Montana Department of Environmental Quality

WATER PROTECTION BUREAU

Agency Use	
Permit No.:	MTG010150
Date Rec'd	1-19-24
Amount Rec'd	$600.00
Check No.	1065
Rec'd By	SMF

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 0 1 0 1 5 0

Select Appropriate Fee:

- ☐ New Application: $1200
- ☒ 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	Duncan Ranch Colony
Location (Physical address or Directions)	12 Duncan Colony Lane Hwy 12
Nearest City or Town	Harlowton
Zip Code, County	59036, Wheatland County
Facility Latitude, Longitude	46.445570, 110.024617
Date facility began operation	March 1, 1962
Status of Applicant	☐ Federal ☐ State ☐ No ☒ Private ☐ Other_____
Located on Tribal Lands?	☒ No ☐ Yes *(If yes, obtain the permit through EPA, not DEQ)*

Continue to Page 2

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	Duncan Ranch Colony
Mailing Address	P.O. Box 248
City, State, Zip Code	Harlowton, MT 59036
Signatory/Responsible Official	Name: Leonard Waldner Title: Farm Boss
Contact Information	Phone: (406) 380-5088 or 380-0923 Email: farm.duncan@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_____ Title_____
Company Name	_____
Mailing Address	_____
City, State, Zip Code	_____
Contact Information	Phone_____ Email_____

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)	214	Sheep
(3)	251	Broiler, Fryer and Roaster Chickens
(4)	252	Chickens for Laying Eggs

NAICS Code		Description
(1)	11221	Hog & Pig Farming
(2)	11240	Sheep Farming
(3)	11232	Broilers & other Meat Chickens
(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.)
The Colony farrow pigs and finishes them in confinement. They raise chicks mostly for layers and some for fryers. They have a 50,000 layer facility. They raise a few hundred ducks, geese, and turkeys for slaughter. They lamb sheep and sell most of the lambs.

3.3 Existing or Pending Permits, Certification, or Approvals

☒ None
☐ MPDES_____
☐ 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	46.45442	-110.02085	Unnamed tributary to Two Dot Canal to Musselshell River

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		
Swine 55 lbs. or over		2,250
Swine 55 lbs. or under		1,225
Horses		
Sheep or Lambs		2,000
Turkeys		
Chicken broilers -includes juveniles		800
Chickens layers – includes juveniles		75,000
Ducks		
Other Specify:		
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: Harlowton ~~OR~~

Latitude, Longitude _____, _____

5.4 Containment Structures

Were the containment structures built after February 2006? **Some of both**.

☒ 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 (Swine Liquid)	4,000,000	Gallons	800
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	19,300	Gals	60
Below Ground Storage Tank	10,000	Gals	365
Roofed Storage Shed			
Concrete Pad	2,700	Tons	260
Impervious Soil Pad			
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)

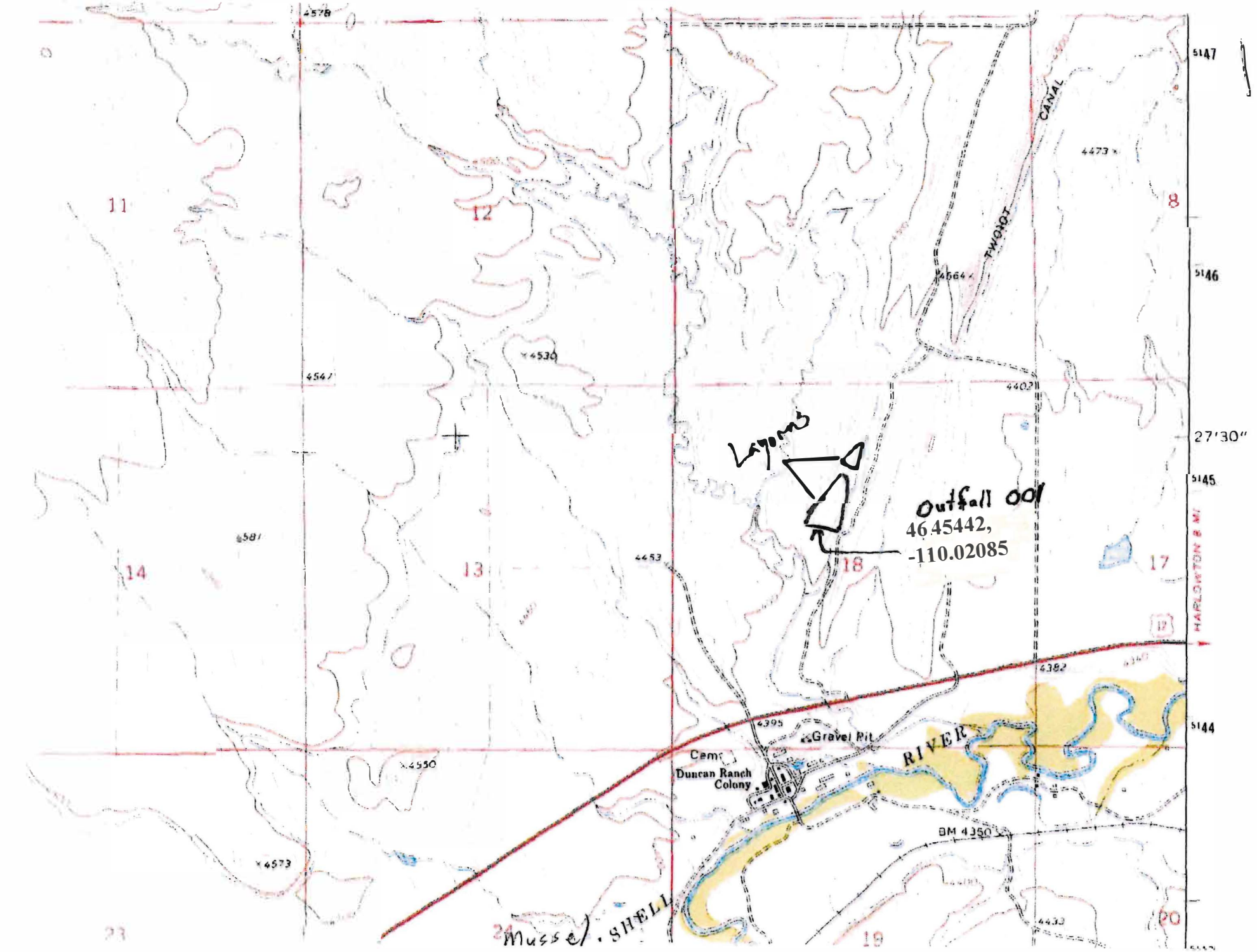
☒ I have attached photos and maps (aerial and topographic) that meet the above requirements.

