DEQ Montana Department of Environmental Quality	WATER PROTECTION BUREAU	Agency Use Permit No.: Date Rec'd Amount Rec'd Check No. Rec'd By

FORM **NOI-NMP CAFO**	**Notice of Intent (NOI) and Nutrient Management Plan (NMP) Concentrated Animal Feeding Operation General Permit MTG010000**

This application form is comprised of the **NOI (Sections 1 – 5)** and the **NMP (Sections 6 – 10)**. Before completing the NOI-NMP form, Concentrated Animal Feeding Operation (CAFO) operators must read the CAFO General Permit. CAFO operators are also advised to read the attached NOI-NMP instructions before completing this form. You must print or type legibly; forms that are not legible, not complete, or unsigned will be rejected. You must maintain a copy of the completed NOI-NMP form for your records.

CAFO Status and Fee

Permit Authorization Number: M T G 010339

Select Appropriate Fee:

- ☐ New Application: $1200
- X Renewal Application: $600
- ☐ Permit Modification: $600

Sections 1 through 5 consist of the NOI. The application form is to be completed by the owner or operator of a Concentrated Animal Feeding Operation (CAFO).

Section 1 – Facility/Site Information

Facility Name	Twin Hills Colony
Location (Physical address or Directions)	4177 Beaverslide Road
Nearest City or Town	Carter
Zip Code, County	Montana, Chouteau
Facility Latitude, Longitude	48.0172220, -111.069167
Date facility began operation	**06-09-2008**
Status of Applicant	☐ Federal ☐ State ☐ No X Private ☐ Other_____
Located on Tribal Lands?	X No ☐ Yes *(If yes, obtain the permit through EPA, not DEQ)*

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Section 2 – Representatives

2.1 Applicant (Owner/Operator)

The owner/operator assumes all liability for site discharges and compliance with the terms and conditions of the permit. The signatory/responsible official must meet certification requirements listed in the Certification Section at this end of this form.

Owner/Operator Formal Name	Twin Hills Colony Inc.
Mailing Address	4177 Beaverside Road
City, State, Zip Code	Carter, Montana, 59420
Signatory/Responsible Official	Name: Peter Wipf Title: President
Contact Information	Phone: 406-734-5250 Email: sec.twinhills@colonymt.com

2.2 Authorized Representative

For future reports (including NetDMR) to be signed by anyone other than the signatory/responsible official, a duly authorized individual(s) or position must be identified. If one is not designated, than all reports must be signed by the signatory until such designation is made in writing [ARM 17.30.1232(2)].

Select Appropriate Box:

☐ No authorized representative for this permit is designated at this time (continue to Section 3)

X I designate the following duly authorized representative for this permit (provide the information below):

Authorized Representative Information:

Authorized Representative	Name: D. Stephen Ellery Title: Certified Professional Agronomist
Company Name	Agrological Solutions Inc.
Mailing Address	40 Eden Road W
City, State, Zip Code	Great Falls, MT, 59405
Contact Information	Phone: 406-262-0230 Email: steve.ellery@aglogical.com

Section 3 – Business Description

3.1 SIC Codes and NAICS Codes

Provide at least one Standard Industrial Classification (SIC) code and one North American Industry Classification System (NAICS) code which best reflects the products or services provided by the CAFO.

SIC Code		Description
(1)	213	Hogs
(2)	252	Chicken Eggs
(3)	254	Poultry Hatcheries
(4)	251/253/259	Fryers, Turkeys, Ducks

NAICS Code		Description
(1)	11221	Hog and Pig Farming
(2)	11234	Chicken Egg Production
(3)	11234	Poultry Hatcheries
(4)	11232/11233	Fryers, Turkeys, Ducks

SIC Code Examples:

211 Beef Cattle Feedlots
212 Beef Cattle, Except Feedlots
213 Hogs
214 Sheep and Goats
241 Dairy Farms
251 Broiler, Fryer and Roaster Chickens
252 Chicken Eggs
253 Turkeys and Turkey Eggs
254 Poultry Hatcheries
259 Poultry and Eggs, not elsewhere classified (Ducks)
272 Horses and other Equines

NAICS Code Examples:

112112 Cattle Feedlots
112111 Beef Cattle Ranching and Farming
11221 Hog and Pig Farming
11240 Sheep Farming
11212 Dairy Cattle and Milk Production
11232 Broilers and other Meat-Type Chickens
11234 Chicken Egg Production
11233 Turkey Production
11234 Poultry Hatcheries
112390 Other Poultry Production
112920 Horses and other Equine Production

3.2 Facility or Operation Description

Provide a brief description of the nature of the facility (feedlot, stockyard, sale barn, etc.)
Facility consists of Farrow to Finish hog barn, Layer chicken barn, fryer chickens, turkeys, ducks and beef feedlot.

3.3 Existing or Pending Permits, Certification, or Approvals

☐ None

X MPDES: MTG010339

☐ PSD (Air Emissions)_____

☐ 404 Permit (Dredge and Fill)_____

☐ RCRA_____

☐ Other_____

☐ Other_____

Section 4 – Outfalls

4.1 Receiving Water

For each outfall, provide the latitude and longitude (to the nearest decimal degree) and the name of the receiving water. If the receiving water/drainage is unnamed, indicate the closest named drainage it flows into (i.e., "unnamed tributary to Clear Creek"). Attach additional sheets if necessary for more outfalls. This section must not be left blank, and "N/A" is not acceptable.

Outfall	Latitude	Longitude	Name of Receiving Water
001	48.0205585	-111.071205	Unnamed drainage to Dugout Coulee
002	48.0176880	-111.067343	Unnamed Drainage to Dugout Coulee

Section 5 – Characteristics

5.1 Impaired Waters 303(d)

Identify whether the receiving water is impaired for nutrients. Check the Clean Water Act Information Center database at https://deq.mt.gov/water/resources to determine if the receiving water is impaired for nutrients (total nitrogen and/or total phosphorus).

☐ The receiving water is impaired for nutrients

☑ The receiving water is NOT impaired for nutrients

Continue to Page 4

5.2 Animal Confinement

Report the maximum number of each type of animal confined at any one time in open confinement and/or housed under a roof.

Animal type	Number in Open Confinement	Number Housed Under Roof
Mature Dairy Cows		
Veal Calves		
Cattle including dairy Heifers	80	
Swine 55 lbs. or over		4700
Swine 55 lbs. or under		900
Horses		
Sheep or Lambs		
Turkeys		300
Chicken broilers –includes juveniles		3000
Chicken layers –includes juveniles		50,000 layers
Ducks		400
Other Specify:Pullet		25,000
Other Specify:		

5.3 Rain Gage Location

Identify the nearest gage station or onsite rain gage. Provide either the Station ID of the gage or a latitude and longitude.

