**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**
**GENERAL PERMIT FOR DISCHARGES FROM CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs) IN NEW MEXICO (NMG010000)**

**U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 6**

**AUTHORIZATION TO DISCHARGE UNDER THE**
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**

In compliance with provisions of the Clean Water Act, 33 USC 1251 et seq., the "Act," owners and operators of concentrated animal feeding operations (CAFOs) in New Mexico, except those CAFOs excluded from coverage in Part I of this permit, are authorized to discharge and must operate their facility in accordance with effluent limitations, monitoring requirements, and other provisions set forth herein.

A copy of this permit must be kept by the permittee at the site of the permitted activity.

This permit will become effective

This permit and the authorization to discharge under the NPDES shall expire at midnight

Issued on

_____
William K. Honker, P.E.
Director
Water Division

# PART I. PERMIT AREA AND COVERAGE

## A. Permit Area

This permit offers NPDES permit coverage for discharges from operations defined as concentrated animal feeding operations (CAFOs) in the State of New Mexico (except Indian Country), as specified herein.

## B. Permit Coverage

This permit covers any operation that meets the definition of a CAFO (see Part VII of this permit) and discharges or proposes to discharge pollutants to waters of the United States. A CAFO proposes to discharge if it is designed, constructed, operated, or maintained such that a discharge will occur. Once an operation is defined as a CAFO, the NPDES requirements for CAFOs apply with respect to all animals in confinement at the operation and all manure, litter and process wastewater generated by those animals or the production of those animals, regardless of the type of animal.

## C. Eligibility for Coverage

Unless excluded from coverage in accordance with Paragraph D or F below, owners/operators of existing, currently operating animal feeding operations that are defined as CAFOs or designated as CAFOs by the Permitting Authority (See Part VII Definitions, "CAFOs") and that are subject to 40 CFR Part 412, Subparts A (Horses and Sheep) and C (Dairy Cows and Cattle Other than Veal Calves) are eligible for coverage under this permit. Eligible CAFOs may apply for authorization under the terms and conditions of this permit, by submitting a notice of intent (NOI) to be covered by this permit (see Appendix A).

CAFO owners/operators may also seek to be excluded from coverage under this permit by (1) submitting to the Director (see Part I.E.4) a notice of termination form (see Appendix B) or (2) by applying for an individual NPDES Permit in accordance with Part I.F.

## D. Limitations on Coverage

The following CAFOs are not eligible for coverage under this NPDES general permit, but must apply for an individual permit:

1. CAFOs that have been notified by EPA to apply for an individual NPDES permit in accordance with Part I.F (below) of this permit.

2. CAFOs that have been notified by EPA that they are ineligible for coverage because of a past history of non-compliance.

3. Duck, Veal, Poultry (including eggs) or Swine CAFOs.

4. Coverage under this permit is available only if your discharge will not adversely affect any

species that are federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) and will not result in the adverse modification or destruction of habitat that is federally-designated as "critical habitat" under the ESA. CAFOs seeking coverage under this general permit must follow the conditions outlined in Part III.D.8 of this permit.

5. CAFOs that do not meet the National Historic Preservation Act eligibility provisions contained in Appendix C of this permit.

6. CAFOs that discharge to waters designated by the State as Tier 3 (outstanding natural resource waters) for antidegradation purposes under 40 CFR 131.13(a)(3). See the list of New Mexico Tier 2 and 3 waters in Appendix E or permittee may call the New Mexico Environment Department Surface Water Quality Bureau at 505-827-0187 if you need assistance determining the antidegradation tier of the water.

7. New dischargers to water quality impaired water (CWA, 303d list) unless the operator:
   a. prevents any discharge that contains pollutant(s) for which the waterbody is impaired, and includes documentation of procedures taken to prevent such discharge in the nutrient management plan (NMP); or

   b. documents that the pollutant(s) for which the waterbody is impaired is not present at the facility, and retains documentation of this finding with the NMP; or

   c. in advance of submitting the notice of intent (NOI), provides to EPA data to support a showing that the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retains such data onsite with the NMP. To do this, the operator must provide data and other technical information to EPA sufficient to demonstrate:

      i. For discharges to waters without an EPA approved or established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the waterbody; or
      ii. For discharges to waters with an EPA approved or established TMDL, that there are sufficient remaining wasteload allocations in an EPA approved or established TMDL to allow the facility's discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards.

   Operators are eligible under this section if they receive an affirmative determination from EPA Region 6 that the discharge will not contribute to the existing impairment, in which case the operator must maintain such determination onsite with the NMP.

8. CAFOs, constructed after April 14, 2003, with discharges subject to New Source Performance Standards (NSPS) at 40 CFR Part 412. .

9. CAFOs that are located on Indian lands in New Mexico.

## E. Application for Coverage

1. Owners/operators of CAFOs seeking to be covered by this permit must:
   a. Submit an NOI to the Director.
   b. Submit a nutrient management plan (NMP) that meets the requirements of this permit and 40 CFR 122 and 412, where applicable.

2. The owner/operator of any CAFO currently covered under the expired 2009 CAFO General Permit that is seeking coverage under this permit must submit a complete NMP and NOI to the Director within 90 days of the effective date of this permit. For any CAFO covered under the 2009 CAFO General Permit that meets this deadline, authorization under the 2009 CAFO General Permit is automatically continued until coverage is granted under this permit or coverage is otherwise terminated.

3. The owner/operator of any CAFO that submitted an application for coverage under an individual permit prior to issuance of this general permit and is now seeking coverage under this permit must submit a complete NMP and NOI to the Director within 90 days of the effective date of this permit.

4. Discharges by new applicants to the permit and by CAFO owners/operators submitting an NOI after the applicable date in either 2 or 3, above, are authorized only after permit coverage is granted. EPA, as permitting authority, reserves the right to take appropriate enforcement actions for any unpermitted discharges;

5. If a CAFO has submitted an application for coverage under an individual permit prior to issuance of this general permit and is seeking to be covered by this general permit, the CAFO must submit an NOI for coverage.

6. Signature Requirements: The NOI must be signed by the owner/operator or other authorized person in accordance with Part VI.E of this permit.

7. Submittal of NMP: An NMP must be submitted that meets the requirements of the provisions of § 122.42(e) (including, for all CAFOs subject to 40 CFR Part 412, Subpart C or Subpart D, the requirements of 40 CFR 412.4(c), as applicable) and Part III.A of this permit.

8. Where to Submit: CAFOs must submit an electronic (paperless) signed copy of the NOI and NMP by email to EPA and NMED:

   EPA: r6CAFO@epa.gov
   NMED:Bruce.Yurdin@state.nm.us

Or mail electronic copies to:

EPA: U.S. Environmental Protection Agency, Region 6
Water Quality Protection Division
NPDES Permits and TMDL Branch (6WQ-PO)
1445 Ross Avenue
Dallas, TX 75202-2733

NMED: Program Manager, NMED SWQB
Point Source Regulation Section
PO Box 5469, Santa Fe, NM 87502

9. Upon receipt, EPA will review the NOI and NMP to ensure that all permit requirements are fulfilled. EPA may request additional information from the CAFO owner or operator, as necessary, to complete the NOI and NMP or clarify, modify, or supplement previously submitted material. If EPA makes a preliminary determination that the NOI is complete, the NOI, NMP and draft terms of the NMP to be incorporated into the permit will be made available for a 30-day public review and comment period. EPA will respond to comments received during this period and if necessary, require the CAFO owner or operator to revise the NMP. If determined appropriate by EPA, a CAFO will be granted coverage under this general permit upon written notification by EPA. (See Part III.A.2)

10. A CAFO whose facility expanded since April 14, 2003, shall submit information to EPA that describes the expansion (i.e., what is being expanded, how the expansion relates to the existing operation, etc.), as well as a map showing the location of the expansion. If EPA determines the expansion to be a new source, (as defined by 40 CFR 122.2 and the new source criteria found at 40 CFR 122.29(a) and (b)) the facility is ineligible for coverage under this permit and must apply for an individual permit if pursuing authorization to discharge. Coordination with EPA can begin in advance of NOI and NMP submittal.