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. Chickens - Layers	Inside building	50,000	365	110	
2. Chicks/chickens – Other	Inside building	25,800	365	12	
3. Sheep or Lambs	Inside building and then to concrete bunker	2,300	175	550	
4. Swine over 55 lbs.	Under floor pits and then to separator. Liquid to lagoon and solid to bunker.	2,250	365	245	1.125 MG
5. Swine under 55 lbs.	Same as above.	1,225	365	80	375,000
6.					
7.					
8.					
9.					
10.					


Lagoons
Outfall 001
46.45442,
-110.02085
TWOHOT
CANAL
RIVER
Gravel Pit
Duncan Ranch
Colony
BM 4350
Mussel Shell
HARLOWTON 8 MI
27'30"
5147
5146
5145
5144
11
12
13
14
17
18
19
20
23
24
8


h Colony
orage Areas
Swine Liquid Lagoons
Outfall 001
12
Swine Manure Separator
Farm Chemical Storage
Swine Barn
Farm Chemical Storage
Swine Barns
Duncan Ranch Colony
Dairy, Duck, Geese & Turkey Barn
Sheep Barn & Pens
Sheep Barn
Layer Barn
360' Grass Buffer below Outdoor Sheep Pens
Pullet Barn
Dead Pit
Dry Manure

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.

Based on consistent animal numbers and what has been produced. Record and weigh number of solid manure loads.

Record amount of liquid pumped.

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: Concrete bunker
- ☒ Direct pipe to liquid impoundment
- ☒ Stored under floor pit
- ☒ Separator

Frequency of manure removal from confinement areas:

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

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

- ☐ No.
- ☒ Yes. Explain how and where: Storage lagoon via pipeline, underfloor pit, and concrete bunker.

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

- ☐ No.
- ☒ Yes. Describe the type and characteristics of this surface: Dry manure is stored on 60 x 250 concrete pad with 8-foot concrete walls.

Waste control structures:

Provide the 24-hr-25-yr storm event at your facility location. Refer to the map provided in the instructions. 2.5 in/hr

Provide the annual precipitation during critical winter storage period (180 days from mid-October to mid-April) 3.09 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. _____53____ 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 _____ acres or ft^2 (circle correct unit)
- ☐ Concrete _____ acres or ft^2 (circle correct unit)
- ☐ Paved _____ acres
- ☐ Under roof _____ acres or ft^2 (circle correct unit) – check if runoff is not part of clean water BMPs
- ☒ Gravel _____ 30 acres ~~or ft^2~~ (circle correct unit)
- ☒ Pasture _____23 acres ~~or ft^2~~ (circle correct unit)
- ☐ Other _____ _____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. Swine Lagoon Ponds	4 MG	800	10	11
2. Underfloor Pits	19,300 gal	60	n/a, pumped when full.	n/a, no rainwater enters pit.
3. Solid Manure Bunker	120,000 ft^3	260	Max 12 ft when mounded.	Does not change with rain.
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_____

Provide the location where mortalities are disposed of, if part of the production area:
See map. It shows "Dead Area" for incineration and then burial.

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 _____

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 _____

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.

Tombstone, Beyond, Salvo, Bromac, Affinity Broadspectrum, LI700, Choice, Axial Star, Stamina F4, Obvious, Nexicor, and glyphosate. Nothing is used on the animals for dips and disinfectants.

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

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

A representative sample must be analized a minimum of once per year for total nitrogen and total phosphorus manure, litter, and process wastewater. 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 to complete Sections 7 – 10.

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
☐ Terrace

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 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 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 _____

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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.

   Swine Liquid: 55.1 # Total N/ac and 5.1 # P/ac if applied 1.5 MG to 195 Ac Pivot.
   Dry Manure: 152 # Total N/ac and 34 # P/ac if applied 10 T/ac acre every 3 years.

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.

   135 and 195 Ac Pivots are quite flat, and liquid is applied in total of ½" total liquid per pass to reduce ponding and run-off. Dry manure is applied to grass areas or standing stubble to reduce any run-off and to non-frozen soil.

3. The crops to be planted or any other uses of a field such as pasture or fallow fields.

   Crop on pivot(s) receiving liquid manure are generally planted to small grains or occasionally pea or canola.
   Where solid manure is applied will be perennial grass or small grains the following year.

4. The realistic annual yield goal for each crop or use identified for each field.

   Pivot: Irrigated barley: 120 bu/ac; spring wheat: 100 bu/ac; and peas: 80 bu/ac.
   Perennial grass: Grazed by sheep.
   Dryland RC wheat: 35 bu; dryland RC barley: 50 bu/ac; canola: 25 bu/ac; and peas: 25 bu/ac.

5. The nitrogen and phosphorus recommendations from Department acceptable sources for each crop or use identified for each field.

   Use "Fertilizer Guidelines for Montana Crops" MSU Extension Publication: EB161.

6. Credits for all residual nitrogen in each field that will be plant-available.

   Soil test nitrates to 24 inches.

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.

   Monitor soil Olsen P on an annual basis with soil tests in all fields.

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).

   For annual crops, band N-P-K-S-Zn according to annual soil tests. Topdress N per soil test data less manure nitrogen coming available that crop year.
   For perennial grass, no fertilizer is applied.

9. The form and source of manure, litter, and process wastewater to be land-applied.

   Swine liquid is pumped from manure separator by swine buildings to ponds.
   Dry manure is from sheep barns/pens, chicken barns, and solids from manure separator.

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.

Swine liquid is applied in June when crop is established, and soil profile has storage capacity for the total liquid being applied so that leaching does not occur.
Dry manure is applied in spring to perennial grass and/or fall to small grain stubble to non-frozen soil.

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.

    Laboratory analysis.

PLEASE NOTE: QUESTIONS 12-22 ARE THE SAME AS 1-11. WHY?

12. The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater.

    Swine Liquid: 55.1 # Total N/ac and 5.1 # P/ac if applied 1.5 MG to 195 Ac Pivot.
    Dry Manure: 152 # Total N/ac and 34 # P/ac if applied 10 T/ac acre every 3 years.

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.

    Annual soil tests determine nitrogen available from soil. Topdress N is adjusted for any manure applied. About half of topdress N for small grain crops is applied preplant and incorporated with drills. The remaining topdress N is spread into standing stubble the next spring once crop stand and stored soil moisture have been evaluated to see what yield potential each field is. Stored soil moisture is determined in April by using a Paul Brown moisture probe.
    No fertilizer is applied to perennial grass.

