

Wyoming Department of Environmental Quality Water Quality Division / WYPDES Concentrated Animal Feeding Operation Minimum Elements of a Nutrient Management Plan



- I. Facility Information
 - A. Owner
 - B. Operator
 - C. Type of facility (open-lot, free stall)
 - D. Short description of the operation (dairy, feedlot)
 - E. Location
 - F. Address
 - G. Legal description of the location
 - H. Latitude and longitude of facility
 - I. Effected watershed
 - J. Is the property listed in a source water protection area for ground water
 - K. Is there a TMDL and are there any concerns
 - L. Average annual precipitation
 - M. Identify the 25 year/24 hour or 100 year/24 hour storm event
 - N. Location of weather station
- II. Resource Issues(s) / BMP Implementation Schedule
- III. Nutrient Management Plan Approval
 - A. NM Planner, affiliation, telephone number and signature
- IV. Annual Reporting Requirements
 - A. List items to be reported annually
 - B. When to report
 - C. Where to send the report
- V. Permit Application and Renewal
 - A. Expected Expiration Date
- VI. Animal Production System - Description of herd, number of animals, animal units, and maximum herd size the plan is designed to cover.
- VII. Manure, collection, transfer, and storage areas - Explanation of how manure collection, transfer, storage, containment, and handling facilities are designed operated and maintained to meet requirements of the CAFO Permit
 - A. Is storage designed and certified by a licensed engineer
 - B. Annual manure production, amount, and percentage handled as solid and liquid
 - C. Manure collection, transfer, and storage systems description
 1. Liquid manure system description
 - a. Storage requirements- number of days storage required, volume required based on maximum herd size
 - i. Include all potential inputs (barn wash, trough runoff, urine, leachate, storm water, truck wash, other)
 - ii. Outputs (spreading, evaporation, other)
 - b. Storage Capacity number of days /volume at maximum herd size
 - c. Does storage capacity include
 - i. Annual rainfall, 24 hour/25 year storm event (24 hours/100 year storm for swine and veal facilities)

Minimum Elements of a Nutrient Management Plan

- ii. Silage leachate containment
 - iii. Contaminated roof water collection
 - iv. Contaminated corral runoff
 - d. Depth marker locations, system description and estimated volumes at marks, inspection records and record retention
 - e. Treatments
 - f. Maintenance schedule (solids removal, dike maintained weed free and inspected periodically for rodent activity, etc)
 2. Solid manure storage system description
 - a. Storage requirements - number of days required, volume required at maximum herd size
 - b. Storage capacity number of days/volume at maximum herd size
 - c. Maintenance schedule
 - d. Composting operations
- VIII. Additional wastewater and storm water containment facilities and handling protocols - Explanation of how wastewater and storm water containment and handling facilities are designed operated and maintained to meet requirements of the CAFO Permit
- o Silage/cannery waste leachate containment
 - o Facility processing water
 - o Parlor wash down water
 - o Facility process water (egg washing, etc)

Land Application Management - Explanation of how land management practices meet requirements of the CAFO Permit

- E. Identify protocols for appropriate testing of manure, litter, process wastewater, and soil (frequency and constituents to be tested)
- F. Establish protocols to land apply manure, litter or process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater
- G. List spreadable/wettable areas (acreage) by field ID
 1. Phosphorus (P) Index rating, date of soil sampling and analysis used to evaluate P Index
 2. Nitrogen (N) Leaching Index rating, date of soil sampling and analysis used to evaluate N Leaching Index
 3. List crop(s), rotations
 4. Irrigation system
 5. Site specific conservation practice (buffers, etc to control runoff of pollutants)
- H. Manure handling equipment
 1. Solid manure applicators volume per load, nutrients per load, and calibration protocols, Is nutrient per load from a current manure sample or based on book value, calibration procedures, recordkeeping of calibration, maintenance and repairs and records retention time

Minimum Elements of a Nutrient Management Plan

2. Liquid manure applicators volume per load, nutrients per load, and calibration protocols, Is nutrient per load from a current manure sample or based on book value, calibration procedures, recordkeeping of calibration, maintenance and repairs and records retention time
 3. Irrigation applications of manure system description, maximum application rate based on soil infiltration rates (inches per hour) and system design, nutrients per gallon or inch, calibration procedures, recordkeeping of calibration, maintenance and repairs and records retention time
 4. Land application records - list requirements including expected crop yields, date manure applied, weather conditions, type of nutrient applied, method used to apply, calculations to determine crop needs and actual amount applied for both nitrogen and phosphorus for each field receiving manure and/or commercial fertilizer, records retention time
 5. Additional irrigation water applications
- IX. Transfer or Export of Manure
- A. Receipt agreements
 - B. Record requirements and records retention time to include
 1. Date of transfer
 2. Amount transferred
 3. Who received the exported manure
 - C. Nutrient content
 1. Provide a copy of the manure analysis
- X. Environmental Monitoring Plan (large CAFOs only) - Emergency Management Plan for spills or other catastrophic events for Production area and Land application areas - Explanation of how Emergency Management Plan meets requirements of CAFO Permit
- A. Protocols for reporting
 - B. Recordkeeping requirements and retention
 1. Discharges - include date, time, and estimated volume of overflows
 2. Why/how the discharge happened
 3. Actions taken to stop the spill
 4. Date and who was notified
 5. Actions taken to prevent future spills
- XI. Animal Mortality Management Plan - Ensure proper management of mortalities (i.e., dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities. Also include a plan for catastrophic mortality disposal.
- XII. Clean Water Inspection and Maintenance Plan
- A. System to ensure clean water is diverted, as appropriate, from the production area
 - B. Inspection plan (including inspection frequency, and methods of documentation)
 - C. Maintenance plan
 - D. Prevent direct contact of confined animals with surface waters of the state

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- XIII. Other technologies used other than NRCS practices
 - A. Justification the practices work as well or better than NRCS procedures
- XIV. Maps
 - A. Production area
 - 1. Identify:
 - a. Manure storage areas
 - b. Equipment storage
 - c. Identify location of farm buildings
 - d. Feed storage
 - e. Raw material storage areas
 - f. Mortality storage
 - g. Sensitive environmental features
 - i. sinkholes
 - ii. wells
 - iii. drinking water sources
 - iv. field drain outlets
 - v. other relevant physical features
 - vi. legend
 - B. Land application area
 - 1. Identify all fields where manure and wastewater is to be land applied.
 - a. Identify the field boundaries.
 - b. buffers
 - c. setbacks
 - d. sensitive environmental features
 - i. sinkholes
 - ii. wells
 - iii. drinking water sources
 - iv. field drain outlets
 - v. nearest surface water bodies
 - C. Soil survey map
 - 1. Copy of NRCS county soil survey map covering production and application areas
 - 2. Topographical map (note: this is also a requirement of the application)
The following items must be clearly marked.
 - a. facility
 - b. street
 - c. buildings
 - d. wetlands
 - e. streams
 - D. Mortality disposal area