



WATER PROTECTION BUREAU

Agency Use

Permit No.: MTG010272

Date Rec'd 12-14-23

Amount Rec'd \$000.00

Check No. 10691

Rec'd By JMF

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: MTG010 ~~272~~ 272

- Select Appropriate Fee: [] New Application: \$1200 [] Renewal Application: \$600 [x] 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: Fairhaven Colony
Location (Physical address or Directions): 124 Fairhaven Road
Nearest City or Town: Ulm
Zip Code, County: 59485
Facility Latitude, Longitude: 47.4032293, 111.638316
Date facility began operation: 01-Sep-2011
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 Fairhaven Colony _____
Mailing Address PO Box 29 _____
City, State, Zip Code 59485 _____
Signatory/Responsible Official Name - Daniel Kleinsasser _____ Title - Farm Manager _____
Contact Information Phone - 406 231 2324 _____ Email - dan.fh@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)
 I designate the following duly authorized representative for this permit (provide the information below):

Authorized Representative Information:

Authorized Representative Name - Daniel Kleinsasser _____ Title - Farm Manager _____
Company Name Fairhaven Colony _____
Mailing Address PO Box 29 _____
City, State, Zip Code Ulm, MT, 59485 _____
Contact Information Phone, 406 231 2324 _____ Email dan.fh@colonymt.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) 211	Beef Cattle Feedlots
(2) 213	Hogs
(3) 241	Dairy Farm
(4) 252	Chickens Eggs

NAICS Code	Description
(1) 112111	Beef Cattle Ranching and Farming
(2) 11221	Hog and Pig Farming
(3) 11212	Dairy Cattle and Milk Production
(4) 11234	Chicken Egg Production

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.) Animal and farm Operation

3.3 Existing or Pending Permits, Certification, or Approvals

- None RCRA _____
- MPDES _____ Other Cafo Discharge Permit ^{MTG010272} ~~MTG01072~~ _____
- PSD (Air Emissions) _____ Other _____
- 404 Permit (Dredge and Fill) _____

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 (003)	47.4032293	-111.6383316	Unnamed Tributary Dry Fork Creek

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	50	170
Veal Calves	0	40
Cattle including dairy Heifers	200	0
Swine 55 lbs. or over	0	4600
Swine 55 lbs. or under	0	1400
Horses	0	0
Sheep or Lambs	0	0
Turkeys	0	0
Chicken broilers –includes juveniles	0	500
Chicken layers –includes juveniles	0	12000
Ducks	0	0
Other Specify: Beef Cows	100	0
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 - Davis Station 5 _____ 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	7,000,000	Gallons	400
Storage Pond #1			
Storage Pond #2			
Storage Pond #3			
Storage Pond #4			
Storage Pond #5			
Above Ground Storage Tank #1			
Above Ground Storage Tank #2			
Above Ground Storage Tank #3			
Underfloor Pits	200,970	Gallons	21
Below Ground Storage Tank	5880	Gallons	2
Roofed Storage Shed	11	Tons	33
Concrete Pad	1688	Tons	365
Impervious Soil Pad	243	Tons	120
Other Specify:			
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)

X 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. Beef Cattle	Dry lot at calving Shed	100	90	243		
2. Chickens (Broilers)	Inside Barn	600	94	.6		
3. Chickens (Layers)	Inside Barn	12000	365	138		
4. Mature Dairy Cattle/Heifers	Concrete Pads	250	365	1688		
5. Swine over 55 lbs.	Inside Barn	4500	365		2,678,005	
6. Swine under 55 lbs.	Inside Barn	1400	365		815,045	
7. Lactating dairy cows and veal Calves	Inside Barn	210	365		1,073,100	
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.