14. The crops to be planted or any other uses of a field such as pasture or fallow fields.

    135 & 195 Ac Pivots: Wheat, barley, canola, or peas.
    Grass Fields: Dryland perennial grass.
    Buffalo Jump 1-4, Tiny, Rimrock, Haymaker, Cow Pasture: NE: Dryland recrop wheat, barley, peas, canola.

15. The realistic annual yield goal for each crop or use identified for each field.

    Pivot irrigated barley: 120 bu/ac; spring wheat: 100 bu/ac; and peas: 80 bu/ac.
    Perennial grass: Grazed by sheep
    Dryland RC wheat: 35 bu; dryland RC barley: 50 bu/ac; canola: 25 bu/ac; and peas: 25 bu/ac.

16. The nitrogen and phosphorus recommendations from Department acceptable sources for each crop or use identified for each field.

    Use “Fertilizer Guidelines for Montana Crops” MSU Extension Publication: EB161.

17. Credits for all residual nitrogen in each field that will be plant-available.

    Soil test nitrates to 24 inches.

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.

    Monitor soil Olsen P on an annual basis with soil tests in all fields.

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).

    For annual crops, band N-P-K-S-Zn according to annual soil tests. Topdress N per soil test data less manure nitrogen coming available that crop year.
    For perennial grass, no fertilizer is applied.

20. The form and source of manure, litter, and process wastewater to be land-applied.

    Swine liquid is pumped from manure separator by swine buildings to ponds.
    Dry manure is from sheep barns/pens, chicken barns, and solids from manure separator.

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.

    Laboratory analysis.

23. Any other factors necessary to determine the maximum application rate identified in accordance with this Linear Approach.

    Use 40-50% of total nitrogen applied per acre to come plant available the first year, depending on the length the crop has to grow following application.

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 maybe, 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: **195 Ac Pivot** Year: **2024** Crop: **Spring Wheat**					
Expected Crop Yield: 100 bu/ac					
Phosphorus index results or Phosphorus application from soil test: 40 # P2O5/ac for 4 ppm Olsen soil test.					
Method of Land Application:					
When will application occur: June at 1st joint stage					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	330		MSU EB 161
2	(-)	Credits from previous legume crops, or soil test lbs/ac	31		Fall 2023 soil test.
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test	14		25% of 2023 application of 56 total N.
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	12		From banded fertilizer.
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		**= Additional Nutrients Needed, lbs/acre**	273		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	7.2 lbs/1000 gals		Lab analysis.
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.5		Colorado State University
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**	3.6 lbs/1000 gals		
10		Additional Nutrients needed, lbs/acre (calculated above)	273		
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	3.6 lbs/1000 gals		
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**	75,833 gpa		

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 maybe, 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: **195 Ac Pivot** Year: **2025** Crop: **Canola**					
Expected Crop Yield: 2400 #/ac					
Phosphorus index results or Phosphorus application from soil test: 40 # P2O5/ac for 4 ppm Olsen soil test.					
Method of Land Application: Via pivot					
When will application occur: Early June.					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	156		MSU EB 161
2	(-)	Credits from previous legume crops, or soil test lbs/ac	31		Fall 2023 soil test.
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test	14		25% of 2023 application of 56 total N.
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	12		From banded fertilizer.
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		**= Additional Nutrients Needed, lbs/acre**	99		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	7.2 lbs/1000 gals		Lab analysis
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.5		Colorado State University
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**	3.6 lbs/1000 gals		
10		Additional Nutrients needed, lbs/acre (calculated above)	99		
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	3.6 lbs/1000 gals		
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**	27,500 gpa		

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 maybe, 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: **195 Ac Pivot** Year: **2026** Crop: **Feed Barley**					
Expected Crop Yield: 120 bu/ac					
Phosphorus index results or Phosphorus application from soil test: 40 # P2O5/ac for 4 ppm Olsen soil test.					
Method of Land Application: Via pivot					
When will application occur: June at 1st joint stage					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	192		MSU EB 161
2	(-)	Credits from previous legume crops, or soil test lbs/ac	31		Fall 2023 soil test.
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test	14		25% of 2023 application of 56 total N.
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	12		From banded fertilizer.
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		**= Additional Nutrients Needed, lbs/acre**	135		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	7.2 lbs/1000 gals		Lab analysis
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.5		Colorado State University
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**	3.6 lbs/1000 gals		
10		Additional Nutrients needed, lbs/acre (calculated above)	135		
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	3.6 lbs/1000 gals		
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**	37,500 gpa		

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 maybe, 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: **195 Ac Pivot** Year: **2027** Crop: **Winter Wheat**					
Expected Crop Yield: 100 bu/ac					
Phosphorus index results or Phosphorus application from soil test: 40 # P2O5/ac for 4 ppm Olsen soil test.					
Method of Land Application: Via pivot					
When will application occur: June at 1st joint stage					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	260		MSU EB 161
2	(-)	Credits from previous legume crops, or soil test lbs/ac	31		Fall 2023 soil test.
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test	14		25% of 2023 application of 56 total N.
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	12		From banded fertilizer.
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		**= Additional Nutrients Needed, lbs/acre**	203		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	7.2 lbs/1000 gals		Lab analysis
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.5		Colorado State University
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**	3.6 lbs/1000 gals		
10		Additional Nutrients needed, lbs/acre (calculated above)	203		
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	3.6 lbs/1000 gals		
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**	56,400 gpa		

End of Linear Approach. Continue to Section 9

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 maybe, 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: **195 Ac Pivot** Year: **2028** Crop: **Spring Wheat**					
Expected Crop Yield: 100 bu/ac					
Phosphorus index results or Phosphorus application from soil test: 40 # P2O5/ac for 4 ppm Olsen soil test.					
Method of Land Application:					
When will application occur: June at 1st joint stage					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	330		MSU EB 161
2	(-)	Credits from previous legume crops, or soil test lbs/ac	31		Fall 2023 soil test.
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test	14		25% of 2023 application of 56 total N.
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	12		From banded fertilizer.
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		**= Additional Nutrients Needed, lbs/acre**	273		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	7.2 lbs/1000 gals		Lab analysis
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.5		Colorado State University
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**	3.6 lbs/1000 gals		
10		Additional Nutrients needed, lbs/acre (calculated above)	273		
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	3.6 lbs/1000 gals		
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**	75,833 gpa		