Station ID KTMFORTB19 OR

Latitude, Longitude _____, _____

5.4 Containment Structures

Were the containment structures built after February 2006?

☐ Yes. Skip the following 3 questions and continue to the table below.

☑ No. Complete the questions and table below.

Do the livestock waste control facilities have 10 feet of separation between the pond bottom and any bedrock formations?

☑ Yes ☐ No

Do the waste containment structures have 4 feet of separation from the pond bottom to any ground water?

☑ Yes ☐ No

Do the livestock waste control facilities comply with the applicable well setbacks?

☑ Yes ☐ No

Continue to Page 5

Identify the type of containment/storage, the total capacity with units, and the number of days of storage in each:

Type of Containment/Storage	Total Capacity	Units (gallons or tons)	Days of Storage
Anaerobic Lagoon			
Storage Pond #1			
Storage Pond #2			
Storage Pond #3			
Storage Pond #4			
Storage Pond #5			
Above Ground Storage Tank #1	2,654,274	gallons	180
Above Ground Storage Tank #2			
Above Ground Storage Tank #3			
Underfloor Pits			
Below Ground Storage Tank			
Roofed Storage Shed			
Concrete Pad	1500	tons	730
Impervious Soil Pad	750	tons	365
Other Specify: Indoor Storage	350	tons	180
Other Specify:			

5.5 Sage Grouse Habitat

Visit the Montana Sage Grouse Habitat Conservation Program (Program) website at https://sagegrouse.mt.gov/ to determine if the proposed operation is located in designated sage grouse core, general, or connectivity habitat.

☐ Yes. Submit an application to the Program and **attach the required consultation letter**.
☑ No. No additional information is required.

5.6 New Source/Operation

Is this a new source and/or operation? New sources must obtain analyses from the Montana Natural Heritage Program (MTNHP) and Montana State Historic Preservation Office (SHPO) demonstrating possible impacts to wildlife and cultural resources, respectively.

☐ Yes. Attach project review analyses from MTNHP and SHPO.
☑ No. No additional information is required

Continue to Page 6

Sections 6 through 10 consist of the Nutrient Management Plan (NMP). These sections are intended to help CAFO operators develop a site-specific NMP required by the CAFO General Permit. Your NMP must be kept at the operation. Attach additional pages as necessary, indicating the corresponding section number on this NMP form.

Section 6 – NMP Minimum Elements

Facility Photos and Maps

Facilities must attach photos and maps depicting the following:

- The production area that shows the locations of all animal confinement structures described in the **Animal Type, Storage Location, and Generation Rates Table.**
- The flow direction of storm water and wastewater for all animal confinement structures described in the **Animal Type, Storage Location, and Generation Rates Table.**
- Manure and wastewater handling and storage areas
- Raw material handling and storage areas
- Storage and disposal areas of chemicals or other contaminants handled on site
- All land application areas (include topography and soil types)
- Environmentally sensitive areas (sinkholes, wells, drinking water sources, tile drain outlets, etc.) for the production area
- Illustrate the facility/activity boundaries, receiving water, and major drainage patterns
- Identify the specific location of the production area and the land application area(s)

☑ I have attached photos and maps (aerial and topographic) that meet the above requirements.

6.1 Ensure Adequate Storage Capacity

Complete the table below: Be sure to identify each type of animal confined at this facility. This could include animals of a given species, weight class, or housed for a specific purpose.

Livestock Statistics and Manure, Litter, and Process Wastewater Generation Rates

Animal Type	Waste Storage Location	Maximum Number of Animals at Any Time	Number of Days/Year on Site	Annual manure, litter, and process wastewater production	
				Dry (tons/yr)	Liquid (gallons/yr)
1. Swine (55lb. or over)	Above Ground Storage Tank	3900	365		5,000,000
2. Swine (55lb. or under)	Above Ground Storage Tank	1800	365		400,000
3. Chicken layers	Bermed soil pad	50,000	365	625	0
4. Chicken Pullets	Bermed soil pad	50,000	100	100	0
5. Ducks	Bermed soil pad	400	120	5	0
6. Turkeys	Bermed soil pad	300	100	5	
7. Fryers	Bermed Soil pad	3000	100	15	
8.					
9.					
10.					
11.					

Methods for estimating animal manure, litter, and process wastewater production

Describe the methods used for estimating animal manure, litter, and process wastewater production: Include all formulas, factors, references to tables, and other resources used to calculate manure, litter, and wastewater production. Be sure to account for soiled bedding materials.

Manure volume estimates are based on historical production numbers for the facility.

Manure handling:

Identify manure, litter, and process wastewater handling at the CAFO. Mark all that apply:

- ☐ Stored in pens
- ☑ Direct pipe to liquid impoundment
- ☑ Stored on stacking pad
- ☑ Stored under floor pit
- ☐ Composting on site
- ☐ Separator
- ☐ Other _____

Frequency of manure removal from confinement areas:

- ☑ Bi-annually
- ☑ As needed
- ☐ Annually
- ☐ Other _____

Is the manure, litter, or process wastewater temporarily stored in any location other than the production area?

- ☐ No.
- ☑ Yes. Explain how and where Dry manure is temporarily stored on field headland prior to applicaiton for up to 7 days.

Is dry manure and/or litter stored on an impervious surface?

- ☐ No.
- ☑ Yes. Describe the type and characteristics of this surface Stored on concrete stacking pad or bermed soil pad

Waste control structures:

Provide the 24-hr-25-yr storm event at your facility location. Refer to the map provided in the instructions. 3.0 in/hr

Provide the annual precipitation during critical winter storage period (180 days from mid-October to mid-April) 5.29 in

Provide the area within clean water diversions. This is the area that is inside the BMPs used for clean water diversions and is used to calculate volume required to hold the 24-hr-25-yr storm event and the volume of your critical storage period. 8.06 acres

Check all the surface types within the clean water diversion area and provide the coverage in acres or ft^2. Be sure to circle the correct units.