## F. Requiring an Individual Permit

1. EPA may, at any, time require any facility authorized by this permit to apply for, and obtain, an individual NPDES permit. EPA will notify the operator, in writing, that an application for an individual permit is required and will set a time for submission of the application. Coverage of the facility under this general NPDES permit is automatically terminated when: (1) the operator fails to submit the required individual NPDES permit application within the defined time frame; or (2) EPA publishes a final decision to issue or deny individual NPDES permit coverage.

2. Any owner/operator covered under this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner/operator shall submit an application for an individual permit (Form 1 and Form 2B) with the reasons supporting the application to EPA. If an individual NPDES permit is issued to an

owner/operator otherwise subject to this general permit, the applicability of this NPDES CAFO general permit to the facility is automatically terminated on the effective date of the individual NPDES permit. Otherwise, the applicability of this general permit to the facility remains in full force and effect (for example, if an individual NPDES permit is denied to an owner/operator otherwise subject to this general permit).

## G. Continuation of this Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 CFR 122.6 and remain in force and effect. If you submitted an NOI to EPA and were authorized to discharge under this permit prior to the expiration date, any discharges authorized under this permit will automatically remain covered by this permit until the earliest of:

1. Your authorization for coverage under a reissued permit or a replacement of this permit following your timely and appropriate submittal of a complete NOI requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or

2. A formal decision by EPA to grant the permittee's request for termination of permit coverage; or

3. Issuance or denial of an individual permit for the facility's discharges; or

4. A formal permit decision by EPA not to reissue this general permit, at which time EPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease at the end of this time period.

## H. Change in Ownership

1. Coverage under this permit may be automatically transferred to a new owner if:
   a. The current permittee notifies the Director in writing at the address specified in Part I.E.8 at least 30 days in advance of the proposed transfer date in Part I.H.1.b;

   b. The notice includes a written agreement between the current permittee and new owner containing a specific date for transfer of permit responsibility, coverage, and liability between them. The notice shall include a signed statement from the new owner certifying that the new owner:
      i) has personally examined and is familiar with the information submitted in the current permittee's NOI and NMP,
      ii) believes the information is true, accurate and complete, and
      iii) agrees with the current permittee that the facility meets the eligibility requirements established in Part I of the permit and that the new owner will comply with any applicable terms, conditions, or other requirements developed in the process of meeting these eligibility requirements;

c. The Director does not notify the current permittee and the new owner of his or her intent to modify or revoke and reissue permit coverage, and

d. At all times, the CAFO shall be operated in accordance with the approved NMP and comply with all permit conditions.

2. Upon transfer of ownership for a permitted facility, the new owner must submit a Notice of Intent. The current permitttee must submit a Notice of Termination within 30 days of the transfer of ownership. Written documentation of the date of transfer of operational control and permit responsibility, signed by both parties, must be retained and provided upon request.

3. Coverage under this permit is not transferrable to a new owner if the new owner cannot fully comply with the terms, conditions and other requirements of the existing permit, including the enforceable requirements of the NMP. When coverage is not transferrable, the new owner seeking permit coverage must apply to EPA in accordance with Part I.E. Within 30 days of the transfer of ownership, the existing permittee must submit a Notice of Termination.

# PART II. EFFLUENT LIMITATIONS AND STANDARDS

## A. Effluent Limitations and Standards

The following effluent limitations apply to facilities covered under this permit:

1. Technology-based Effluent Limitations and Standards - Production area.

   There shall be no discharge of manure, litter, or process wastewater pollutants into waters of the United States from the production area except as provided below.

   a. Whenever precipitation causes an overflow of manure, litter, or process wastewater, pollutants in the overflow may be discharged into waters of the United States provided:
      i. The production area is properly designed, constructed, operated and maintained to contain all manure, litter, process wastewater plus the runoff and direct precipitation from the 25-year, 24-hour storm event for the location of the CAFO; and
      ii. The design storage volume is adequate to contain all manure, litter, and process wastewater accumulated during the storage period considering, at a minimum, the following:
         (A) The volume of manure, litter, process wastewater, and other wastes accumulated during the storage period;
         (B) Normal precipitation less evaporation during the storage period;
         (C) Normal runoff during the storage period;
         (D) The direct precipitation from the 25-year, 24-hour storm;
         (E) The runoff from the 25-year, 24-hour storm event from the production area;
         (F) Residuals solids after liquid has been removed;
         (G) Necessary freeboard to maintain structural integrity. After settlement, the top of the embankment shall be ≥ 1 foot above the surrounding grade. (NRCS, Waste Storage Facility Code 313)
         (H) A minimum treatment volume, in the case of treatment lagoons.

   b. The production area must be operated in accordance with the additional measures and records specific in Part II.A.2 of this permit.

2. Other Limitations – Applicable to the Production Area

   a. Additional Requirements

      In addition to meeting the requirements in Part II.A.1 of this permit, the permittee must implement the following additional requirements.

i. Conduct weekly visual inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage and containment structures.

ii. Conduct daily visual inspections of all water lines, including drinking water and cooling water lines.

iii. Install a depth marker in all open surface liquid impoundments. The depth marker must clearly indicate the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. The marker shall be visible from the top of the levee.

iv. Conduct weekly inspections of the manure, litter, and process wastewater impoundments noting the level as indicated by the depth marker installed in accordance with Part II.A.2.a.iii.

v. Correct any deficiencies that are identified in daily and weekly inspections as soon as possible. Document all corrective actions taken and explain why deficiencies not completed within 30 days were not immediately corrected. A written record of all deficiencies and corrective actions shall be made available to EPA or NMED upon request.

vi. Properly dispose of dead animals within three (3) days unless otherwise provided for by the Director. Mortalities must not be disposed of in any liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities. Mortalities must be handled in such a way as to prevent the discharge of pollutants to surface water, unless alternative technologies pursuant to 40 CFR 412.31(a)(2) and approved by the Director are designed to handle mortalities.

vii. Maintain complete on-site records documenting implementation of all required additional measures, including the records specified for Operation and Maintenance in Part IV.C, Table IV-A, for a period of at least five years from the date they are created.

viii. CAFOs constructing new wastewater retention facilities or modifying existing retention facilities shall insure that all retention structure design and construction will, at a minimum, be in accordance with the technical standards developed by the Natural Resources Conservation Service (NRCS). The permittee must use those standards that are current at the time of construction. Existing retention facilities that have been properly maintained and show no signs of structural problems or leakage will be considered to be properly constructed.

