Montana Department of Environmental Quality

WATER PROTECTION BUREAU

Agency Use

Permit No.: **MTG010148**

Date Rec'd
Amount Rec'd
Check No.
Rec'd By
Date Gen'd **02/25/2019**

FORM
NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit. CAFO operators also need to read the "Instructions For filling out Form NMP," found at the back of this form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan of the General Permit. Your Nutrient Management Plan must be kept at the operation. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your NOI-CAFO. Attach additional pages as necessary, indicating the corresponding section number on this NMP form.

Section A - NMP Status *(Check one):*

	New	No prior NMP submitted for this site.
	Resubmittal/Administrative Processing	
X	Renewal	Permit Number: MTG010148

Section B - Facility Information *(see instruction sheet)*

Site Name: VOGEL FEEDERS INC

Site physical address: ROAD 12 SOUTH

City, State, Zip: Ballantine , MT, 59006

County: Yellowstone

Township, Range, Section: 2N 28E 13SN

Latitude: 45.9266670 Longitude: -108.194722

Facility Phone Number: 406-967-2966 Date facility began operation: 01-Jan-1973

Status of Applicant: Privately Owned Facility

Is this facility or site located on Indian Lands? **No**

Section C - Applicant (Owner/Operator) Information

Owner or Operator Name: VOGEL FEEDERS INC

Mailing Address: 2088 SOUTH 13TH ROAD

City, State, Zip: BALLANTINE, MT, 59006

Applicant Type: Owner and Operator

Contact Name: DAN VOGEL Title: PERMITTEE

Phone Number: 406-967-2966 Email Address: dnmvogel@yahoo.com

Section D – NMP Minimum Elements:

1. Operation and Maintenance

a. Livestock statistics and manure, litter, and processed wastewater.

Animal Type	Maximum number of animals	# of Days on Site (per year)	Annual manure litter and process wastewater production	
			Dry in tons	Liquid in gallons
Cattle (All except Mature Dairy Cattle and Veal Calves)	7500	365	6500.00 Tons	4000000.00

Method used for estimating annual manure production:

Historic data

b. Manure, litter and process wastewater handling

i. Identify manure, litter and process wastewater handling at the facility:

Composting on site, Stored in Pens, Stored in stacking pad

Solid manure is cleaned from the pens as needed and stockpiled. During the winter months the manure is composted. Both composted and raw manure are spread annually on fields after harvest. Most of the liquid from the lagoons evaporates. If the quantity of liquid in the lagoons needs to be reduced, it is conveyed to the corn/alfalfa crop ground.

ii. Frequency of Manure Removal from confinement areas:

Annually

iii. Is this manure, litter or process wastewater temporarily stored in any location other than the production area? **No**
If so then how and where?

iv. Is dry manure and/or litter stored on impervious surface? **No**
If yes, describe type and characteristics of this surface:

c. Waste control structures

i. What is the 24 hr.-25 yr. storm event at your facility? Please refer to map(s) attached to application package.

2.70 inches

ii. What is the annual precipitation during the critical winter storage period (180 days from mid-October to mid-April)

4.36 inches

iii. Area within clean water diversions: **56.00** acres

Type of surface within clean water diversion area:

Gravel 0.00 Acres

Production Area Waste Control Structures (name/type)	Length (ft.)	Width (ft.)	Depth (ft.)*	Volume (cubic ft. or gallons)	Number of days of storage	Winter storage depth	24hr-25yr storm event depth
Storage Lagoon	460.00	151.00	10.00	5209500.00 Gallons		5.00	5.00

Lagoon	300.00	210.00	1.00	1890000.00 Gallons		2.00	2.00
Holding Pond	136.00	88.00	8.00	718080.00 Gallons		4.00	4.00

*At minimum 1 foot of free board must be maintained on liquid storage structures

2. Mortality Management
a. Please describe how mortalities are disposed of at this facility:

Other
Dead animals are transferred to Baker Commodities (rendered)

b. Describe the location where mortalities are disposed of, if part of production area.