- ☑ Dirt 1.36 acres or ft^2 (circle correct unit)
- ☑ Concrete 0.39 acres or ft^2 (circle correct unit)
- ☐ Paved _____ acres
- ☑ Under roof 3.61 acres or ft^2 (circle correct unit) – check if runoff is not part of clean water BMPs
- ☐ Gravel _____ acres or ft^2 (circle correct unit)
- ☑ Pasture 2.27 acres or ft^2 (circle correct unit)
- ☑ Other Above Ground Storage Tank 0.43 acres or ft^2 (circle one)

Use the Table below to identify and describe all production area waste control structures for the production area of each animal type identified in the table "Livestock Statistics and Manure, Litter, and Process Wastewater Generation Rates" above (Section 6.1). Waste control structures may include but are not limited to: manure lagoons, manure ponds, evaporation ponds, wastewater retention ponds, contaminated runoff retention ponds, settling basins, underground storage tanks, underfloor pits, manure solids stacking pads, vegetative treatment strips, composting facilities, and dry stack facilities. Berms, dikes, concrete curbs, ditches, and waste transfer pipelines are also waste control structures and must be listed, though some of the requested measurements may not apply.

Production Area Waste Control Structures Description				
Production area Waste Control Structure (For Corresponding Animal Type Identified in Table Above)	Volume (gal if liquid) (ft^3 if dry)	Number of days of storage	Winter storage depth (ft)	The 24hr-25 yr storm event depth (ft)
1. Above Ground Storage Tank	2,500,000	180	10	2
2. Concrete Stacking Pad	5,000	730	1	1
3. Bermed soil pad	1400	720	1	1
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

6.2 Mortality Management

Check the box that describes how mortalities are disposed of at this CAFO.

- ☑ Burial
- ☑ Composted
- ☐ Incineration
- ☐ Landfill
- ☐ Contractor removal
- ☐ Other_____

Provide the location where mortalities are disposed of, if part of the production area:

See provided "Facility Layout" Map.

6.3 Clean Water Diversion Practices

Check all that apply for how clean water is diverted from the production area.

- ☑ Ditches
- ☑ Earthen berms
- ☐ Culverts
- ☑ Site grading
- ☑ Gutters and spouts
- ☐ Other _____

6.4 Prohibiting Animals and Wastes from Direct Contact with State Waters

Check all that apply for how animals and wastes are prohibited from direct contact with sate waters.

- ☑ Fencing
- ☐ Wall
- ☑ Inside building
- ☐ Other _____

6.5 Chemicals and Contaminants

List all major chemicals or other contaminants handled on site as part of your CAFO operation, including, but not limited to: pesticides, herbicides, animal dips, disinfectants, etc. Specify the method of disposal and location stored for each contaminant. Ensure a corresponding map has been attached, as required in Section 6, Facility Photos and Maps.

No chemicals stored in Production Areas. All chemical products are stored in the Farm Storage building.

6.6 Conservation Practices

Check all temporary, permanent, and structural BMPs which will be used to control runnoff of pollutants from the facility's **production area**. Be sure to include them on the map described above in Section 6. If BMPs are not installed, include a schedule for implementation of each of the following measures. Provide details and specifications to suplement the BMP descriptions. Attach additional sheets if necessary.

- ☐ Ditches
- ☐ Earthen berms
- ☐ Culverts and pipes
- ☑ Buffers
- ☑ Site grading
- ☑ Gutters and spouts
- ☑ Covered Pens
- ☐ Other _____

6.7 Sampling and Analysis Procedures for Manure, Litter, Process Wastewater, and Soil

Representative samples of manure, litter, and process wastewater must be analyzed a minimum of once per year for total nitrogen and total phosphorus. Results should be reported in lbs/ton for solids and lbs/1000 gal for liquids. Results will be used to determine rates for manure, litter, and process wastewater. Indicate your method for samping. Be sure to provide a description if you select "other."

- ☑ Sample collection will occur according to CAFO General Permit Section II.D.
- ☐ Other _____

Continue to Page 10

Section 7 – NMP Land Application

Identify whether manure will be land applied to land that is owned, rented, or leased by the owner or operator of the facility.

☐ No. Explain how animal waste will be managed by the operation, including protocol for transfers of manure, litter, and process wastewater. Skip to Section 10.

_____

_____

☑ Yes. Continue below.

7.1 Land Application Photos and Maps

Facilities that land apply must attach photos/maps clearly identify the following items. If an item is not applicable, check the box "None."

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The soil type(s) present and their locations within the individual land application field(s)
- The location of any downgradient surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field i.e. setbacks
- Buffers and setbacks around state surface waters, well heads, etc.
- Any downgradient open tile line intake structures
  - ☑ None. Not included on map
- Any downgradient sinkholes
  - ☑ None. Not included on map
- Any downgradient agricultural well heads
  - ☑ None. Not included on map
- All conduits to surface waters
- All temporary, permanent, and structural BMPs used to control runoff of pollutants from the land application area

☑ I have attached photos and maps of the site where manure is to be applied.

7.2 Protocols to Land Apply Manure, Litter, or Process Wastewater

Check all temporary, permanent, and structural BMPs which will be used to control runoff of pollutants from the CAFO's **land application area.** If not already in use, include a schedule for implementation of each of these measures. You may supplement this description by attaching details and specifications.

☑ Buffers
☐ Constructed wetlands
☐ Infiltration field
☑ Setbacks
☐ Other _____
☑ Conservation tillage
☑ Grass Filter
☑ Residue Management
☐ Terrance

7.3 Soil Phosphorus Sampling and Analysis

Representative **soil** (composite) samples from the top 6 inches layer of soil for each field where manure will be applied must be analyzed for phosphorus content at least once every five years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater.

☑ Sample collection will occur according to Part II.D of the CAFO General Permit.
☐ Other (describe)_____

7.4 Soil Nitrogen Sampling and Analysis

Representative composite soil samples for total nitrogen and nitrate must be collected for each field where manure will be applied. Composite samples for total nitrogen must be collected from a soil depth of 0 to 6 inches and must be analyzed annually. Composite samples for nitrate must be collected from a soil depth of 6 to 24 inches and must be analyzed annually. All samples must be analyzed according to method code 4H2al-3 in NRCS Soil Survey Laboratory Methods Manual, Soil Survey Investigation Report No. 42. Results must be reported as mg/kg total nitrogen and pounds per acre.

☑ Sample collection will occur according to Part II.D of the CAFO General Permit.

☐ Other _____

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Section 8. NMP Application Rates

The applicant has 2 ways in which to report how manure or process wastewater application rates can be reported to DEQ. Select one:

☐ **Linear Approach**. Expresses rates of application as pounds of nitrogen and phosphorus. Complete Section 8.1, then continue to Section 9. See page 8 of the NOI-NMP Instructions for guidance on the Linear Approach.