The following minimum design standards are required for construction and/or modification of a retention facility: (a) soils used in the embankment shall be free of foreign material such as trash, brush, and fallen trees; (b) the embankment shall be constructed in lifts or layers no more than 6 inches thick after compaction at a minimum compaction effort of 95% Standard Proctor Density (ASTM D698) at -2% to +2% optimum moisture content; (c) all embankment walls shall be stabilized to prevent erosion or deterioration; (d) site specific variation in embankment construction shall be in accordance with NRCS design standards (e) liner requirements

specified in Part III.D.1, as appropriate.

ix. A daily record of measurable rainfall events must be recorded. A rain gauge shall be kept on site and properly maintained. The rain gauge must be kept free of debris, inspected for damages which may impair functionality, and secured tightly to a protected area of a building/structure which is inaccessible to wildlife as well as domestic animals. Measurements taken from the rain gauge must be recorded to the nearest half (½) of an inch. Permittees do not need to update their records on any day when there is no rainfall. EPA will interpret the lack of an update on any particular day to indicate a record of no rainfall occurring on that day.

x. Open lots and associated wastes shall be isolated, as appropriate, from run-on from outside surface drainage by ditches, dikes, berms, terraces or other such structures designed to carry peak flows expected at times when a 25-year, 24-hour rainfall event occurs. Clean water and flood waters must be diverted, as appropriate, from contact with feedlots and holding pens, and manure and/or process wastewater storage systems. In cases where it is not feasible to divert clean water from the production area, the retention structures shall include adequate storage capacity for the additional clean water. Clean water includes rain falling on the roofs of facilities, runoff from adjacent land, or other sources.

xi. Facilities shall not expand operations, either in size or numbers of animals, prior to amending or enlarging the waste handling procedures and structures to accommodate any additional wastes that will be generated by the expanded operations.

b. Prohibitions

i. All discharges to retention facilities shall be composed entirely of manure, litter or process wastewater from the proper operation and maintenance of a CAFO, and the runoff from and direct precipitation onto the production area. The disposal of other materials into these retention facilities is prohibited.

ii. Animals confined at the CAFO shall not be allowed to come into direct contact with waters of the United States. Fences may be used to restrict such access.

iii. New facilities shall not be built in a water of the United States as defined in 40 CFR 122.2.

iv. Wastewater containment facilities, manure storage facilities or holding pens may not be located in the 100-year flood plain unless the facility is protected from inundation and damage that may occur during that flood event.

v. There shall be no water quality impairment to public and neighboring private drinking water wells due to waste handling at the permitted facility. Facility wastewater retention facilities, holding pens or waste/wastewater disposal sites shall not be located closer to public or private water wells than the distances specified by State regulations or health codes, or State issued permits for that facility.

vi. There shall be no discharge of manure, litter, or process wastewater from

retention or control structures to surface waters of the United States through groundwater with a direct hydrologic connection to surface waters.

vii. There shall be no discharge of rainfall runoff from manure or litter storage piles.

3. Water Quality-based Effluent Limitations and Standards - Production Area

EPA has established the following permit conditions to protect water quality standards.

a. Discharges to Water Quality Impaired Waters.

i. If the CAFO discharges or proposes to discharge to an impaired water with an EPA approved or established TMDL, EPA will inform the facility if any additional limits or controls are necessary for the discharge to be consistent with the assumptions of any available wasteload allocation in the TMDL, or if coverage under an individual permit is necessary in accordance with Part I.D.1. Any additional limits or controls shall be included in the NMP.

ii. If the CAFO discharges or proposes to discharge to an impaired water without an EPA approved or established TMDL, EPA will inform the facility if any additional limits or controls are necessary to meet water quality standards, or if coverage under an individual permit is necessary in accordance with Part I.D.1. Any additional limits or controls shall be included in the NMP.

iii. If a CAFO's authorization for coverage under this permit relied on Part I.D.7 for a new discharge to an impaired water, the facility must implement and maintain any control measures or conditions on its site that enabled the CAFO to become eligible under Part I.D.7., and shall include these control measures or conditions in its NMP.

iv. If at any time the facility becomes aware, or EPA determines, that a discharge to an impaired water has occurred and the requirements of Part II.A.3.a.i-iii have not been addressed, the facility must take corrective action to fulfill the requirements of Part II.A.3.a.i-iii. Any changes to the NMP required to fulfill the requirements of Part II.A.3.a.i-iii shall be done in accordance with Part III.A.6.

b. Tier 2 Antidegradation Requirements for New or Increased Dischargers

If the CAFO discharges or proposes to discharge directly to waters designated by a State or Tribe as Tier 2 for antidegradation purposes under 40 CFR 131.12(a), EPA may notify the facility that additional analyses, control measures, or other permit conditions are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary in

accordance with Part I.D.7. Any such additional requirements shall be included in the NMP. (See the list of New Mexico Tier 2 and 3 waters in Appendix E or a permittee may call the New Mexico Environment Department Surface Water Quality Bureau at 505-827-0187 if you need assistance determining the antidegradation tier of the water)

4. Technology-based Effluent Limitations and Standards - Land Application Areas under the Control of the CAFO Owner/Operator.

For CAFOs where manure, litter, or process wastewater is applied to land under the control of the CAFO owner/operator, the NMP required by Part III of this permit must include the following requirements:

a. Nutrient transport potential. The NMP must incorporate elements in paragraphs c – h below based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field.

b. Form, source, amount, timing, and method of application. The NMP must address the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters.

c. Determination of application rates. Application rates for manure, litter, or process wastewater must minimize phosphorus and nitrogen transport from the field to surface waters in compliance with the most current New Mexico NRCS Conservation Practice Standard Code 590 (Nutrient Management).(see Appendix D)

d. Site specific conservation practices. Identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States.

e. Protocols to land apply manure, litter or process wastewater. 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.

f. Manure and soil sampling. Manure must be analyzed at least once annually for nitrogen and phosphorus content. Soil must be analyzed at least once every five years. The results of these analyses must be used in determining application rates for manure, litter, and process wastewater.

g. Inspection of land application equipment for leaks. Equipment used for land application of manure, litter, or process wastewater, including wastewater conveyance lines, must be inspected quarterly or in between crop rotations (whichever comes first) for leaks.

h. Land application setback requirements. Manure, litter, or process wastewater must not be applied closer than one-hundred (100) feet to any down-gradient water of the United States, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to waters of the United States. The permittee may elect to use a 35-foot vegetated buffer where applications of manure, litter, or process wastewater are prohibited as an alternative to the 100-foot setback to meet this requirement. As a compliance alternative, the permittee may demonstrate that a set-back or buffer is not necessary because implementation of alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions that would be achieved by the 100-foot setback.

i. Recordkeeping requirements. Complete on-site records including the site specific NMP must be maintained to document implementation of all required land application practices. Such documentation must include the records specified for Soil and Manure/Wastewater Nutrient Analyses and Land Application in Part IV.C, Table IV-A.