Off-site

3. Clean Water Diversion Practices
Please describe how clean water is diverted from production area:

Culverts, Ditches, Earthen berms, Site grading

4. Prohibiting Animals and Wastes from Contact with State Waters
Please describe how animals and wastes are prohibited from direct contact with state waters:

Fencing

5. Chemicals and Contaminants. List all major chemicals or other contaminants handled on site as part of your CAFO operation. This would include, but not limited to, pesticides, herbicides, animal dips, disinfectants, etc. Specify the method of disposal and location stored (on map required above) for each chemical/contaminant:

All chemicals used on site are handled according to label directions. Containers are disposed of in the City of Billings Landfill.

6. Conservation Practices
Check all temporary, permanent and structural BMPS which will be used to control runoff of pollutants from facility's production area and include them on the map described above. If BMPS are not installed, include a schedule for implementation of each of these measures which may include details and specifications to supplement their description(s).

Culverts and pipes, Earthen berms

7. Manure, Litter, Process Wastewater and Soil Sampling and Analysis Procedures
A representative manure, litter, and process wastewater sample will be analyzed a minimum of once annually for Total Nitrogen and Total Phosphorus. Analysis results should be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining rates for manure, litter, and process wastewater and copies for transfers.

Yes Sample collection will occur according to CAFO General Permit Appendix D.
Other (describe)

8. Land Application
Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?
Yes
If yes, then the information requested in Section D.8(a-g) must be provided.
If no, then explain how animal waste will be managed by the operation, including protocol for transfers of manure, litter and process wastewater.

a. Photos and/or Maps
Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"X 17" piece of paper, and must clearly identify the following items:

- 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
- The location of buffers and setbacks around state surface waters, well heads, etc.
- The location of any downgradient open tile line intake structures
- The location of any downgradient sinkholes
- The location of any downgradient agricultural well heads
- The location of all conduits to surface waters

No Check here if the maps attached to the NMP for the 2013 CAFO General Permit are still applicable and the Department should attach them to this NMP. If the maps are still applicable, new maps do not need to be provided to the Department. (renewals only)

b. 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 facility's land application area. Indicate the location of these practices on the aerial photographs require. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description.

Buffers	Yes	**Conservation Tillage**	Yes
Constructed Wetlands	No	**Grass Filter**	Yes
Infiltration Field	No	**Residue Management**	Yes
Set backs	Yes	**Terrace**	No
Other			

c. 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.

Yes Sample collection will occur according to CAFO General Permit Appendix D
Other (describe)

d. Soil Nitrogen Sampling and Analysis: Representative soil (composite) samples must be collected from a depth of zero to six inches below the surface and analyzed for total nitrogen (as N) and nitrate (as N). A second composite sample must be collected at a depth of six to 24 inches and analyzed for nitrate (as N) only. Samples must be analyzed in accordance with method code 4H2a1-3 in NRCS Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42. Results must be reported as mg/kg total nitrogen and pounds per acre and will be used in determining application rates for manure, litter, and process wastewater.

Yes Sample collection will occur according to CAFO General Permit Appendix D
Other (describe)

e. The applicant has 2 ways in which to report how manure or process wastewater application rates can be reported to DEQ.
Approach: Narrative Rate Approach

f. Phosphorus Risk Assessment

The permittee shall access 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. 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 on-site 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.

Method A – Representative Soil Sample
Method B – Phosphorus Index

Field	Method A - Olsen P Soil Test Results (ppm)	Method B - Total Phosphorus Index Value	Application Basis
10-20		24.00	Phosphorus Need Up to Crop Removal
12-21		24.00	Phosphorus Need Up to Crop Removal
1-33		24.00	Phosphorus Need Up to Crop Removal
13-65		12.00	Nitrogen Needs
15-44		24.00	Phosphorus Need Up to Crop Removal
18&19		24.00	Phosphorus Need Up to Crop Removal
20-8		11.00	Nitrogen Needs
2-65		23.00	Phosphorus Need Up to Crop Removal
3-70		23.50	Phosphorus Need Up to Crop Removal
5-51		28.00	Phosphorus Need Up to Crop Removal
8-25		22.00	Phosphorus Need Up to Crop Removal
9-48		24.00	Phosphorus Need Up to Crop Removal
Eleventy		24.00	Phosphorus Need Up to Crop Removal
Pivot 1		24.00	Phosphorus Need Up to Crop Removal
Pivot 2		24.00	Phosphorus Need Up to Crop Removal
Pivot 3		24.00	Phosphorus Need Up to Crop Removal
Pivot 4		24.00	Phosphorus Need Up to Crop Removal
Pivot 5 North		24.00	Phosphorus Need Up to Crop Removal
Pivot 5 South		24.00	Phosphorus Need Up to Crop Removal