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 maybe, 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: **Cow Pasture Grass & East of Buffalo Jump 4 Grass** Year: **2024-2028** Crop: **DL Grass**					
Expected Crop Yield: 1 T/Ac					
Phosphorus index results or Phosphorus application from soil test: 0 # P2O5/ac for 6-11 ppm Olsen test.					
Method of Land Application: Spreader Truck					
When will application occur: Spring or fall – **once every 3 years**.					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	50		42 yrs of experience
2	(-)	Credits from previous legume crops, or soil test lbs/ac	17		Soil test
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0		
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		**= Additional Nutrients Needed, lbs/acre**	33		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	15.2 lbs/T		Lab analysis
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.5		Colorado State University
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**	7.6 lbs/T		
10		Additional Nutrients needed, lbs/acre (calculated above)	33		
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	7.6 lbs/T		
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**	4.3 T/ac		

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 maybe, 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: **Tiny, Rimrock, Cow Pasture: NE, Haymaker, Buffalo Jump 1-4** Years: **2025-2028** Crop: **Winter Wheat**					
Expected Crop Yield: 35 bu/ac					
Phosphorus index results or Phosphorus application from soil test: 30 # P2O5/ac for 4-12 ppm Olsen soil test.					
Method of Land Application: Spreader Truck					
When will application occur: Fall after crop is harvested, fields will rotate during this period for 1 app ea.					
Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	91		MSU EB 161
2	(-)	Credits from previous legume crops, or soil test lbs/ac	16		Fall 2023 soil test.
3	(-)	Residuals from past manure production lbs/acre-only if no new soil test	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	9		From banded fertilizer.
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		**= Additional Nutrients Needed, lbs/acre**	65		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	15.2 lbs/T		Lab analysis
8	(×)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.5		Colorado State University
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**	7.6 lbs/T		
10		Additional Nutrients needed, lbs/acre (calculated above)	65		
11	(÷)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	7.6 lbs/T		
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**	8.6 T/ac		

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:
Tiny: 19 ppm
Cow Pasture: NE (CP 1): 13 ppm
Cow Pasture Grass: 6 ppm
Haymaker: 6 ppm
Rimrock: 11 ppm
Buffalo Jump 1: 11 ppm
Buffalo Jump 2: 5 ppm
Buffalo Jump 3: 13 ppm
Buffalo Jump 4: 23 ppm
East of Buffalo Jump 4 Grass: 11 ppm
195 Ac Pivot (aka 200 Pivot): 4 ppm

See farm map to see location of each field.

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:

Swine Liquid: Applied via pivot during growing season. Calibrated by collecting liquid while timing.
Dry Manure: Applied via spreader truck. Calibrated by tarp method.

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:

No manure is transferred off this property.

Provide date and location of most recent documentation:

Date: 12/22/23
Location: Leonard Waldner's 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.

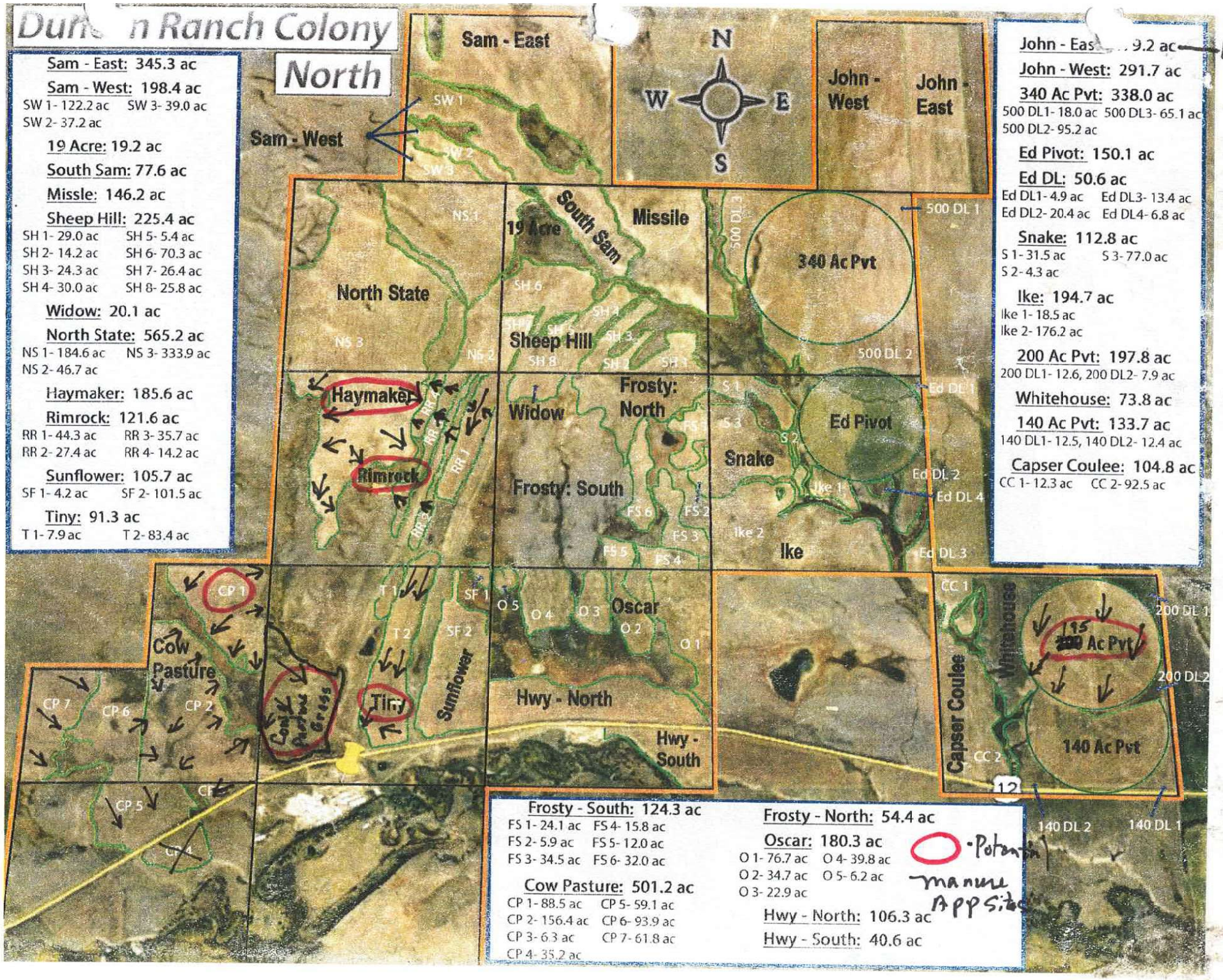
Name (Type or Print) Leonard Waldner	
Title (Type or Print) Farm Boss	Phone Number 406-380-5088 (Office) 406-380-0923 (Mobile)
Signature Leonard J Waldner.	Date Signed 12/29/23