5. Other Limitations for Land Application under the Control of the CAFO Owner/Operator

a. Additional BMPs to control discharges from land application areas.

i. Land application areas shall be identified that, due to topography, activities or other factors, have a high potential for significant soil erosion. Where land application areas have the potential to contribute pollutants to waters of the United States, measures used to limit erosion and pollutant runoff shall be identified.

ii. Calibration of land application equipment shall be performed at least annually in accordance with procedures and schedules described in the CAFO's nutrient management plan

iii. Irrigation Control: Irrigation systems shall be managed so as to minimize (a) ponding or puddling of wastewater on land application fields, (b) contamination of ground and surface water and (c) the occurrence of nuisance conditions such as odors and flies.

b. Prohibitions.

i. There shall be no discharge of manure, litter, or process wastewater to a water of the United States from a CAFO as a result of the application of manure, litter or process wastewater to land application areas under the control of the CAFO, except where it is an agricultural storm water discharge. Where manure, litter, or process wastewater has been applied in accordance with the CAFO's site specific NMP, a precipitation related discharge of manure, litter, or process wastewater from land areas under

the control of the CAFO is considered to be an agricultural storm water discharge.

ii. Waste shall not be applied to land when the ground is frozen, saturated with water, or during rainfall events. The permittee shall not land apply if precipitation capable of producing runoff and erosion is forecast by the National Weather Service or other reputable weather service organizations to occur within 24 hours of the time of the planned application.

c. Water Quality-Based Effluent Limitations. There shall be no dry weather discharges from land application sites.

6. Other Limitations

a. The NMP shall identify measures necessary to meet applicable water quality standards for any discharges of process wastewater under the control of the CAFO operator but outside the production area. This may include:

i. Washdown of equipment that has been in contact with manure, raw materials, products or byproducts.

ii. Runoff of pollutants from raw materials, products or byproducts that have been spilled or deposited outside the production area

b. The NMP shall identify measures necessary to meet applicable water quality standards for discharges under the control of the CAFO operator that do not meet the definition of process wastewater, including:

i. discharges associated with fuel, chemical, or oil spills, equipment repair, and equipment cleaning where the equipment has not been in contact with manure, raw materials, products or byproducts, and

ii. domestic wastewater discharges

c. Storm water discharges that are not addressed under the effluent limitations in Part II above remain subject to applicable industrial or construction storm water discharge requirements.

In addition to meeting the above effluent limitations (Part II.A), the permittee must comply with the special conditions established in Part III of this permit.

## B. Other Legal Requirements

No condition of this permit shall release the permittee from any responsibility or requirements under other statutes or regulations, Federal, State/Indian Tribe or Local.

# PART III. SPECIAL CONDITIONS

## A. Requirements for Developing and Implementing NMPs

The permittee shall develop, submit, and implement a site specific NMP. The NMP shall specifically identify and describe practices that will be implemented to assure compliance with the effluent limitations and special conditions of this permit (Parts II.A and III.A). The NMP must be developed in accordance with the New Mexico NRCS Conservation Practice Standard Code 590 (Nutrient Management) (see Part II.A and Appendix D).

1. Schedule. The completed NMP must be submitted to EPA along with the notice of intent for CAFOs seeking coverage under this permit. The permittee shall implement its NMP as soon as possible and modify as necessary upon authorization under this permit in accordance with 40 CFR 122.23(h).

2. NMP Review and Terms.

   a. Upon receipt of the NMP, EPA will review the NMP. If additional information is necessary to complete the NMP, or to clarify, modify, or supplement previously submitted material, the Director may request such information from the CAFO owner or operator.

   b. The NMP will be used by the Director to identify site specific permit terms, to include the items outlined in Part III.A.3, to be incorporated into this permit. The Director will identify site specific permit terms with respect to protocols for the land application of manure, litter, and process wastewater. The Director will also identify site specific permit terms with respect to manure, litter, and process wastewater storage capacities and site specific conservation practices based on the CAFO's NMP to the extent that such terms are necessary to support the application rates expressed in the NMP.

   c. When the Director makes a preliminary determination that the notice of intent is complete in accordance with the requirements of 40 CFR 122.21(i)(1) and 122.42(e), the Director will notify the public of the Director's proposal to grant coverage under the permit to the CAFO and make available for public review and comment the notice of intent submitted by the CAFO, including the CAFO's NMP and the draft terms of the NMP to be incorporated into the permit. The notice will also provide the opportunity for a public hearing on the NOI and draft NMP in accordance with 40 CFR 124.11 and 12.

   d. The period of time for the public to comment and request a hearing on the proposed terms of the NMP to be incorporated into the permit shall be thirty (30) days.

e. The Director will respond to comments received during the comment period, as provided in 40 CFR 124.17, and, if necessary, require the CAFO owner or operator to revise the NMP in order to be granted permit coverage.

f. When the Director authorizes the CAFO owner or operator to discharge under the general permit, the terms of the NMP shall be incorporated as terms and conditions of the permit for the CAFO. The Director will notify the CAFO owner or operator that coverage has been authorized and of the applicable terms and conditions of the permit. Notice of permit coverage and site specific permit terms will be provided to the permittee in a written permit authorization notice.

g. Each CAFO covered by this permit must comply with the site specific permit terms established by the Director based on the CAFO's site specific NMP.

3. NMP Content. The site specific NMP at a minimum must include practices and procedures necessary to implement the applicable effluent limitations and standards. In addition, the NMP and each CAFO covered by this permit must, as applicable:

a. Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities. All wastewater and manure containment structures shall at a minimum be designed, constructed, operated, and maintained in accordance with the standards of the *Natural Resources Conservation Service, Field Office Technical Guide*. Storage capacity must be sufficient to meet the minimum requirements of Part II.A.1, as stated above, and also must be sufficient to allow the CAFO to comply with the land application schedule specified in the NMP. To the extent that the NMP depends on off-site transport or other means of handling to ensure adequate storage capacity this must be described in the NMP.

If the CAFO needs to maintain storage capacity that exceeds the minimum capacity requirements of Part II.A.1, as stated above, to comply with the land application provisions of the NMP or Part II.A., the storage capacity shall become a term of this permit and EPA will develop site specific terms based on the submitted NMP.

b. Ensure that clean water is diverted, as appropriate, from the production area. Any clean water that is not diverted and comes into contact with raw materials, products, or byproducts including manure, litter, process wastewater, feed, milk, or bedding is subject to the effluent limitations specified in Part II.A of this permit. Where clean water is not diverted from the production area, the retention structures shall include adequate storage capacity for the additional clean water. Clean water includes, but is not limited to, rain falling on the roofs of facilities and runoff from adjacent land.

c. Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment

system unless specifically designed to treat such chemicals or contaminants. All wastes from dipping vats, pest and parasite control units, and other facilities utilized for the management of potentially hazardous or toxic chemicals shall be handled and disposed of in a manner sufficient to prevent pollutants from entering the manure, litter, or process wastewater retention structures or waters of the United States. Include references to any applicable chemical handling protocols and indicate that other protocols included in the NMP will be reviewed.

d. Identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States and specifically, to minimize the runoff of nitrogen and phosphorus. Each CAFO covered by this permit must implement the site specific conservation practices determined by the Permitting Authority to be a term of this permit, as specified in the CAFO's permit authorization notice. These practices may include, but are not limited to, residue management, conservation crop rotation, grassed waterways, strip cropping, vegetated buffers, riparian buffers, setbacks, terracing, and diversions. The plan shall identify areas which, due to topography, activities, or other factors, have a high potential for significant erosion. Where these areas have the potential to contribute pollutants to waters of the United States, the NMP shall identify measures used to limit erosion and pollutant runoff using NRCS approved risk assessment tools for nitrogen, phosphorus, and erosion losses, as specified by the New Mexico NRCS Conservation Practice Standard 590 (Nutrient Management) (see Appendix D of this permit).