g. Land Application Equipment Calibration

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

A truck with a rear mounted discharge manure spreader that is calibrated by weighing loads on a on a state certified scale.

9. Implementation, Operation, Maintenance and Recordkeeping

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

a. Have protocols been developed for the operation? Yes

b. The documents below are maintained:

Implementation of the NMP: Yes

Facility operation and maintenance: Yes

Record keeping and reporting	Yes
Sample collection and analysis:	Yes
Manure transfer	Yes

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

d. Provide date and location of most recent documentation:

12/20/2018 - Dan Vogel Office 2088 S 14th Rd, Ballantine, MT 59006

CERTIFICATION

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

- For a corporation,
  - (i) a president, secretary, treasurer, or vice-president of the corporation.
  - (ii) the manager of one or more manufacturing, production, or operating facilities.
- 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 Applicants 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]

A. Name (Type or Print)	
B. Title (Type or Print)	**C. Phone No.**
D. Signature	**E. Date Signed**

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

INSTRUCTIONS FOR
Montana's CAFO General Permit (MTG010000)
Notice of Intent Form NOI-CAFO

Important: Do not use this form to transfer permit coverage to a new owner or operator, you must use Form PTN. You must provide the information requested for this application to be complete. Responses must be self-explanatory and must not refer exclusively to attached maps, plans or documents. The appropriate fees must accompany this NOI. Mail this to the DEQ address stated on the form. You must maintain a copy of the completed form for your records. CAFO General Permit documents and related forms are available at (406) 444-5546 or on the DEQ website at: http://www.deq.mt.gov.

Please type or print legibly; applications that are not legible or are not complete will be rejected.

SPECIFIC ITEM INSTRUCTIONS

Section A – Application Status
Check the box that applies and provide the requested information. If Form NOI has not been previously submitted for this site, check the first box (New). DEQ will assign a permit number when the form is submitted. The permit number is a 9-digit code beginning with MTG010. If you submitted a Form NOI and DEQ deemed the application deficient or incomplete, check the second box (Resubmitted); If you were notified by DEQ that the permit coverage expired or will expire and you are now submitting a NOI to continue coverage check the third box (Renewal); if there is change in the facility information (Section H or Section I), check the last box (Modification). If a NOI has been submitted and deemed deficient then the permit number will appear in the deficiency letter. If the site has been covered under a CAFO General Permit, the number is given on the Authorization letter sent to you by DEQ. The permit number should be included on any correspondence with DEQ regarding this site.

Section B – Facility Information:
Identify the legal name of the facility that is subject to permit coverage. The facility is the land or property where the facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity. Give the address or location of this facility and the geographical information. The location maybe the physical mailing address or description of how the facility may be accessed. (PO Boxes are not acceptable.) Latitude and longitude must be accurate to the nearest decimal degree. Sources include GPS or a USGS topographic map. If an operation is located on tribal lands, the operation is not eligible for the Montana CAFO General Permit, but may be able to obtain a permit from the EPA or tribes.

Section C – Applicant (Owner/Operator) Information:
Give the name, as it is legally referred to, of the person, business, public organization, or other entity that owns, operates, controls or supervises the facility described in Section B of this Form. The operator is the legal entity which controls the facility operation. The permit will be issued to the entity identified in this section (Section C). The owner or operator assumes all liability for discharges of the facility and compliance with the permit. If the owner or operator is anything other than a person or government entity, it must be registered with the Montana Secretary of State's office.

Section D – Authorized Representative:
Give the name, title, and work phone number of a person who is thoroughly familiar with the operation of the facility and the facts reported in this form, and who can be contacted by DEQ for additional information. Those facilities with periodic changes in the contact person may provide the contact person position instead of a person's name.