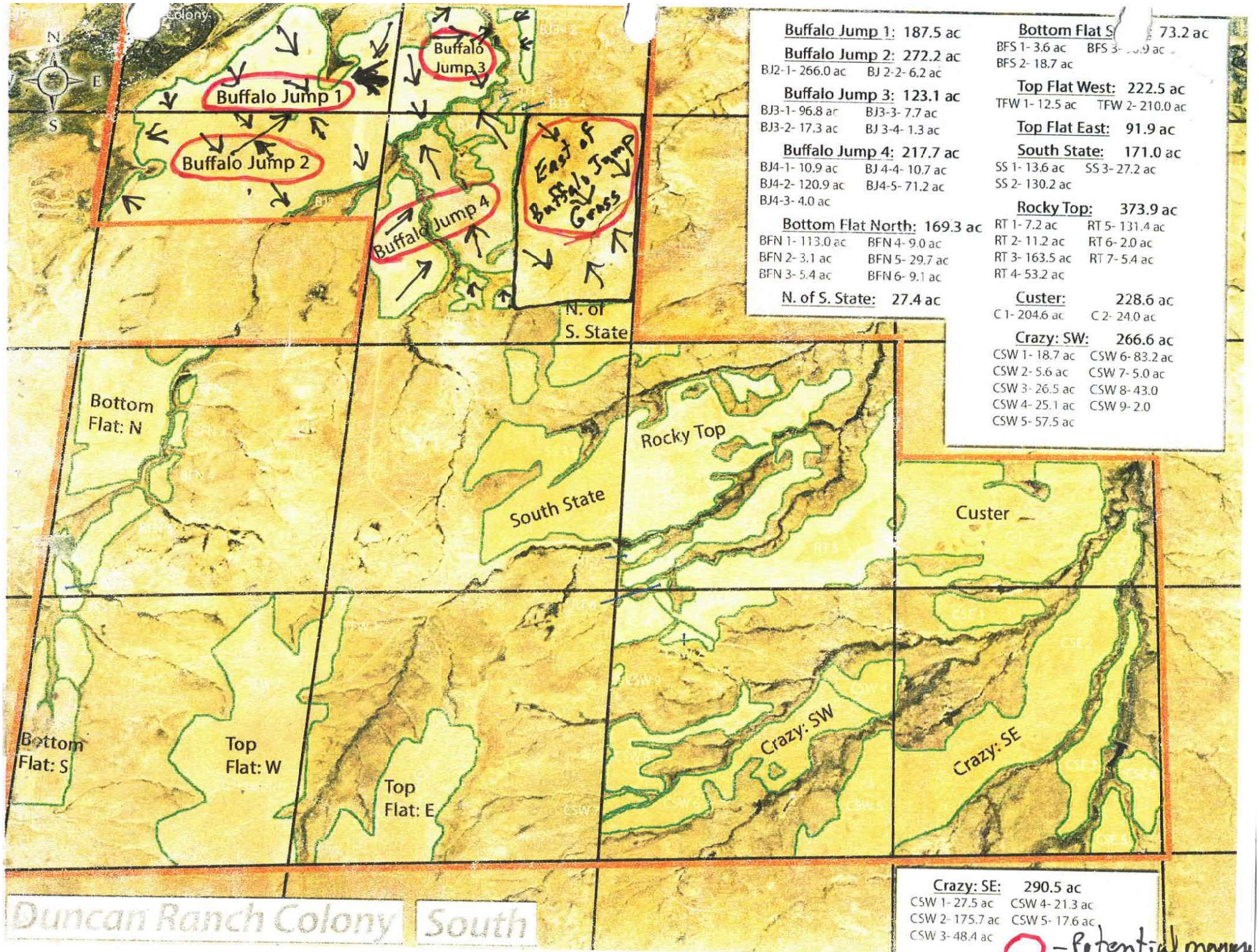
DEQ will not process this form until all of the requested information is supplied, and the appropriate fees are paid.

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

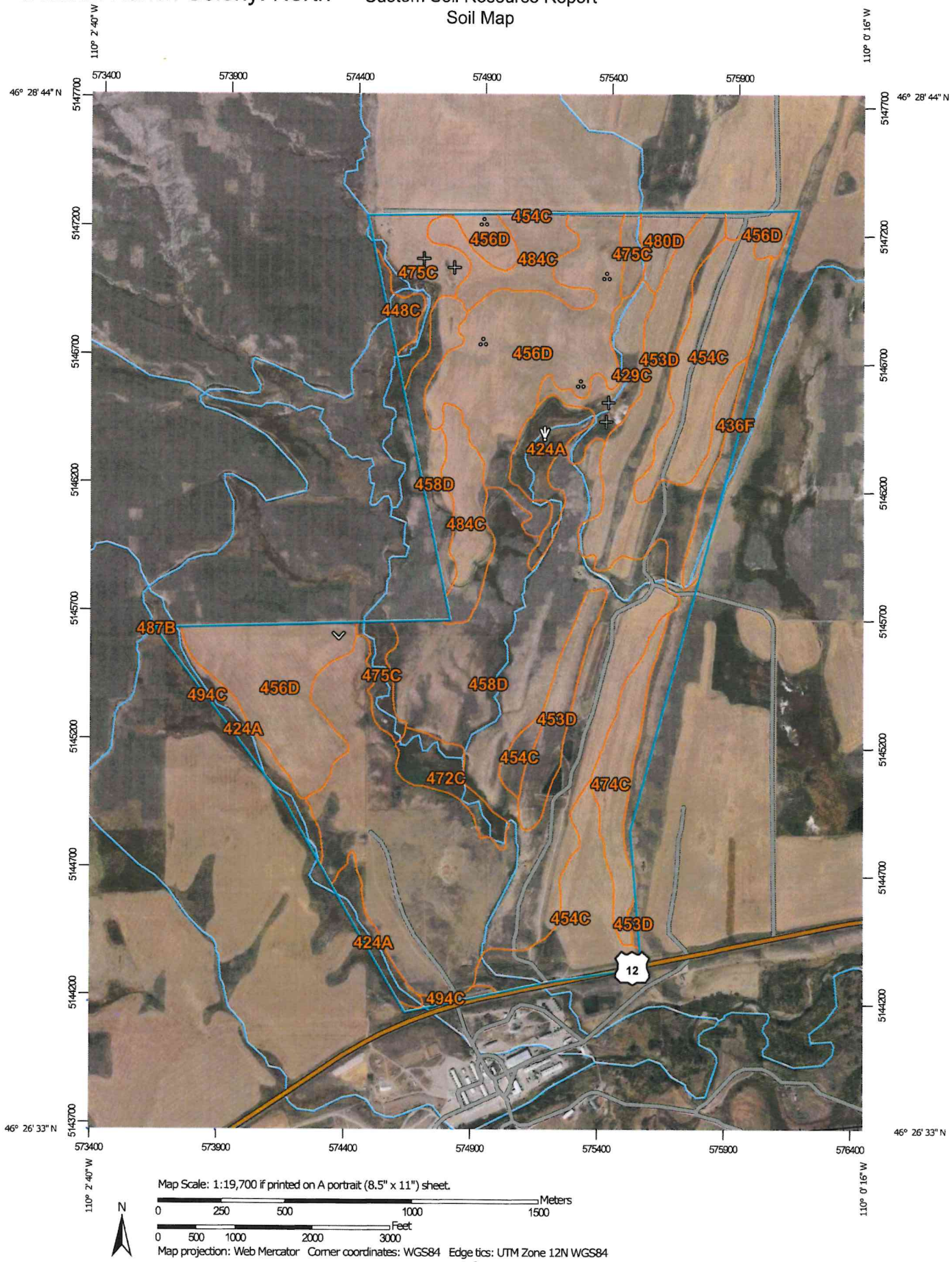
RECEIVED
JAN 19 2024
DEQ WATER QUALITY DIVISION