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e. Identify protocols for appropriate testing of manure, litter, process wastewater, and soil. Manure, wastewater and soil sampling must be conducted in accordance with the requirements of Parts III.A.7.d and e.

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.

The permittee's site specific NMP shall document the calculation of land application rates of manure, litter, or process wastewater. The New Mexico NRCS Conservation Practice Standard 590 (Nutrient Management) shall be used for calculating these rates (see Appendix D). The rate calculation shall address the form, source, amount, timing, and method of application on each field to achieve realistic production goals while minimizing nitrogen and phosphorus movement to surface water. The rate calculation shall be based on the results of a field specific assessment of the potential for nitrogen and phosphorus transport from the field to surface waters using the assessment tools and procedures described in New Mexico NRCS Conservation Practice Standard 590 (Nutrient Management), including the New Mexico Phosphorus Index (New Mexico NRCS Agronomy Technical Note 57).

The permittee shall comply with site specific permit terms established by the Director for land application of manure, litter, and process wastewater. Development of site specific terms shall be based upon the Director's review of the NMP submitted in accordance with the requirements of parts I.E and III.A of this permit. The NMP must also include any additional information necessary to assess the adequacy of the application rates included in the NMP.

g. Application rates shall be expressed in the NMP consistent with one of the following two approaches.

i. Linear Approach

(A) The Linear Approach expresses rates of application as pounds of nitrogen and phosphorus. Permittees selecting the linear approach to address rates of application must include in the NMP submitted to the Director the following information for each crop, field, and year covered by the NMP, which will be used by the Director to establish site specific permit terms:

(1) The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater;
(2) The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. The potential for nitrogen and phosphorus transport shall be determined using the assessment tools and procedures described in New Mexico NRCS Conservation Practice Standard 590 (Nutrient Management) including the New Mexico Phosphorus Index (New Mexico NRCS Agronomy Technical Note 57). The CAFO must specify any conservation practices used in calculating the risk rating;
(3) The crops to be planted or any other uses of a field such as pasture or fallow fields;
(4) The realistic annual yield goal for each crop or use identified for each field;
(5) The nitrogen and phosphorus recommendations from EPA approved sources for each crop or use identified for each field;
(6) Credits for all residual nitrogen in each field that will be plant-available;
(7) Consideration of multi-year phosphorus application. For any field where nutrients are applied at a rate based on the crop phosphorus requirement, the NMP must account for

single-year nutrient applications that supply more than the crop's annual phosphorus requirement;

(8) Accounting for all other additions of plant available nitrogen and phosphorus (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen);

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

(10) The timing and method of land application. The NMP also must include storage capacities needed to ensure adequate storage that accommodates the timing indicated;

(11) The methodology that will be used to account for the amount of nitrogen and phosphorus in the manure, litter, and wastewater to be applied; and

(12) Any other factors necessary to determine the maximum application rate identified in accordance with the Linear Approach.

(B) Large CAFOs using the Linear Approach must calculate the maximum amount of manure, litter, and process wastewater to be land applied at least once each year using the results of the most recent representative manure, litter, and process wastewater tests of nitrogen and phosphorus. Such representative tests must be taken within twelve (12) months of the date of land application.

ii. Narrative Rate Approach

(A) The 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. Permittees selecting the narrative rate approach to address rates of application must include in the NMP submitted to the Director the following information for each crop, field, and year covered by the NMP, which will be used by the Director to establish site specific permit terms:

(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 potential for nitrogen and phosphorus transport shall be determined using the assessment tools and procedures described in New Mexico NRCS Conservation Practice Standard 590 (Nutrient Management) including the New Mexico Phosphorus Index (New Mexico NRCS

Agronomy Technical Note 57). 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 EPA approved 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: (a) the results of soil tests required by Parts II.A.4.f and III.A.3.e, (b) credits for all nitrogen in the field that will be plant-available, (c) the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied, (d) 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), (e) accounting for 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), (f) the timing and method of land application, and (g) 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.

(B) NMPs using the Narrative Rate Approach must also include the following projections, which will not be used by the Director in establishing site specific permit terms:

(1) Planned crop rotations for each field for the period of permit coverage;

(2) Projected amount of manure, litter, or process wastewater to be applied;

(3) Projected credits for all nitrogen in the field that will be plant-available;

(4) Consideration of multi-year phosphorus application;

(5) Accounting for other additions of plant-available nitrogen and phosphorus to the field; and

(6) The predicted form, source, and method of application of manure, litter, and process wastewater for each crop.

iii. Identify and maintain all records necessary to document the development and implementation of the NMP and compliance with the permit.

h. Include a legible site map of the production area (including, at a minimum, the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment area), and the land application area. The map must also include flow direction, an outline of drainage areas to the process wastewater retention or control structures, structural controls, and surface water bodies. In addition, the following items, if present, should be identified on the map:

i. 100 year flood plain;
ii. Locations of storage/retention facilities;
iii. Locations of animal confinement areas;
iv. Locations of Waters of the US;
v. Locations of litter/manure storage;
vi. Locations of mortality management areas;
vii. Directions of flow across the facility, drainage features and clean water diversion structures;
viii. Land application setback requirements;
ix. Areas of significant soil erosion;
x. Locations of soil sampling, groundwater wells, etc.
xi. Chemical storage areas; and locations of sumps and equipment storage.

4. Signature. The NMP shall be signed and certified by the owner/operator or other signatory authority in accordance with Part VI.E (Signatory Requirements) of this permit.

5. A current copy of the NMP shall be kept on site at the permitted facility in accordance with Part IV.C of this permit and provided to the Permitting Authority upon request.

6. Changes to the NMP

a. When a CAFO owner or operator covered by this permit makes changes to the CAFO's NMP previously submitted to the Director, the CAFO owner or operator must provide the Director with the most current version of the CAFO's NMP and identify changes from the previous version, with the exception of annual calculations of application rates for manure, litter, and process wastewater as required in Parts III.A.3.g.i(B) (for the Linear Approach) and III.A.3.g.ii(A) (for the Narrative Rate Approach), which are not required to be submitted to the Director.

b. When changes to an NMP are submitted to the Director, the Director will review the revised NMP to ensure that it meets the requirements of Parts II.A.4 and III.A.3. If the Director determines that the changes to the NMP necessitate revision to the terms of the NMP incorporated into the permit issued to the CAFO, the Director must determine whether such changes are substantial. Substantial changes to the terms of an NMP incorporated as terms and conditions of a permit include, but are not limited to:

i. Addition of new land application areas not previously included in the CAFO's NMP, except that if the added land application area is covered by the terms of a NMP incorporated into an existing NPDES permit and the permittee complies with such terms when applying manure, litter, and process wastewater to the added land;
ii. For NMPs using the Linear Approach, changes to the field-specific maximum annual rates of land application (pounds of N and P from manure, litter, and process wastewater). For NMPs using the Narrative Rate Approach, changes to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop;
iii. Addition of any crop or other uses not included in the terms of the CAFO's NMP; and
iv. Changes to site specific components of the CAFO's NMP, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the United States

c. If the Director determines that the changes to the terms of the NMP are not substantial, the Director will include the revised NMP in the permit record, revise the terms of the permit based on the site specific NMP, and notify the permittee and the public of any changes to the terms of the permit based on revisions to the NMP.

d. If the Director determines that the changes to the terms of the NMP are substantial, the Director will notify the public, make the proposed changes and the information submitted by the CAFO owner or operator available for public review and comment, and respond to all significant comments received during the comment period. The public notice will be provided using the guidelines described in Part III.A.2.c above. The Director may require the permittee to further revise the NMP, if necessary. Once the Director incorporates the revised terms of the NMP into the permit, the Director will notify the permittee of the revised terms and conditions of the permit.