☑ **Narrative Rate Approach**. Expresses a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied. Complete Section 8.2, then continue to section 9. See page 9 of the NOI-NMP Instructions for guidance on the Narrative Rate Approach.

8.1 Linear Approach

Expresses rates of application as pounds of nitrogen and phosphorus. CAFOs selecting the linear approach to address rates of application must include in the NMP submitted to the Department the following information for each crop, field, and year covered by the NMP:

1. The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater.
2. The outcome of the field-specific assessment of the potential for phosphorus transport from each field. The Department does not have an N transport risk assessment, therefore the NMP must document any basis for assuming that nitrogen will be fully used by crops. The CAFO must specify any conservation practices used in calculating the risk rating.
3. The crops to be planted or any other uses of a field such as pasture or fallow fields.
4. The realistic annual yield goal for each crop or use identified for each field.
5. The nitrogen and phosphorus recommendations from Department acceptable sources for each crop or use identified for each field.
6. Credits for all residual nitrogen in each field that will be plant available.
7. Consideration of multi-year phosphorus application. For any field where nutrients are applied at a rate based on the crop phosphorus requirement, the NMP must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement.
8. All other additions of plant available nitrogen and phosphorus (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen).
9. The form and source of manure, litter, and process wastewater to be land-applied.
10. The timing and method of land application. The NMP also must include storage capacities needed to ensure adequate storage that accommodates the timing indicated.
11. The methodology that will be used to account for the amount of nitrogen and phosphorus in the manure, litter, and wastewater to be applied.
12. Any other factors necessary to determine the maximum application rate identified in accordance with this Linear Approach.

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13. Complete the Nutrient Budget Worksheet, below, for the crop grown on each field for each year to which manure or process wastewater is, or may be, applied. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet

Field identification: Year: Crop:					
Expected Crop Yield:					
Phosphorus index results or Phosphorus application from soil test:					
Method of Land Application:					
When will application occur:					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre			
2	(-)	Credits from previous legume crops, or soil test lbs/acre			
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test			
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre			
5	(-)	Nutrients supplied in irrigation water, lbs/acre			
6		**= Additional Nutrients Needed, lbs/acre**			
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)			
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0			
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**			
10		Additional Nutrients needed, lbs/acre (calculated above)			
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)			
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**			

End of Linear Approach. Continue to Section 9

8.2 Narrative Approach

Expresses a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied. CAFOs selecting the narrative rate approach to address rates of application must include in the NMP submitted to the Department the following information for each crop, field, and year covered by the NMP:

1. The maximum amounts of nitrogen and phosphorus that will be derived from all sources of nutrients (pounds/acre for each crop and field).

2. The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. The Department does not have an N transport risk assessment, therefore the NMP must document any basis for assuming that nitrogen will be fully used by crops. The CAFO must specify any conservation practices used in calculating the risk rating.

3. The crops to be planted in each field or any other uses of a field such as pasture or fallow fields, including alternative crops if applicable. Any alternative crops included in the NMP must be listed by field, in addition to the crops identified in the planned crop rotation for that field.

4. The realistic annual yield goal for each crop or use identified for each field for each year, including any alternative crops identified.

5. The nitrogen and phosphorus recommendations from Department acceptable sources for each crop or use identified for each field, including any alternative crops identified.

6. The methodology (including formulas, sources of data, protocols for making determination, etc.) and actual data that will be used to account for: (1) the results of soil tests, (2) credits for all nitrogen in the field that will be plant-available, (3) the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied, (4) consideration of multi-year phosphorus application (for any field where nutrients are applied at a rate based on the crop phosphorus requirement, the methodology must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement), (5) all other additions of plant available nitrogen and phosphorus to the field (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen), (6) timing and method of land application, and (7) volatilization of nitrogen and mineralization of organic nitrogen.

7. Any other factors necessary to determine the amounts of nitrogen and phosphorus to be applied in accordance with the Narrative Rate Approach.

8. NMPs using the Narrative Rate Approach must also include the following projections, which will not be used by the permitting authority in establishing site-specific permit terms:
   - Planned crop rotations for each field for the period of permit coverage.
   - Projected amount of manure, litter, or process wastewater to be applied.
   - Projected credits for all nitrogen in the field that will be plant available.
   - Consideration of multi-year phosphorus application.
   - Accounting for other additions of plant available nitrogen and phosphorus to the field.
   - The predicted form, source, and method of application of manure, litter, and process wastewater for each crop.

Section 9 – NMP Phosphorus

Phosphorus Risk Assessment: The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using Method A or Method B (below) to complete the assessment, unless the receiving water is impaired for nutrients, then you must use method B below for phosphorus risk assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained onsite at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Indicate which method will be used to determine phosphorus application:

☐ **Method A** – Representative Soil Sample. Complete Section 9.1, then continue to Section 10.
☐ **Method B** – Phosphorus Index. Complete Section 9.2, then continue to Section 10.

9.1 Method A – Representative Soil Sample

Obtain one or more representative soil sample(s) from the field per ARM 17.30.1334
Have the sample analyzed for phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm). Using the results of the Olsen P test, determine application basis according to the Table below.

Olsen P Soil Test Results (ppm)	Application Basis
<25.0	Nitrogen Needs of Crop
25.1 - 100.0	Phosphorus Needs of Crop
100.0 – 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application allowed

Olsen P Test Result: _____ ppm

End of Method A. Continue to Section 10

9.2 Method B – Phosphorus Index

Complete a phosphorus Index according to the crop grown on each field. Complete the Phosphorus Index Worksheet below to calculate phosphorus index. For information on filling out specific sections of this table, please refer to the method as described in NRCS Agronomy Technical Note MT-77.