Dun n Ranch Colony
North
Sam - East: 345.3 ac
Sam - West: 198.4 ac
SW 1- 122.2 ac SW 3- 39.0 ac
SW 2- 37.2 ac
19 Acre: 19.2 ac
South Sam: 77.6 ac
Missle: 146.2 ac
Sheep Hill: 225.4 ac
SH 1- 29.0 ac SH 5- 5.4 ac
SH 2- 14.2 ac SH 6- 70.3 ac
SH 3- 24.3 ac SH 7- 26.4 ac
SH 4- 30.0 ac SH 8- 25.8 ac
Widow: 20.1 ac
North State: 565.2 ac
NS 1- 184.6 ac NS 3- 333.9 ac
NS 2- 46.7 ac
Haymaker: 185.6 ac
Rimrock: 121.6 ac
RR 1- 44.3 ac RR 3- 35.7 ac
RR 2- 27.4 ac RR 4- 14.2 ac
Sunflower: 105.7 ac
SF 1- 4.2 ac SF 2- 101.5 ac
Tiny: 91.3 ac
T 1- 7.9 ac T 2- 83.4 ac
Sam - East
Sam - West
SW 1
SW 2
SW 3
N
W
E
S
John - West
John - East
John - East 19.2 ac
John - West: 291.7 ac
340 Ac Pvt: 338.0 ac
500 DL1- 18.0 ac 500 DL3- 65.1 ac
500 DL2- 95.2 ac
Ed Pivot: 150.1 ac
Ed DL: 50.6 ac
Ed DL1- 4.9 ac Ed DL3- 13.4 ac
Ed DL2- 20.4 ac Ed DL4- 6.8 ac
Snake: 112.8 ac
S 1- 31.5 ac S 3- 77.0 ac
S 2- 4.3 ac
Ike: 194.7 ac
Ike 1- 18.5 ac
Ike 2- 176.2 ac
200 Ac Pvt: 197.8 ac
200 DL1- 12.6, 200 DL2- 7.9 ac
Whitehouse: 73.8 ac
140 Ac Pvt: 133.7 ac
140 DL1- 12.5, 140 DL2- 12.4 ac
Capser Coulee: 104.8 ac
CC 1- 12.3 ac CC 2- 92.5 ac
17
South Sam
Missile
19 Acre
500 DL 3
500 DL 1
340 Ac Pvt
500 DL 2
North State
NS 1
NS 3
NS 2
Sheep Hill
SH 6
SH 8
SH 2
SH 1
SH 3
Haymaker
Rimrock
RR 4
RR 3
RR 1
RR 2
Widow
Frosty: North
Frosty: South
FS 1
FS 5
FS 6
FS 2
FS 3
FS 4
S 1
S 3
S 2
Ed Pivot
Snake
Ike 1
Ike 2
Ike
Ed DL 1
Ed DL 2
Ed DL 4
Ed DL 3
CP 1
CP 7
CP 6
CP 2
CP 5
CP 4
Cow Pasture
Cool Season Grass
T 1
T 2
Tiny
SF 1
SF 2
Sunflower
O 5
O 4
O 3
O 2
O 1
Oscar
Hwy - North
Hwy - South
CC 1
CC 2
Capser Coulee
Whitehouse
200 Ac Pvt
200 DL 1
200 DL2
140 Ac Pvt
140 DL 2
140 DL 1
12
Frosty - South: 124.3 ac
FS 1- 24.1 ac FS 4- 15.8 ac
FS 2- 5.9 ac FS 5- 12.0 ac
FS 3- 34.5 ac FS 6- 32.0 ac
Cow Pasture: 501.2 ac
CP 1- 88.5 ac CP 5- 59.1 ac
CP 2- 156.4 ac CP 6- 93.9 ac
CP 3- 6.3 ac CP 7- 61.8 ac
CP 4- 35.2 ac
Frosty - North: 54.4 ac
Oscar: 180.3 ac
O 1- 76.7 ac O 4- 39.8 ac
O 2- 34.7 ac O 5- 6.2 ac
O 3- 22.9 ac
Hwy - North: 106.3 ac
Hwy - South: 40.6 ac
-Potential manure App Sites