7. <u>Requirements for implementing NMPs</u>

a. Permittee must have adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities.

b. Clean water must be diverted, as appropriate from the production area.

c. Chemicals and other contaminants handled on-site may not be disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.

d. Manure, Litter, and Process Wastewater Testing. Representative samples of manure, litter, and process wastewater shall be collected and analyzed for nutrient content, including nitrogen and phosphorus, at least annually, in accordance with the protocols established in the NMP under Part III.A.3.e. At a minimum, manure sampling and analysis shall be conducted prior to the first land application event each year of permit coverage. Steps must be taken to ensure the collection of a representative sample. The sample shall be sent for analysis as soon after collection as practical and, where necessary, specific preservation procedures shall be utilized to prevent the degradation of the sample.

e. Soil Testing. Representative samples of soil for all land application fields under the control of the CAFO operator where manure and wastewater may be applied must be collected and analyzed for phosphorus content at least once every five (5) years, in accordance with the protocols established in the NMP under Part III.A.3.e. Representative samples shall be collected from each field included in the NMP. Each sample area should consist of only one general soil type or condition. If a field varies in slope, color, drainage or texture, and if those areas can be fertilized separately, collect and analyze a separate sample for each area. Samples shall be collected according to New Mexico NRCS, NMED, or New Mexico State University Extension guidance. Avoid sampling in old fence rows, dead furrows, low spots, feeding areas, and other areas that might not provide representative results. Soil samples shall not be taken when the soil is wet or frozen or shortly after applying lime or fertilizer. Collect at least 10 soil cores for small areas and up to thirty (30) cores for larger fields. Take the soil cores randomly throughout the sampling area and combine the cores into a single sample. An individual sample should represent no more than twenty (20) acres except when soils, past management, and cropping history are uniform.

In all cases the sampling frequency for manure, litter, process wastewater and soil shall be consistent with the New Mexico NRCS Conservation Practice Standard Code 590 (Nutrient Management).

f. CAFOs that use the Narrative Rate Approach must calculate maximum amounts of manure, litter, and process wastewater to be land applied at least once each year using the methodology specified in the NMP pursuant to Part III.A.3.g.ii(A) before land applying manure, litter, and process wastewater. Such calculations must rely on the following data:

i. A field-specific determination of soil levels of nitrogen and phosphorus. For nitrogen, the determination must include a concurrent determination of

nitrogen that will be plant available. For phosphorus, the determination must include the results of the most recent soil test conducted as required in Parts II.A.4.d and III.A.3.g.

ii. The results of the most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application, as required in Parts II.A.4.d and III.A.3.g, in order to determine the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.

8. Certified Specialists to Develop NMPs. Owners and operators of CAFO facilities located in the State of New Mexico (except Indian Country) shall use a "Certified Conservation Planner – CNMP" or a "Certified Specialist(s) – CNMP" to develop and/or modify the NMP required by this permit. The NMP must also include applicable document(s) to verify that the person who developed and/or modified the NMP had met the qualifications of a certified planner/specialist.

A certified NMP planner is a person who has a demonstrated capacity to develop Comprehensive Nutrient Management Plans (CNMPs) in accordance with applicable USDA-NRCS and State standards which, when an NPDES Permit is required, also meets the NMP requirement, the EPA CAFO effluent guidelines and NPDES permit requirements. The certified NMP planner must be certified by New Mexico USDA-NRCS or a USDA-NRCS sanctioned organization as a "Certified Specialist-CNMP," or an alternate, equivalent certification program developed by NMED. The certified NMP specialist must be certified by New Mexico USDA-NRCS or a USDA-NRCS sanctioned organization as a "Certified Specialist – CNMP," or an alternate, equivalent certification program developed by NMED.

CAFO owners/operators are solely responsible for assuring their NMPs comply with all permit conditions and are properly implemented.

## B. Facility Closure Requirements

1) The following conditions shall apply to the closure of manure, litter, or process wastewater storage and handling structures:

a) No manure, litter, or process wastewater storage and handling structure shall be abandoned.

b) Manure, litter, or process wastewater storage and handling structures, shall be maintained at all times until closed in compliance with this section.

c) All closures of impoundments must be consistent with New Mexico NRCS Conservation Practice Standard Code 360 (Closure of Waste Impoundments) and any applicable state and local requirements. Consistent with this Practice Standard Code 360, the permittee shall remove all waste materials to the maximum extent practicable and dispose of them in accordance with the permittee's NMP, unless otherwise authorized by EPA.

## C. Requirements for the Transfer of Manure, Litter, and Process Wastewater to Other Persons

1. In cases where CAFO-generated manure, litter, or process wastewater is sold or given away the permittee must comply with the following conditions (amounts less than 10 tons per year given or sold to a single recipient need not be recorded.):

   a. Maintain records showing the date and amount of manure, litter, and/or process wastewater that leaves the permitted operation;
   b. Record the name, telephone number, and address of the recipient of transferred manure, litter or process wastewater;
   c. Provide the recipient(s) with representative information on the nutrient content of the manure, litter, and/or process wastewater; and
   d. Retain all records on-site, for a period of five (5) years, and submit to the Permitting Authority any requested records.

## D. Additional Special Requirements

1. Liner Requirement: The permittee shall document that no direct hydrologic connection exists between the contained wastewater and surface waters of the United States. Where the permittee cannot document that no direct hydrologic connection through ground water exists, the ponds, lagoons and basins of the containment facilities must have a liner which will prevent the potential contamination of surface waters.

   a. Documentation of no direct hydrologic connection. The permittee can document lack of hydrologic connection by either: (1) documenting that there will be no significant leakage from the retention structure; or (2) documenting that any leakage from the retention structure would not migrate to surface waters. For documentation of no significant leakage, in-situ materials must, at a minimum, meet the minimum criteria for hydraulic conductivity and thickness described in 1.b, below. Documentation that leakage will not migrate to a surface water must include maps showing ground water flow paths, or that the leakage enters a confined environment. This documentation must be certified in writing by a NRCS engineer or a Professional Engineer and must include information on the hydraulic conductivity and thickness of the natural materials underlying and forming the walls of the containment structure up to the wetted perimeter.

   b. Liner Construction. Liners constructed and maintained in accordance with NRCS design specifications shall be considered to prevent hydrologic connection which could result in the contamination of surface waters. Where no site-specific assessment has been done by a NRCS engineer or Professional Engineer, the liner shall be constructed to have hydraulic conductivities no greater than 1x10 (-7) cm/sec, with a thickness of 1.5 feet or greater or its equivalency in other materials.

c. Liner Maintenance. The permittee must maintain the liner to inhibit infiltration of wastewaters. Liners shall be protected from animals by fences or other protective devices. No tree shall be allowed to grow such that the root zone would intrude or compromise the structure of the liner. Any mechanical or structural damage to the liner must be evaluated by a NRCS Engineer or Professional Engineer within thirty (30) days of the damage. Documentation of liner maintenance shall be kept with the NMP. The permittee shall have a NRCS Engineer or Professional Engineer review the documentation and do a site evaluation a minimum of once every five (5) years. If notified by the State or EPA that a direct hydrological connection to waters of the United States exists for the contamination of surface waters or drinking water, the permittee shall install a leak detection system or monitoring wells, or take other appropriate measures in accordance with that notice. Documentation of compliance with the notification must be kept with the NMP, as well as all sampling data. Data from the monitoring wells must be kept on site for three (3) years with the NMP. The first year's sampling shall be considered the baseline data and must be retained on site for the life of the facility.