Appendix A: Phosphorus Index Worksheet (Complete for each field and crop)

Field: **Crop:** **Year:**

Field Category Factor	None (0)	Low (1)	Medium (2)	High (4)	Very High (8)	Risk Value (0,1,2,4,8)	Weight Factor	Weight Risk
Soil Erosion	NA	<5 tons/as/yr	5-10 ton/ac/yr	10-15 tons/ac/yr	QA> 10 for erodible soils		X 1.5	
Furrow Irrigation Erosion	N/A	Tail water recovery, QS>6 very erodible soils, or QS>10 other soils	QS> for erosion resistant soil	QS> for erodible soils	QA>6 for very erodible soils		X 1.5	
Sprinkler Irrigation Erosion	All fields 0-3% slope, all sandy fields or field evaluation indicates little or no runoff large spray on silts 3-8%	Medium spray on silty soils 3-15% slopes, large spray on silty soils 8-15% slope, low spray on silt soils 3-8% large spray on clay soil 3-15% slope	Medium spray on clay soils 3-8% slopes, large spray on clay soils >15% slope, medium spray on silt soil >15% slope	Medium spray on clay soils >8% slope, low spray on clay soil 3-8% slope, low spray on silty soils >15% slopes	Low spray on clay soils >8% slopes		X 1.5	
Runoff Class	Negligible	Very Low or Low	Medium	High	Very High		X 0.5	
Olson Soil Test P	--------	<20 ppm	20-40 ppm	40-80 ppm	>80 ppm		X 0.5	
Commercial P Fertilizer Application Method	None Applied	Placed with Planter or injection deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season	Incorporated >3 months before crop or surface applied <3 months before crop emerges	Surface applied to pasture or >3 months before crop emerges		X 1.0	
Commercial P Fertilizer Application Rate	None Applied	<30 lbs/ac P205	31-90 lbs/ac P205	91-150 lbs/ac P205	>150 lbs/ac P205		X 1.0	
Organic P Source Application Method	None Applied	Injected deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season	Incorporated >3 months before crop or surface applied <3 months before crop.	Surface applied to pasture or >3 months before crop emerges		X 1.0	
Organic P Source Application Rate	None Applied	<30 lbs/ac P205	31-90 lbs/ac P205	91-150 lbs/ac P205	>150 lbs/ac P205		X 1.0	
Distance to Concentrated Surface Water Flow	>1,000 feet	200-1,000 feet, or functioning grass waterways in concentrated surface water	100-200 feet	<100 feet	0 feet or application are directly into concentrated surface water flow areas.		X 1.0	
Total Phosphorus Index Value:								

Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus Index Value	Site Vulnerability to Phosphorus Loss
<11	Low
11-21	Medium
22-43	High
>43	Very High

Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	Application Basis
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

Phosphorus Index Value: _____

Section 10 – NMP Guidance

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibration procedures:

Dry manure is applied through a density calibrated manure spreader, liquid manure is applied using a spike injection system with flow meter.

Implementation, Operation, Maintenance and Recordkeeping

The permittee is required to develop protocols for implementation of the NMP, proper operation and maintenance of the livestock waste control facilities, and recordkeeping as described in Part 2 of the permit.

Have protocols been developed for the operation? ☑ Yes ☐ No

The documents below are maintained:

- Implementation of the NMP: ☑ Yes ☐ No
- Facility operation and maintenance: ☑ Yes ☐ No
- Recordkeeping and reporting ☑ Yes ☐ No
- Sample collection and analysis ☑ Yes ☐ No
- Manure transfer ☑ Yes ☐ No

If your answer to any of the above question is no, provide explanation:

Provide date and location of most recent documentation:

Date: February 2024

Location: Plumbers office

NOI-NMP Certification

The NOI Form certification must be completed by the applicant (owner/operator) responsible for the authorization as identified in Section C. Certification of this NOI is certification that the applicant will comply with the applicable terms of the CAFO General Permit.

Permittee Information: This form must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

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 my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, 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. [75-5-633, MCA].

Certification of this form indicates conformance with the CAFO General Permit.

Name (Type or Print) Peter Wipf	
Title (Type or Print) President	Phone Number406-734-5250
SignatureElectronic Signature on File	Date Signed 02-26-2025

DEQ will not process this form until all the requested information is supplied, and the appropriate fees are paid.

Return this NOI-NMP-CAFO Form and the applicable fee payment to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-5546

NOI-NMP Certification

The NOI Form certification must be completed by the applicant (owner/operator) responsible for the authorization as identified in Section C. Certification of this NOI is certification that the applicant will comply with the applicable terms of the CAFO General Permit.

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Certification of this form indicates conformance with the CAFO General Permit.

Name (Type or Print)	
David D Hofer	
Title (Type or Print)	Phone Number
Sec	406-734-5216
Signature	Date Signed
David D. Hofer	1-23-24

DEQ will not process this form until all the requested information is supplied, and the appropriate fees are paid.

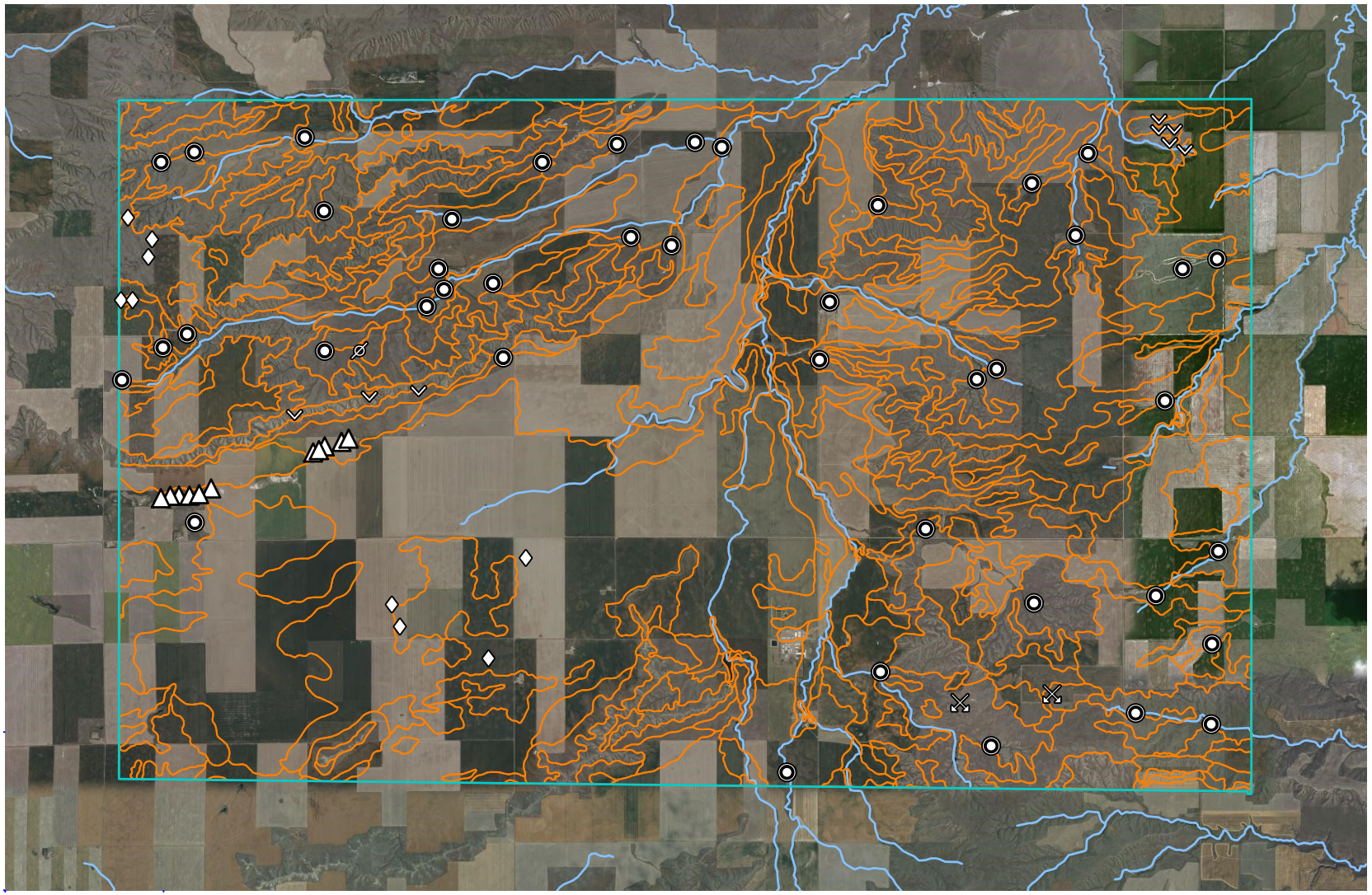
Return this NOI-NMP-CAFO Form and the applicable fee payment to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-5546