Distributed annual production of manure by class and size based on average production of 4,566,150 gal and 2069
Tons. Manure production by animal class also provided by NRCS CNMP

A mature dairy cow weighing 1,400 pounds can generate around 14 gallons of feces and urine each day

Dry Litter production estimates are as follows: 23 pounds per laying hen per year on a dry matter basis

A 1,000-pound cow in confinement and a 750-pound cow will produce, on average, an estimated 54 pounds and 37 pounds
of manure per day, respectively

For example: hogs growing from 45 lb to 245 lb would have an average weight of 145 lb. With 500 pigs: $AU = 500 \times 145 / 1000 = 72.5 AU$

145 lbs pigs produce 11 gal manure/AU/day. Thus for these pigs: $72.5 AU \times 11 \text{ gal/AU/day} = 797.5 \text{ gal/day}$

Broilers have on average a 47-day growout period, during which the typical broiler chicken will generate about two pounds
of litter, if you add the manure and bedding materials.

Manure handling:

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

- Stored in pens
- Stored on stacking pad
- Composting on site
- Other - Liquid manure gravity flows to underfloor storage then pumped as needed to the separators and the liquid is pumped to lagoon and the solids go to dry cement pads. Dry manure is scraped and stored on Dry Lot or Separator pad. Solids and Liquid waste is applied by spreader to fields Spring and Fall _____
- Direct pipe to liquid impoundment
- Stored under floor pit
- Separator

Frequency of manure removal from confinement areas:

- Bi-annually
- Annually
- As needed
- Other - Spreading waste applications occur before and after Harvest_

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

- No.
- Yes. Explain how and where _____

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

- No.
- Yes. Describe the type and characteristics of this surface - A three walled concrete storage pad is located adjacent to the Dairy Barn and a packed earth open lot provides an anaerobic seal _____

Waste control structures:

Provide the 24-hr-25-yr storm event at your facility location. Refer to the map provided in the instructions. 3.3 _____ in/hr

Provide the annual precipitation during critical winter storage period (180 days from mid-October to mid-April) 0.85 _____ 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. 5 _____ acres

Check all the surface types within the clean water diversion area and provide the coverage in acres or ft². Be sure to circle the correct units.

- Dirt - 40000 square feet _____ acres or ft² (circle correct unit)
- Concrete - 6640 square feet _____ acres or ft² (circle correct unit)

Paved _____ acres

X Under roof – 1000 square feet__ acres or ft² (circle correct unit) – check if runoff is not part of clean water BMPs

Gravel _____ acres or ft² (circle correct unit)

Pasture _____ acres or ft² (circle correct unit)

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. Concrete Pads	1700 ton	265		
2. Lagoon	7,000,000 gal	265	9	12
3. Outdoor Piles	243 ton	265		
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 Landfill
 Composted Contractor removal
 Incineration Other - Animals are composted in dry manure to facilitate the process. _____

Provide the location where mortalities are disposed of, if part of the production area: - On the dry Dairy Manure Concrete Pad.

6.3 Clean Water Diversion Practices

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

- Ditches Site grading
 Earthen berms Gutters and spouts
 Culverts Other All Swine and Poultry production is enclosed, Building runoff is directed away from waste storage facilities. A clean water diversion separates holding pond from runoff. Facility was reviewed by NRCS and appropriate runoff structures were installed via EQIP for a CNMP _____

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 state waters.

- Fencing
- Inside building
- Wall
- Other - No confined animals are in contact with State water. See above _____

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.- All Chemicals are stored within covered concrete storage outside of manure production area.

6.6 Conservation Practices

Check all temporary, permanent, and structural BMPs which will be used to control runoff 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 supplement the BMP descriptions. Attach additional sheets if necessary.

- Ditches
- Earthen berms
- Culverts and pipes
- Buffers
- Site grading
- Gutters and spouts
- Covered Pens
- Other - All clean water is diverted away from waste storage areas by drainage. All swine , and poultry production is indoors. See previously provided information. Manure is removed and applied to fields in a timely manner. A Comprehensive Nutrient management plan was developed for this site by NRCS

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 sampling. 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.