Section E – Existing or Pending Permits, Certification, or Approvals:
List any environmental permits obtained by the operation.

Section F – SIC Codes:
List, in descending order of significance, the four digit standard industrial codes that best describe the activities at this facility. Also, provide a brief description in the space provided. A complete list of SIC Codes (and conversion form the newer North American Industry Classification System (NAICS)) can be obtained from the Internet at

http://www.census.gov/epcd/www/naics.html or in paper from the document entitled "Standard Industrial Classification Manual", Office Management and Budget, 1987. SIC Code listings may also be found at http://www.osha.gov/pls/imis/sicsearch.html. At least one SIC code must be provided.

Section G – Receiving Surface Water(s):
Surface waters is defined as any waters on the earth's surface including, but not limited to, streams, lakes, ponds, reservoir, or other surface water including ephemeral and intermittent drainage ways and irrigation ditches. Water bodies used solely for treating, transporting, or impounding pollutants are not considered surface water. Provide the following information in the table on the application form:

1. Assign an outfall to each receiving water starting with 001. For existing permittees, ensure outfall numbers used are consistent with those identified in the past for the same outfall.
2. Latitude/longitude can be derived from a GPS, smartphone, or topographic map. Latitude and longitude must be accurate to the nearest decimal degree.
3. Give the name of the surface waters. If the discharge reports to a municipal storm sewer, please indicate so.
4. Please attach topographic map(s) indicating the boundary of your facility, major drainage patterns, and the receiving surface water(s).

The facility must check the CWAIC database at http://cwaic.mt.gov/ to determine if the receiving water is impaired for nutrients (nitrate and/or phosphorus).

Section H – Concentrate Animal Feeding Operation Characteristics:
Waste Production, Storage and Disposal:
Report the maximum number of each type of animal confined at any one time and the type of confinement structure used for each (e.g. open feedlot, under roof.)

Manure, Litter, and/or Wastewater Production and Use:
To *transfer waste* means to give away or sell waste to another person for disposal on land owned or controlled by someone other than the permit applicant.

The term *"storage pond,"* includes, but is not limited to ponds, aerobic lagoons, evaporation ponds, manure holding cells, collection basins, settling basins, bermed or diked areas used for impounding waste, and temporary or seasonal waste holding ponds.

"Production area" means that part of an Animal Feeding Operation (AFO) that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The *animal confinement area* includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The *manure storage area* includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storage, liquid impoundments, static piles, and composting piles. The *raw materials storage area* includes but is not limited to feed silos, silage bunkers, and bedding materials. The *waste containment area* includes but not limited to settling basins, and areas within berms and diversion which separate uncontaminated storm water. Also include in the definition of production area is any egg washing or egg processing facility, and any area used in storage, handling, treatment, or disposal of mortalities.

"Land application area" means land under control of a AFO owner or operator, whether it is owned, rented, or leased, to which manure, litter or process wastewater from the production area is or may be applied.

Section I - Supplemental Information:
Use the space provided to expand upon any information requested in the application or information you wish to bring to the attention of the reviewer. Attach additional sheets, if necessary. For applicants requesting a modification to an existing authorization or site-specific NMP (aka Form NMP), provide and explanation of the requested modification.

Section J – Sage Grouse:

Visit with the Montana Sage Grouse Habitat Conservation Program (Program) to determine if the operation is within sage grouse habitat designated as a core area, general habitat or connectivity area. Projects within sage grouse habitat must be submitted to the Program through their website for consultation. Any recommendations and mitigations determined by the Program are provided in a consultation letter by the Program. If the project is outside of sage grouse habitat, no consultation is required.

Section K – 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.

The NOI-CAFO Form and other forms for water discharge permitting or authorization are available at DEQ's website. If you have any questions concerning how to fill out this form, or other forms related to the Montana Pollutant Discharge Elimination System (MPDES) discharge permitting program, please contact DEQ at (406) 444-5546. Mail the package to the address provided in Section J.