Buffalo Jump 1
Buffalo Jump 2
Buffalo Jump 3
Buffalo Jump 4
East of Buffalo Jump Grass
N. of S. State
Bottom Flat: N
South State
Rocky Top
Custer
Bottom Flat: S
Top Flat: W
Top Flat: E
Crazy: SW
Crazy: SE
Buffalo Jump 1: 187.5 ac
Buffalo Jump 2: 272.2 ac
BJ2-1- 266.0 ac BJ 2-2- 6.2 ac
Buffalo Jump 3: 123.1 ac
BJ3-1- 96.8 ac BJ3-3- 7.7 ac
BJ3-2- 17.3 ac BJ 3-4- 1.3 ac
Buffalo Jump 4: 217.7 ac
BJ4-1- 10.9 ac BJ 4-4- 10.7 ac
BJ4-2- 120.9 ac BJ4-5- 71.2 ac
BJ4-3- 4.0 ac
Bottom Flat North: 169.3 ac
BFN 1- 113.0 ac BFN 4- 9.0 ac
BFN 2- 3.1 ac BFN 5- 29.7 ac
BFN 3- 5.4 ac BFN 6- 9.1 ac
N. of S. State: 27.4 ac
Bottom Flat S 73.2 ac
BFS 1- 3.6 ac
BFS 2- 18.7 ac
Top Flat West: 222.5 ac
TFW 1- 12.5 ac TFW 2- 210.0 ac
Top Flat East: 91.9 ac
South State: 171.0 ac
SS 1- 13.6 ac SS 3- 27.2 ac
SS 2- 130.2 ac
Rocky Top: 373.9 ac
RT 1- 7.2 ac RT 5- 131.4 ac
RT 2- 11.2 ac RT 6- 2.0 ac
RT 3- 163.5 ac RT 7- 5.4 ac
RT 4- 53.2 ac
Custer: 228.6 ac
C 1- 204.6 ac C 2- 24.0 ac
Crazy: SW: 266.6 ac
CSW 1- 18.7 ac CSW 6- 83.2 ac
CSW 2- 5.6 ac CSW 7- 5.0 ac
CSW 3- 26.5 ac CSW 8- 43.0
CSW 4- 25.1 ac CSW 9- 2.0
CSW 5- 57.5 ac
Crazy: SE: 290.5 ac
CSW 1- 27.5 ac CSW 4- 21.3 ac
CSW 2- 175.7 ac CSW 5- 17.6 ac
CSW 3- 48.4 ac
Duncan Ranch Colony South

Duncan Ranch Colony: North

Custom Soil Resource Report
Soil Map



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
424A	Havre-Harlake complex, 0 to 4 percent slopes	50.4	4.8%
429C	Gerdrum-Vanda-Creed complex, 2 to 8 percent slopes, fan	24.2	2.3%
436F	Cabbart-Rentsac complex, 15 to 60 percent slopes	19.3	1.9%
448C	Varney-Niart complex, 2 to 8 percent slopes	7.1	0.7%
453D	Cabbart-Rentsac complex, 2 to 15 percent slopes	117.8	11.3%
454C	Delpoint-Yamacall complex, 2 to 8 percent slopes	109.2	10.5%
456D	Cabbart-Delpoint loams, 4 to 15 percent slopes, fan	178.5	17.2%
458D	Delpoint-Cabbart-Yamacall complex, 4 to 15 percent slopes, fan	373.5	35.9%
472C	Kobase clay loam, 2 to 8 percent slopes, fan	17.9	1.7%
474C	Kobase-Megonot complex, calcareous, 0 to 8 percent slopes, fan	29.4	2.8%
475C	Zatoville-Kobase complex, 2 to 8 percent slopes, fan	44.1	4.2%
480D	Yawdim-Abor complex, 4 to 15 percent slopes	10.5	1.0%
484C	Rothiemay loam, 2 to 8 percent slopes	55.1	5.3%
487B	Niart-Crago complex, 0 to 4 percent slopes, fan	0.0	0.0%
494C	Crago gravelly loam, 0 to 8 percent slopes, fan	2.9	0.3%
Totals for Area of Interest		**1,039.8**	**100.0%**

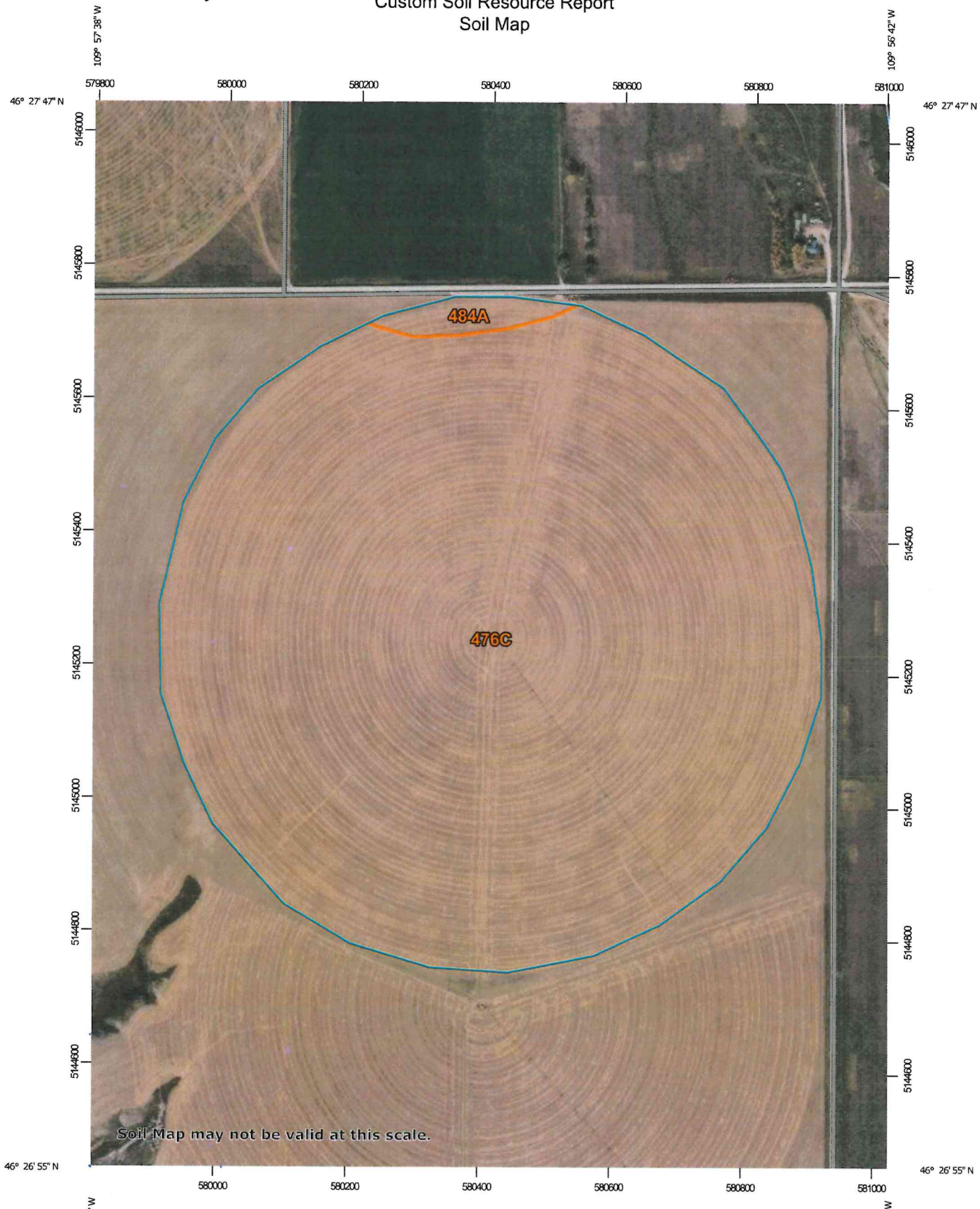
Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic

Duncan Ranch Colony: 195 Ac Pivot

Custom Soil Resource Report
Soil Map



Map Scale: 1:7,790 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 100 200 400 600

Feet
0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
476C	Ethridge clay loam, 2 to 4 percent slopes, fan	196.2	98.5%
484A	Rothiemay loam, 0 to 2 percent slopes	3.0	1.5%
Totals for Area of Interest		**199.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

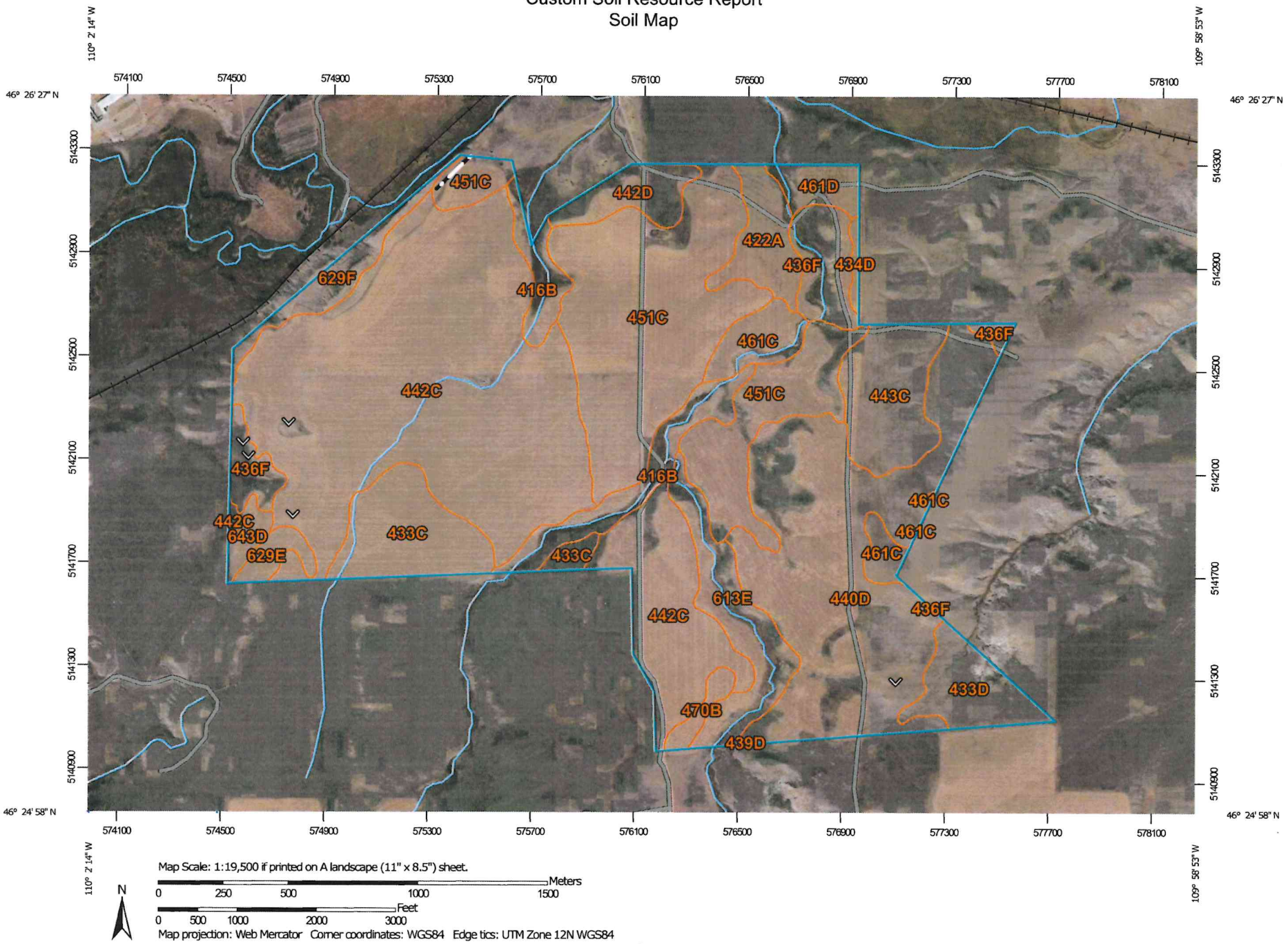
A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Duncan Ranch Colony: South

Custom Soil Resource Report
Soil Map



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
416B	Fairway-Korchea loams, 0 to 4 percent slopes, rarely flooded	45.9	3.9%
422A	Havre loam, 0 to 2 percent slopes, rarely flooded	25.9	2.2%
433C	Boxwell-Rentsac complex, 2 to 8 percent slopes	50.3	4.3%
433D	Boxwell-Rentsac complex, 8 to 15 percent slopes	29.4	2.5%
434D	Cabbart loam, 2 to 15 percent slopes, fan	2.7	0.2%
436F	Cabbart-Rentsac complex, 15 to 60 percent slopes	38.8	3.3%
439D	Rentsac channery loam, 2 to 15 percent slopes	0.1	0.0%
440D	Rentsac-Tanna complex, 8 to 15 percent slopes	196.0	16.8%
442C	Rhame-Rentsac complex, 2 to 8 percent slopes	375.6	32.2%
442D	Rhame-Rentsac complex, 8 to 15 percent slopes	20.9	1.8%
443C	Ethridge-Rentsac complex, 2 to 8 percent slopes	45.6	3.9%
451C	Chinook gravelly fine sandy loam, 2 to 8 percent slopes	211.4	18.1%
461C	Varney gravelly loam, cool, 4 to 8 percent slopes	25.7	2.2%
461D	Varney gravelly loam, 8 to 15 percent slopes	13.2	1.1%
470B	Verson loam, 0 to 4 percent slopes, fan	6.7	0.6%
613E	Cabba-Haverlon complex, 0 to 25 percent slopes	43.9	3.8%
629E	Cabba-Rock outcrop complex, 4 to 35 percent slopes	8.9	0.8%
629F	Cabba-Rock outcrop complex, 15 to 60 percent slopes	19.2	1.6%
643D	Shambo loam, 4 to 15 percent slope	7.2	0.6%
Totals for Area of Interest		**1,167.3**	**100.0%**