- | | |
|---|--|
| <input checked="" type="checkbox"/> Buffers | <input checked="" type="checkbox"/> Conservation tillage |
| <input type="checkbox"/> Constructed wetlands | <input checked="" type="checkbox"/> Grass Filter |
| <input type="checkbox"/> Infiltration field | <input checked="" type="checkbox"/> Residue Management |
| <input type="checkbox"/> Setbacks | <input type="checkbox"/> Terrance |
| <input type="checkbox"/> Other _____ | |

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 three 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 at least once every 3 years. Composite samples for nitrate must be collected from a soil depth of 6 to 24 inches and must be analyzed at least once every 3 years. All samples must be analyzed according to method code 4H2a1-3 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 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 _____

Continue to Page 12

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.
Liquid and Dry Manure From Lagoon and Dry Pad ^{concrete}
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.
*Spring and Fall
Liquid is Blow Injected and Dry Manure is spread and Plowed in.*
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. The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater.
13. 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.
14. The crops to be planted or any other uses of a field such as pasture or fallow fields.
15. The realistic annual yield goal for each crop or use identified for each field.
16. The nitrogen and phosphorus recommendations from Department acceptable sources for each crop or use identified for each field.
17. Credits for all residual nitrogen in each field that will be plant available.
18. 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.
19. 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).
20. The form and source of manure, litter, and process wastewater to be land-applied.
21. The timing and method of land application. The NMP also must include storage capacities needed to ensure adequate storage that accommodates the timing indicated.
22. The methodology that will be used to account for the amount of nitrogen and phosphorus in the manure, litter, and wastewater to be applied.
23. Any other factors necessary to determine the maximum application rate identified in accordance with this Linear Approach.

24. 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: 10		Year: 2024	Crop: wheat		
Expected Crop Yield: 70 bu.					
Phosphorus index results or Phosphorus application from soil test: 15 PM Olsen Test					
Method of Land Application: Manure Shanker (Injection Knife)					
When will application Occur: Fall and Spring					
Nutrient Budget		Nitrogen-based Application	Phosphorus-based Application	Source of information	
1		Crop Nutrient Needs, lbs/acre	182	45	EB 161, Table 21
2	(-)	Credits from previous legume crops, or soil test lbs/acre	10 lbs	Na	
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test	NA	NA	
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	30	0	Starter Fert
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0	0	
6		= Additional Nutrients Needed, lbs/acre	142	45	EB 616, Table 21
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	11 lbs/1000	8 lbs/1000	Midwest Lab
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0	.95	1	NRCS
9		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	10.45/1000	8 lbs/1000	
10		Additional Nutrients needed, lbs/acre (calculated above)	142	45	
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	10.45	8	
12		= Manure Application Rate, tons/acre or 1000 gal/acre	13588 gal/acre	5625 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.

<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: 15 _____ 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.

<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.

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:

Flow Injection Flow Meter calibration chip installed previous to land application

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: 12/06/23 _____

Location: Farm Manager 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) Daniel D Kleinsasser