INSTRUCTION FOR Form NMP – Nutrient Management Plan Associated With Concentrated Animal Feeding Operations

You may need the following items in order to complete this form: A copy of your most recently submitted NOI-CAFO: NRCS No. 80.1 Nutrient Management, Agronomy Technical Note MT-11; Montana State University Extension Service Publication 161, Fertilizer Guidelines for Montana Crops; NRCS Sampling Soils for Nutrient Management – Manure Resource, MT; Montana State University Mont Guide, Interpretation of Soil Test Reports for Agriculture, MT200702AG; NRCS Conservation Practice Standard, Code 590 and Waste Utilization, Code 633.

Please type or print legibly; forms that are not legible will be considered incomplete.

SPECIFIC ITEM INSTRUCTIONS

Section A – NMP Status:

Check the box that applies and provide the requested information. If this is the first time applying for the CAFO General Permit, check the first box (New). If you submitted a FORM NMP and the Department found it to be incomplete, check the second box (Resubmitted);

If you were notified by the Department that the permit coverage expired and you are now submitting and updated Form NMP, check the third Box (Modification). The permit number should be noted in the letter. If the site was previously covered under CAFO General Permit, the number is given on the Authorization letter sent to you by the Department. The permit number should be included on any correspondence with the Department regarding this site.

Section B – Facility Information:

The information must be stated exactly the same way as it was stated on the most recently submitted version of your form NOI-CAFO.

Section C – Applicant (Owner/Operator) Information:

The information must be stated exactly the same way as it was stated on the most recently submitted version of your form NOI-CAFO.

Section D – Waste Management Minimum Elements:

1. **Operation and Maintenance**
   - ***a. Livestock Statistics and manure, litter and processed wastewater:*** Identify each type of animal confined at this facility. The definition of "type" could include animals of a given species, animals of a given weight class (e.g. piglets, sows), or animals housed for a specific purpose. The Animal types should be identical to what is reported on the NOI.
     Enter the Maximum number of that type on animal that the facility can hold.
     Enter the "number of days on site per year" means the number of days at least one animal of a given type is held in confinement during 12-month period.
     "Annual Manure Liter and Process Wastewater Production" means the volume of manure, liter or process wastewater (from a given animal type) that is stored, land applied, or transferred to another person during any given 12-month period.
     "Method used for estimating annual manure production." When describing the method used to calculate annual manure production, include all formulas, factors, references to tables, and other resources used to calculate manure production. Be sure to account for soiled bedding materials and manure-contaminated runoff water, which is also consider manure under state regulations.

   - ***b.*** **Manure, Litter and Process Wastewater handling.**
     Identify where the manure, litter and process wastewater is handled and stored at the facility. Identify the frequency that manure, litter or wastewater is removed from the confinement area. If the manure, litter or process wastewater is temporarily stored outside of the production area, please describe how and where. If dry manure or liter is stored on an impervious surface like concrete or asphalt, please describe.

   - ***c.*** **Waste Control Structures**.

"25-year 24-hour rainfall event" means a precipitation event with a probable recurrence interval of once in 25 years as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States," May 1961, and subsequent amendments, or the equivalent regional or state rainfall probability information.
"Critical Storage period" The minimum design volume for liquid manure storage structures is based on the expected length of time between emptying events that result in maximum production of process wastewater, including runoff from the production area. The critical storage period is considered to the 180 days starting November 1st to April 30.
List the area with in the clean water diversions. This is the area that is inside the BMP's used for clean water diversions. This area is used to calculate the volume required to hold the 24hr.-25yr. storm event and the volume of your critical storage period. Check all the surface types within the clean water diversion area in acre or ft^2.
List all waste control facilities for the production area. These 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.

2. **Mortality Management**. Please check the box(s) of how the facility manages their dead loss. Please describe the location where dead loss is disposed of if part of production area. The dead loss disposal area may be located offsite.

3. **Clean Water Diversion Practices**. Please check all boxes supplied and include them on the required map of the production area.

4. **Prohibiting Animals from Contact with State Waters.** Indicate what BMP's are used to prevent animals from coming into direct contact with waterbodies.

5. **Chemicals and Contaminants**. List all major chemicals or other contaminants handled onsite as part of the CAFO operation. This would include, but not limited to, pesticides, herbicides, animal dips, disinfectants, etc. Specify the method of disposal for each chemical/contaminant.

