Google Earth



2000 ft



#1 Zion 18

Add setback shown in red.

Legend

 Setback

76th St NE

76th St N

64th Ave NE

64th Ave NE

Google Earth

Image USDA/FFAC/GEO



1000 ft

#2 Zion 21 NE

Add setback shown in red.

Legend

 Setback

75th St NE

75th St NE

Google Earth

Image USDA/FPAC/GEO



1000 ft