Title (Type or Print) Farm Manager

Phone Number 406 231 2324

Signature

Daniel D Kleinsasser

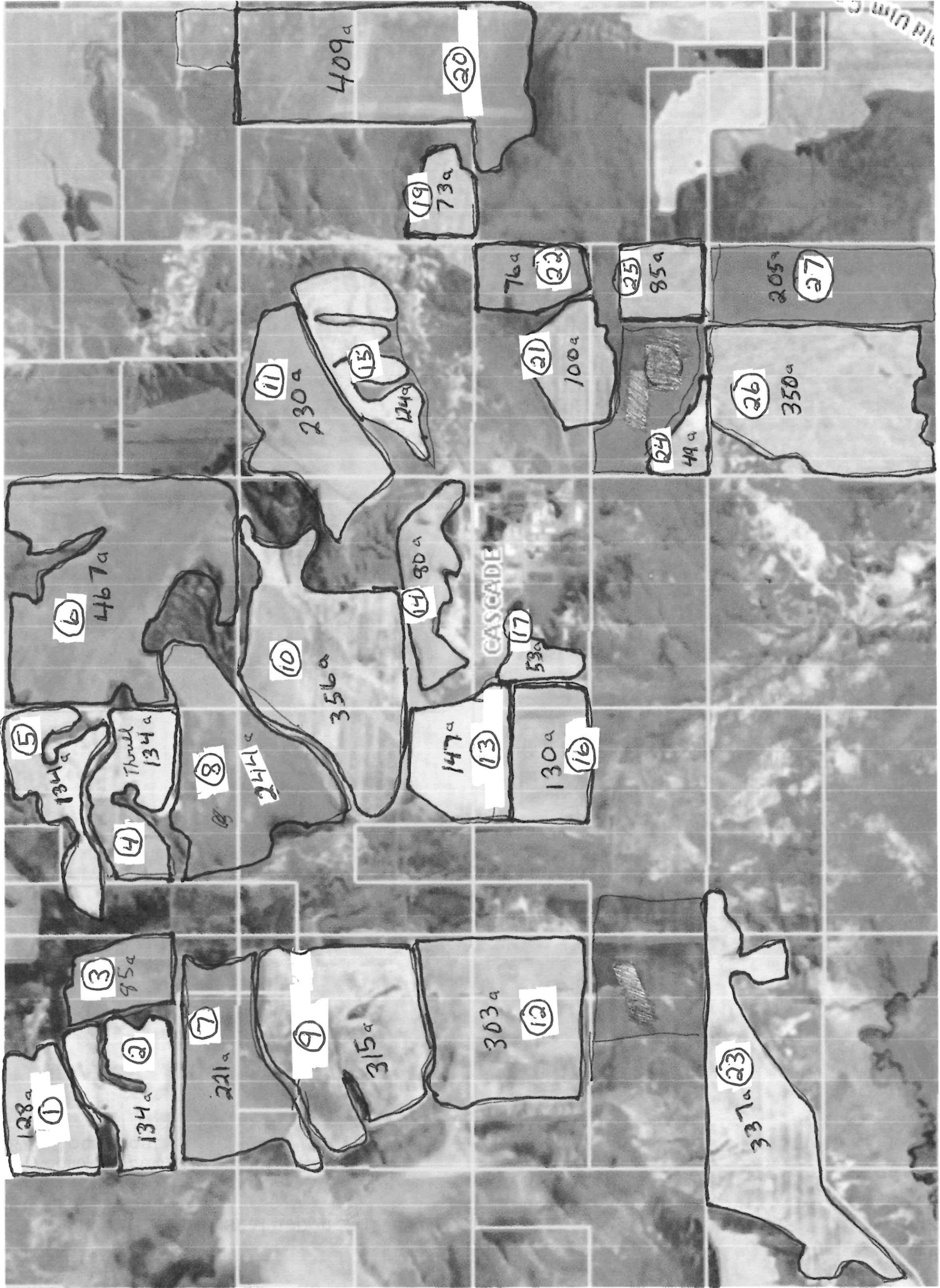
Date Signed 12/13/2023