6. **Conservation Practices.** Check all Best Management Practice (BMPs) that apply. These BMPs are used to control runoff of pollutants from the production area. Please note that "production area" means that part of a CAFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The "animal confinement area" includes but in not limited to open lots, housed lots, feedlots, confinement houses, stall barns, animal walkways, and stables. The "manure storage area" includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The "raw material storage area" includes but is not limited to feed silos, silage bunkers, and bedding materials. The "waste containment area" includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

7. **Manure, Litter and Process Wastewater Sampling and Analysis Procedures.** Sampling and Analysis can be done according to Appendix D of the CAFO General Permit

8. **Land Application:** If all of the manure produced at your facility will be transferred to other persons for use in areas beyond your operational control, then you do not need to provide the information requested in following section.

a. Photos and/or maps:
Items that must be on the photo/map include buffers and setbacks around state surface waters, well heads, etc. The items required that are not already shown on published map(s) can be hand drawn on the map.

b. Conservation Practices for land application: Check all Best Management Practice (BMPs) that apply. These BMPs are used to control runoff of pollutants from the production area. Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's land production area. Indicate the location of these practices on the field maps required above. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites; and consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground.

c. Soil Phosphorus Sampling and Analysis.

d. Soil Nitrogen Sampling and Analysis.

e. Linear and Narrative Rate Approaches.

f. Phosphorus Risk Assessment.

g. Land Application Equipment Calibration. Describe the type of equipment used to land apply wastes and the calibration procedures. Land application equipment calibration in essential to ensuring that nutrients are being applied at agronomic rates. Please provide specific information on how equipment will be calibrated. The CAFO shall maintain the supporting documentation on site and shall make this information available to DEQ upon request.

9. **Implementation, Operation, Maintenance and Recordkeeping:** Indicate protocols kept for implementation of the Nutrient Management Plan.

Section E – Certification:
If Form NMP is filled out by one person and signed by another, the person signing the document should read it thoroughly. Always retain a copy of each of the documents that you send to the Department.
If you have any questions concerning how to fill out this form, or other forms related to the Montana Pollutant Discharge Elimination System (MPDES) discharge permitting program, please contact the Department's Water Protection Bureau at:

Phone: (406) 444-5546
Fax: (406) 444-1374
1520 East Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901

Linear Approach Nutrient budget work Sheet.

Enter the field identification number used on the photos/maps above, the year in which the crop will be grown, the crop that will be grown and the number of acres for that field.
Enter the expected crop yield from the Fertilizer Guidelines for Montana Crops Publication EB 161 based on expected nitrogen supplied from all sources.
Enter the results of the phosphorus field-specific assessment.
Enter Method of land application.
Enter when application will occur.

Line 1: Enter in the planned crop nutrient needs in pounds per acre from Fertilizer Guidelines for Montana Crops Publication EB 161.
Line 2: If in the previous year a Legume crop was grown, enter the max values given in Appendix D of the General Permit. Otherwise. enter the credits from soil analysis results in pounds per acre.
Line 3: Enter nutrient credits from second year manure applications pounds per acre if applicable. See Appendix D of the General Permit for mineralization rate. Multiply the previous year's nitrogen application rate from manure, litter or processed wastewater by the Second-year mineralization rate and enter it here.
Line 4: Enter nutrients supplied by commercial fertilizer in pounds per acre. This can be starter or other fertilizer that is applied prior to manure application.
Line 5: Enter nutrients supplied by any irrigation water in pounds per acre from water test.
Line 6: Subtract lines 2 through 5 from line 1 and enter in the space provided
Line 7: Enter in the nitrogen or phosphorus from sample taken of manure or process wastewater within the last year.
Line 8: Enter in the Nitrogen Availability by Application Method. Enter 1 for phosphorus.
Line 9: Multiply line 7 by line 8 and enter it here
Line 10: Enter value from line 6 here.
Line 11: Enter value from line 9 here.
Line 12: Divide line 10 by line 11 and enter it here.

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

12		= Manure Application Rate, tons/acre or 1000 gal/acre			

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:								