2. Retention Structure Dewatering: A schedule must be developed for liquid waste removal from the retention structure(s). A date log indicating weekly inspection of wastewater level in the retention facility, including specific measurement of wastewater level must be kept. Retention facilities shall be equipped with either irrigation or evaporation or liquid removal systems capable of dewatering the retention facilities. Operators using pits, ponds, or lagoons for storage and treatment of storm water, manure and process generated wastewater, including flush water waste handling systems, shall maintain sufficient available storage capacity to contain the runoff and the direct precipitation from a 25-year, 24-hour rainfall event. The operator shall restore the storage capacity as soon as possible after any rainfall event or accumulation of wastes reduces such storage capacity, weather permitting.

3. Spills: Appropriate measures necessary to prevent spills and to cleanup spills of any toxic and other pollutants shall be taken. Handling procedures and storage for these materials must be specified in the NMP. Procedures for cleaning up spills shall be identified, and the necessary equipment to implement clean up shall be made available to facility personnel. All spills and clean-up activities must be documented. Documentation of spills and clean-up must be kept with the NMP. Any spill which results in a discharge to the water of United States must be reported to EPA and NMED, in accordance with the notification requirements specified in Part IV. A. of permit.

4. Solids, sludge, manure or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner to prevent pollutants from being discharged to waters of the United States.

5. Manure, litter, and process wastewater handling, treatment, and management shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or contribute to the taking of endangered or threatened species of

plant, fish or wildlife. The operator shall notify State and Federal wildlife agencies, NMED, and EPA within 48 hours if any dead or injured threatened or endangered species or protected migratory birds are observed in or on receiving waters following a discharge or on the facility's land application areas at any time.

6. Manure, litter, and process wastewater handling, treatment, and management shall not create an environmental or public health hazard; shall not result in the contamination of drinking water; shall conform to State guidelines and/or regulations for the protection of surface water quality.

7. Employee Training: Employees responsible for permit compliance must be annually trained or informed of any information pertinent to the proper operation and maintenance of the facility and waste disposal. Training shall include topics such as land application of wastes, proper operation and maintenance of the facility, good housekeeping and material management practices, necessary record-keeping requirements, and spill response and clean up.

8. Endangered Species
   a. All CAFOs in the counties of Bernalillo, Chavez, Eddy, Sandoval, San Juan and Valencia must develop and implement an Emergency Action Plan (EAP). The EAP must identify the BMP(s) that shall be implemented immediately to minimize the likelihood of an accident, leak, spill or permitted discharge from entering waters of the United States occupied by threatened or endangered species or their critical habitat. The EAP must be included as an element of the NMP submitted to EPA for review. BMPs developed and implemented must comply with state laws. BMP(s) to reach this goal may include, but are not limited to:

      i. An emergency runoff discharge abatement area;
      ii. A storage lagoon or other lined storage area with additional capacity;
      iii. A contingency plan to immediately pump out and create additional storage (avoiding land application where pumped material runoff would reach receiving stream);
      iv. Implementation of a CNMP according to the USDA Natural Resources Conservation Service guidelines;
      v. Additional constructed wetland or other adequate waste treatment units; or
      vi. Other watershed practices that are capable of reducing discharges from reaching waters of the United States that are occupied by threatened or endangered species (e.g., facility setbacks, berms, filter strips, emergency response barriers, etc.).

   b. All CAFOs in the counties of Bernalillo, Chavez, Eddy, Sandoval, San Juan and Valencia must develop and implement soil sampling of land application sites once every five (5) years for the metals selenium, copper and zinc. The sampling may be performed concurrently with required phosphorus sampling.

# PART IV. DISCHARGE MONITORING AND NOTIFICATION REQUIREMENTS

## A. Notification of Discharges Resulting from Manure, Litter, and Process Wastewater Storage, Handling, On-site Transport and Application

If, for any reason, there is a discharge of pollutants to a water of the United States, the permittee is required to make immediate oral notification within 24-hours to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas at 214-665-6595, and NMED at 505-827-0187. The permittee is also required to notify EPA and NMED in writing within fourteen (14) working days of the discharge of pollutants to a water of the United States from the facility. In addition, the permittee shall keep a copy of the notification submitted to EPA together with the other records required by this permit. The discharge notification shall include the following information:

1. A description of the discharge, its cause, and any actions taken to stop the release. Include a description of the flow path to the receiving water body, an estimate of the flow and volume discharged, and an estimate of any recovered volume.

2. The date of the rain event and the daily rainfall amount as recorded by the rain gauge noted in Part II.A.2.a.ix. Rainfall amounts will be reported to the nearest half (½) of an inch.

3. The period of non-compliance, including exact dates and times, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the discharge.

4. Any permittee required to implement an EAP under Part III.D.8 of the permit shall include information on how their EAP was implemented and what actions may be necessary to improve the plan.

## B. Monitoring Requirements for All Discharges from Retention Structures

In the event of any overflow or other discharge of pollutants from a manure and/or wastewater storage or retention structure, whether or not authorized by this permit, the following actions shall be taken:

1. All discharges shall be sampled and analyzed. Samples must, at a minimum, be analyzed for the following parameters: total nitrogen, nitrate nitrogen, ammonia nitrogen, total phosphorus, *E. coli* bacteria, five-day biochemical oxygen demand ($BOD_5$), total suspended solids, pH, and temperature. The discharge must be analyzed in accordance with approved EPA methods for water analysis listed in 40 CFR Part 136.

2. Record an estimate of the volume of the release and the date and time.

3. Samples shall consist of grab samples collected from the over-flow or discharges from the retention structure. A minimum of one sample shall be collected from the initial

discharge (within 30 minutes or as soon as practicable after the first 30 minutes). If applicable, the permittee must document why it was not possible to take samples within the first 30 minutes. The sample shall be collected and analyzed in accordance with EPA approved methods for water analysis listed in 40 CFR 136. Samples collected shall be representative of the monitored discharge.

4. If conditions are not safe for sampling, the permittee must provide documentation of why samples could not be collected and analyzed. For example, the permittee may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.). However, once dangerous conditions have passed, the permittee shall collect a sample from the retention structure (pond or lagoon) from which the discharge occurred.

5. Monitoring results, including volume of release and the date, time and duration, must be submitted to EPA Region 6, Compliance Assurance and Enforcement Division, within thirty (30) days of the discharge event at the address listed in Part V.A. of this permit. If applicable, documentation as to why it was not possible to take samples within the first 30 minutes of the initial discharge must be included with the monitoring results. See Part IV.B.3 above. Monitoring information shall be submitted to the appropriate entities on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part VI.D.4 of this permit.