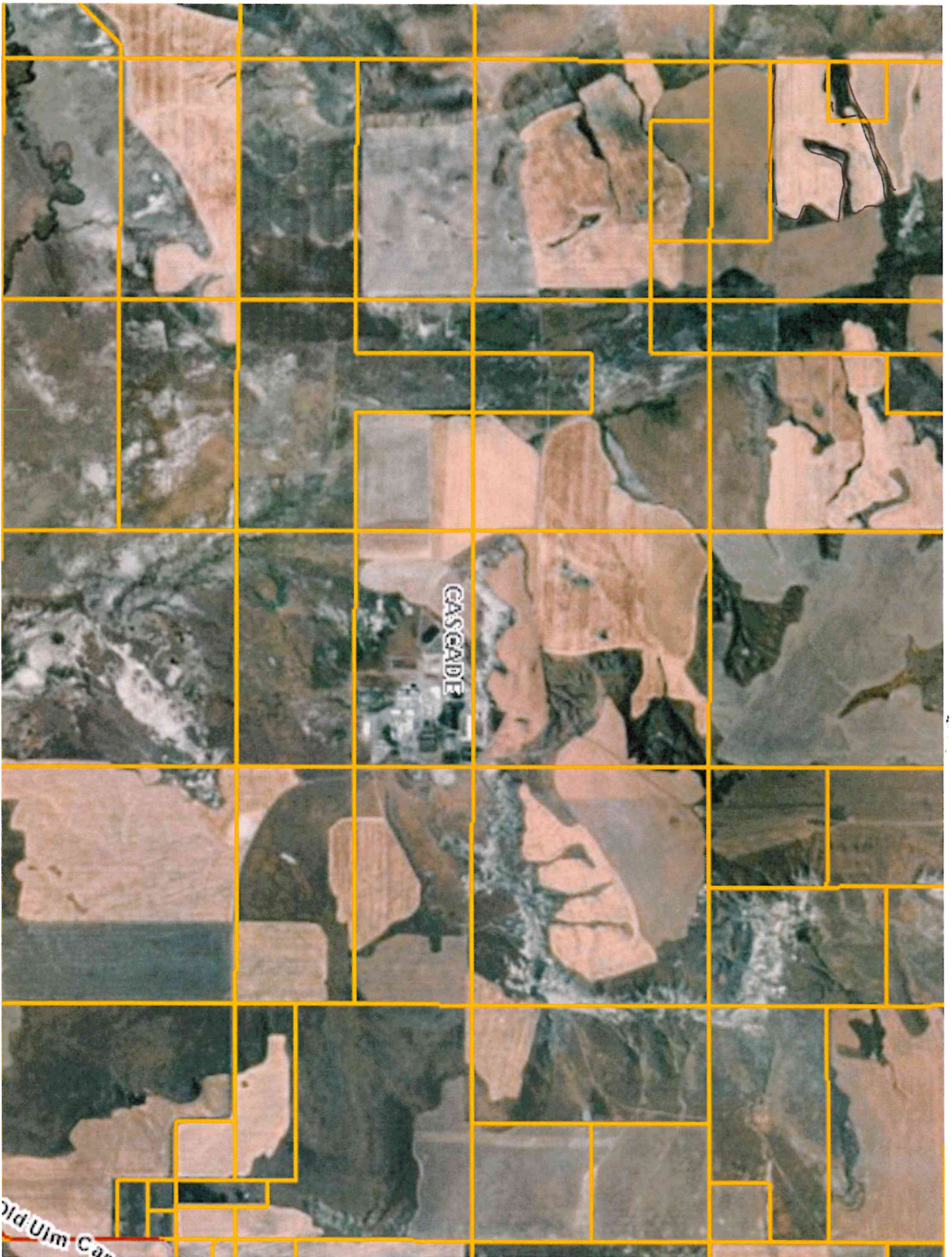
DEQ will not process this form until all the requested information is supplied, and the appropriate fees are paid.