email to dryforkjoe@gmail.com

Soil Map—Chouteau County Area, Montana
(Twin Hills Soils)

111° 14' 15" W
110° 56' 50" W
48° 6' 27" N
47° 58' 52" N



Map Scale: 1:98,900 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 1000 2000 4000 6000

Feet
0 4500 9000 18000 27000

Map projection: Web Mercator Corner coordinates: WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Chouteau County Area, Montana
Survey Area Data: Version 19, Aug 29, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 6, 2014—Sep 30, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2B	Marcott-Bigsandy complex, 0 to 4 percent slopes	13.9	0.0%
21E	Cabbart-Delpoint loams, 8 to 25 percent slopes	114.1	0.2%
22F	Hillon loam, 15 to 60 percent slopes	1,012.7	2.1%
28	Nishon clay loam, 0 to 1 percent slopes	25.0	0.1%
31A	Ferd loam, 0 to 2 percent slopes	1,183.6	2.4%
32B	Kobase silty clay loam, 0 to 4 percent slopes	2,481.3	5.1%
32C	Kobase silty clay loam, 4 to 8 percent slopes	494.7	1.0%
33A	Phillips loam, 0 to 4 percent slopes	63.9	0.1%
34A	Linnet silty clay, 0 to 2 percent slopes	56.1	0.1%
37B	Evanston loam, 0 to 4 percent slopes	2,878.1	5.9%
37C	Evanston loam, 4 to 8 percent slopes	189.3	0.4%
38B	Ethridge silty clay loam, 0 to 4 percent slopes	2,665.9	5.5%
43A	Pendroy clay, 0 to 2 percent slopes	2,022.1	4.2%
47B	Marias silty clay, 0 to 4 percent slopes	7,899.3	16.3%
47C	Marias silty clay, 4 to 8 percent slopes	17.6	0.0%
79B	Yamacall loam, 0 to 4 percent slopes	490.9	1.0%
79C	Yamacall loam, 4 to 8 percent slopes	720.1	1.5%
79D	Yamacall loam, 8 to 15 percent slopes	33.2	0.1%
212F	Hillon-Cabbart loams, 15 to 60 percent slopes	743.6	1.5%
221E	Hillon-Kevin clay loams, 8 to 25 percent slopes	5,884.7	12.1%
224E	Hillon-Joplin loams, 8 to 25 percent slopes	302.7	0.6%
261B	Absher-Nobe complex, 0 to 4 percent slopes	95.0	0.2%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
272C	Attewan-Tinsley complex, 2 to 8 percent slopes	66.0	0.1%
311B	Ferd-Creed-Gerdrum complex, 0 to 4 percent slopes	165.8	0.3%
331B	Phillips-Elloam complex, 0 to 4 percent slopes	240.9	0.5%
331C	Phillips-Elloam complex, 2 to 8 percent slopes	157.7	0.3%
385B	Ethridge-Kobase silty clay loams, 0 to 4 percent slopes	27.6	0.1%
386B	Ethridge-Evanston complex, 0 to 4 percent slopes	459.3	0.9%
421C	Joplin-Hillon loams, 2 to 8 percent slopes	453.1	0.9%
441C	Kevin-Hillon clay loams, 2 to 8 percent slopes	2,486.7	5.1%
442C	Kevin-Elloam complex, 2 to 8 percent slopes	306.1	0.6%
471B	Marias-Kobase complex, 0 to 4 percent slopes	486.6	1.0%
503B	Telstad-Joplin loams, 0 to 4 percent slopes	1,564.5	3.2%
503C	Telstad-Joplin loams, 2 to 8 percent slopes	3,771.7	7.8%
521B	Thoeny-Elloam-Absher complex, 0 to 4 percent slopes	40.3	0.1%
561B	Scobey-Kevin clay loams, 0 to 4 percent slopes	3,723.8	7.7%
561C	Scobey-Kevin clay loams, 2 to 8 percent slopes	4,826.4	9.9%
605C	Yamacall-Havre loams, 0 to 8 percent slopes	262.5	0.5%
W	Water	60.6	0.1%
Totals for Area of Interest		**48,507.9**	**100.0%**