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

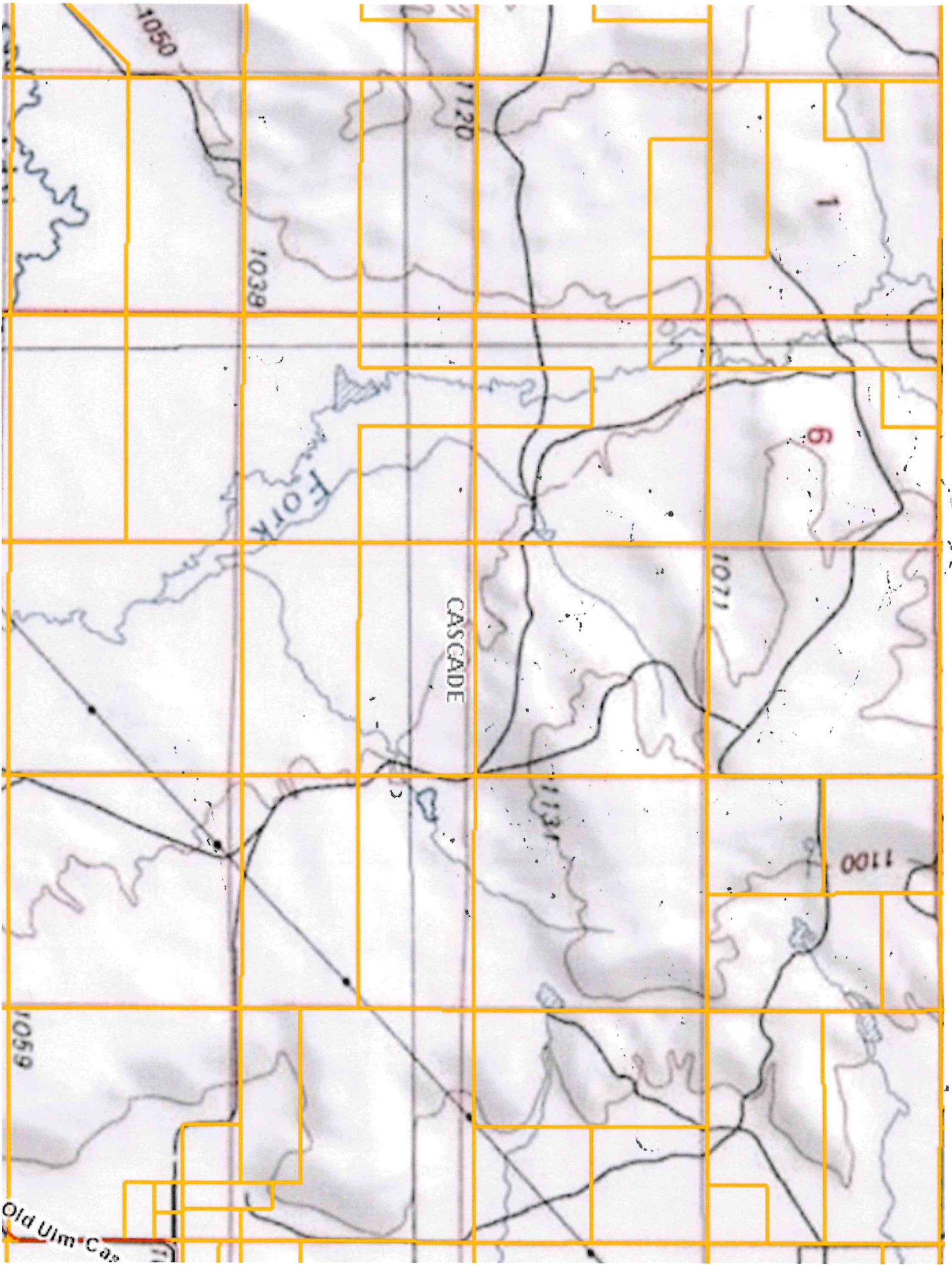
RECEIVED
DEC 14 2023
DEQ WATER QUALITY DIVISION





CASCADE

Old Ulm Cas



Dry
Manure
Concrete
Pad

Flow
Dairy
Barn

Clean water
on this side

Flow
Earthen berm

Cow
Corral

Flow
Calve
Corral

Flow
Heifer
Corrals

Flow
Earthen Berm

Waste
water
Collecting Pond

Lagoon

Out Fall
X

Hog Barn

Hog Barn

Hog Barn

Hog Barn

Concrete Pit under
Hog Barn gets Pumped
Over to Lagoon