Customer(s): TWIN HILLS COLONY INC

District: CHOUTEAU COUNTY CONSERVATION DISTRICT

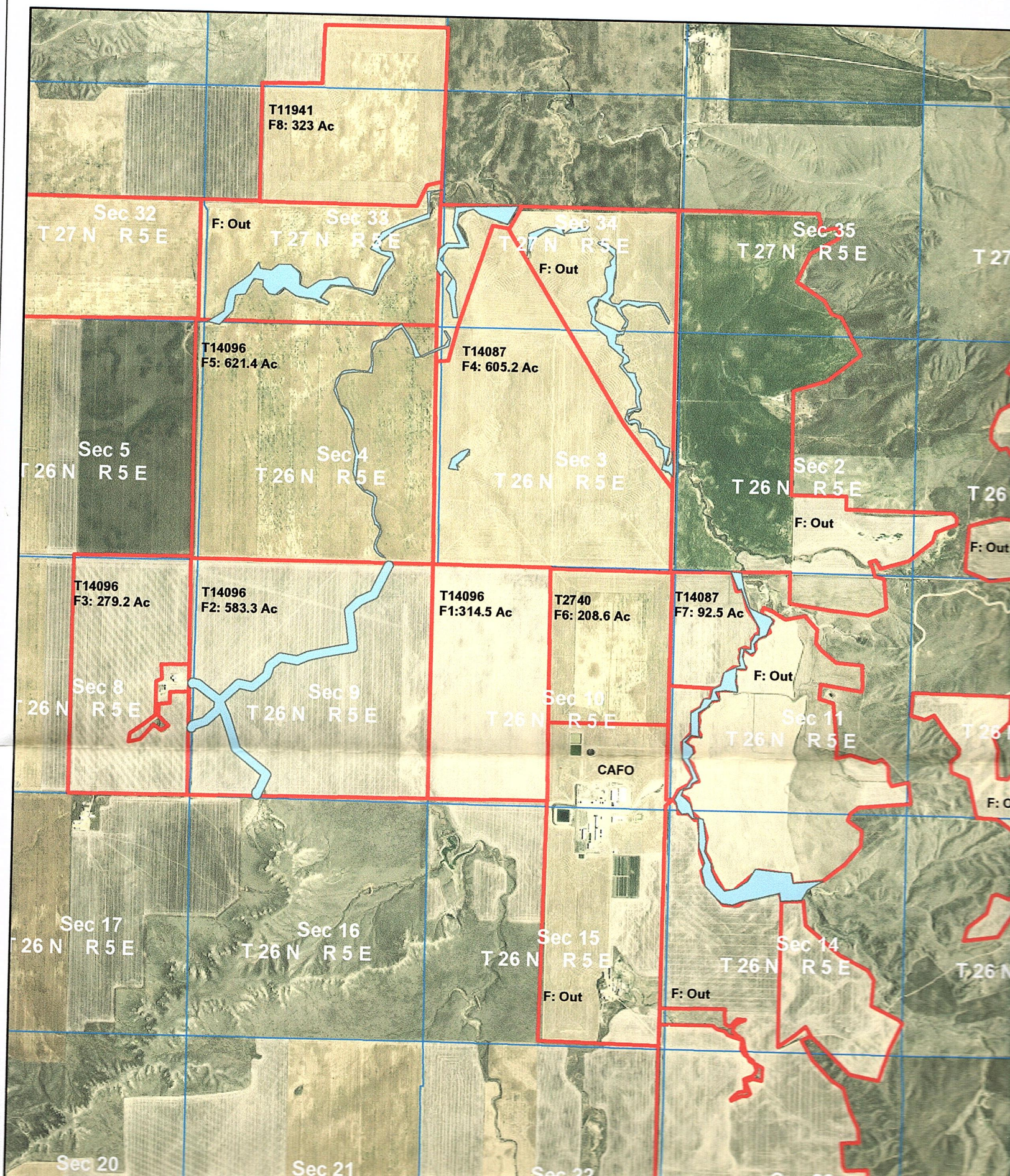
Approximate Acres: 3028 Ac

Field Office: FORT BENTON SE

Agency: USDA - NRCS

Assisted By: Pam Linker

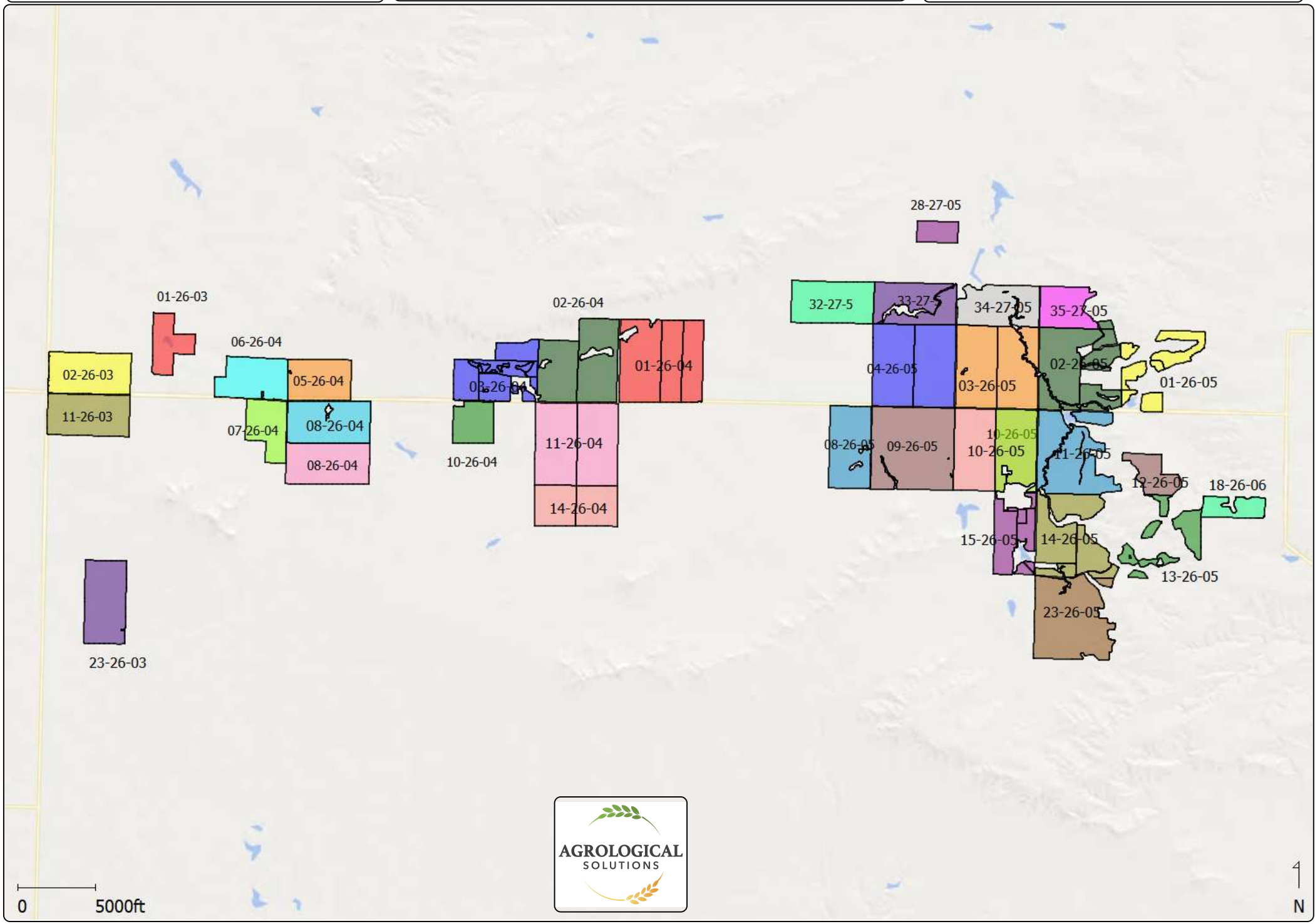
State and County: MT, CHOUTE



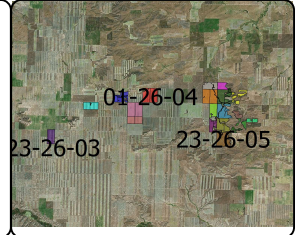
TWIN HILLS COLONY
2023 CAFO PERMIT

SITE OVERVIEW

Agrological Solutions Inc.
steve.ellery@aglogical.com
406.262.0230



Map Layer 1



Field : Multiple

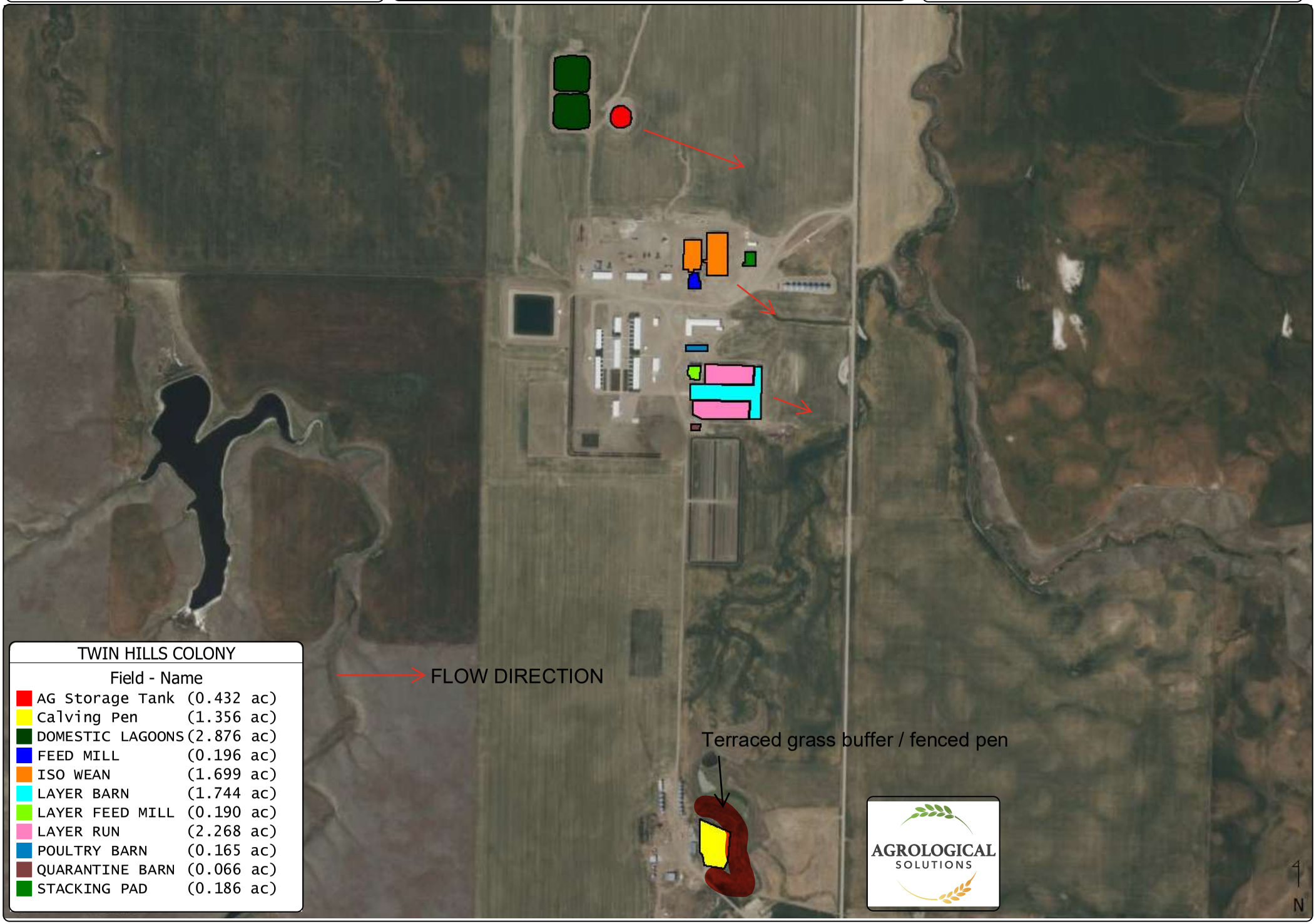
Field - Name

- 01-26-04 (623.7 ac)
- 01-26-05 (215.3 ac)
- 02-26-05 (505.7 ac)
- 03-26-04 (353.2 ac)
- 03-26-05 (623.7 ac)
- 08-26-04 (318.7 ac)
- 10-26-05 (292.3 ac)
- 11-26-04 (639.4 ac)
- 11-26-05 (464.8 ac)
- 12-26-05 (132.2 ac)
- 13-26-05 (173.1 ac)
- 14-26-04 (314.2 ac)
- 14-26-05 (448.7 ac)
- 15-26-05 (233.3 ac)
- 18-26-06 (108.8 ac)
- 23-26-03 (319.3 ac)
- 23-26-05 (537.3 ac)
- 34-27-05 (291.1 ac)
- 35-27-05 (191.8 ac)

TWIN HILLS COLONY
2023 CAFO PERMIT

SITE LAYOUT

Agrological Solutions Inc.
steve.ellery@aglogical.com
406.262.0230



Map Layer 1

Field : Multiple

Field - Name

AG Storage Tank	(0.432 ac)
Calving Pen	(1.356 ac)
DOMESTIC LAGOONS	(2.876 ac)
FEED MILL	(0.196 ac)
ISO WEAN	(1.699 ac)
LAYER BARN	(1.744 ac)
LAYER FEED MILL	(0.190 ac)
LAYER RUN	(2.268 ac)
POULTRY BARN	(0.165 ac)
QUARANTINE BARN	(0.066 ac)
STACKING PAD	(0.186 ac)