## C. General Inspection, Monitoring, and Record keeping Requirements

The permittee shall inspect, monitor, and record the results of such inspection and monitoring in accordance with Table IV–A:

| **Table IV-A NPDES Large CAFO Permit Record Keeping Requirements** | | |
|---|---|---|
| **Parameter** | **Units** | **Frequency** |
| **Permit and Nutrient Management Plan** ***(Note: Required by the NPDES CAFO Regulation – applicable to all CAFOs)*** | | |
| The CAFO must maintain on-site a copy of the current NPDES permit, including the permit authorization notice. | N/A | Maintain at all times |
| The CAFO must maintain on-site a current site specific NMP that reflects existing operational characteristics. The operation must also maintain on-site all necessary records to document that the NMP is being properly implemented with respect to manure and wastewater generation, storage and handling, and land application, and all other minimum practices described in 40 CFR 122.42(e). | N/A | Maintain at all times |
| **Soil and Manure/Wastewater Nutrient Analysis** ***(Note: Required by the CAFO ELG – applicable to Large CAFOs)*** | | |
| Analysis of manure, litter, and process wastewater to determine nitrogen and phosphorus content.[1] | ppmor pounds/ton | At least annually after initial sampling |
| Analysis of soil in all fields where land application activities are conducted to determine phosphorus content.[1] | ppm | At least once every 5 years after initial sampling |
| **Soil Sampling ( ESA Section 7 Requirement)** | | |
| All CAFOs in the counties of Bernalillo, Chavez, Eddy, Sandoval, San Juan and Valencia must develop and implement soil sampling of land application sites for the selenium, copper and zinc metals. | ppm | At least once every 5 years after initial sampling |
| **Operation and Maintenance** Record Keeping Requirements ***(Note: Required by the CAFO ELG – applicable to Large CAFOs)*** | | |
| Visual inspection of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to wastewater and manure storage and containment structure. | N/A | Weekly |
| Visual inspection of all water lines | N/A | Daily[2] |
| Visual inspection of rain gauge | inches | Daily[5] |
| Visual inspection of the manure, litter, and process wastewater impoundments, including documentation of depth of manure and process wastewater in all liquid impoundments | feet | Weekly |
| Documentation of all corrective actions taken. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction. | N/A | As necessary |
| Documentation of animal mortality handling practices | N/A | As necessary |

| **Table IV-A NPDES Large CAFO Permit Record Keeping Requirements** | | |
|---|---|---|
| **Parameter** | **Units** | **Frequency** |
| Design documentation for all manure, litter, and wastewater storage structures including the following information:<br>• Volume for solids accumulation<br>• Design treatment volume<br>• Total design storage volume[3]<br>• Days of storage capacity | • cubic yards, gal<br>• cubic yards, gal<br>• cubic yards, gal<br>• days | Once in the permit term unless revised |
| Documentation of all overflows from all manure and wastewater storage structures including: ***(Note: Required by the NPDES Regulation – applicable to all CAFOs)***<br>• Date and time of overflow<br>• Estimated volume of overflow<br>• Analysis of overflow (as required by the Permitting Authority) | • month/day/year<br>• total gallons<br>• ppm | • Per event<br>• Per event<br>• Per event |
| **Land Application** ***(Note: Required by the CAFO ELG – applicable to Large CAFOs)*** | | |
| For each application event where manure, litter, or process wastewater is applied, documentation of the following by field:<br>• Date of application<br>• Method of application<br>• Weather conditions at the time of application and for 24 hours prior to and following application<br>• Total amount of nitrogen and phosphorus applied[4] | • month/day/year<br>• N/A<br>• N/A<br>• pounds/acre | • Daily<br>• Daily<br>• Daily<br>• Daily |
| Documentation of the crop and expected yield for each field | bushel/acre | Seasonally |
| Documentation of the actual crop planted and actual yield for each field | bushel/acre | Seasonally |
| Documentation of test methods and sampling protocols used to sample and analyze manure, litter, and wastewater and soil. | N/A | Once in the permit term unless revised |
| Documentation of the basis for the application rates used for each field where manure, litter, or wastewater is applied. | N/A | Once in the permit term unless revised |
| Documentation showing the total nitrogen and phosphorus to be applied to each field including nutrients from the application of manure, litter, and wastewater and other sources | pounds/acre | Once in the permit term unless revised |
| Documentation of manure application equipment inspection | N/A | Seasonally |
| **Manure Transfer** ***(Note: Required by the NPDES CAFO Regulation – applicable to Large CAFOs)*** | | |
| For all manure transfers the CAFO must maintain the following records:<br>• Date of transfer<br>• Name and address of recipient<br>• Approximate amount of manure, litter, or wastewater transferred | • N/A<br>• N/A<br>• tons, gallons | • As necessary<br>• As necessary<br>• As necessary |

| Table IV-A NPDES Large CAFO Permit Record Keeping Requirements | | |
|---|---|---|
| **Parameter** | **Units** | **Frequency** |

[1] Refer to the state nutrient management technical standard for the specific analyses to be used.
[2] Visual inspections should take place daily during the course of normal operations. The completion of such inspection should be documented in a manner appropriate to the operation. Some operations may wish to maintain a daily log. Other operations may choose to make a weekly entry, when they update other weekly records, that required daily inspections have been completed.
[3] Total design volume includes normal precipitation less evaporation on the surface of the structure for the storage period, normal runoff from the production area for the storage period, 25-year, 24-hour precipitation on the surface of the structure, 25-year, 24-hour runoff from the production area, and residual solids.
[4] Including quantity/volume of manure, litter, or process wastewater applied and the basis for the rate of phosphorus application.
[5] Visual inspections should take place daily during the course of normal operation. A daily record of measured rainfall shall be recorded. The completion of such inspection should be documented in a manner appropriate to the operation. Permittees need not update records on any day when there is no rainfall. EPA will interpret the lack of an update on any particular day to indicate a record of no rainfall occurring on that day. Measurements taken from the rain gauge must be recorded to the nearest half (½) of an inch.

# PART V. ANNUAL REPORTING REQUIREMENTS

A. The annual report shall be submitted to EPA and NMED. As of December 21, 2020 all annual reports submitted in compliance with this section must be submitted electronically by the permittee to the Director and NMED, as defined in 40 CFR 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D to part 3), § 122.22, and 40 CFR part 127. See Part VI.D.4 for more information and important deadlines regarding electronic reporting. The annual report shall be submitted by the 31st day of March.

The required reports shall be submitted to the following addresses when hard copies are used:

EPA Region 6: Compliance Assurance and Enforcement Division
Water Enforcement Branch (6EN-W)
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75250

NMED: Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
1190 Saint Francis Drive
Santa Fe, NM 87502

B. The annual report must include the following information:

1. The number and type of animals, whether in open confinement or housed under roof;

2. Estimated amount of total manure, litter and process wastewater generated by the CAFO in the previous twelve (12) months (tons and gallons);

3. Estimated amount of total manure, litter and process wastewater transferred to other persons by the CAFO in the previous twelve (12) months (tons and gallons);

4. Total number of acres for land application covered by the NMP:

5. Total number of acres under control of the CAFO that were used for land application of manure, litter and process wastewater in the previous twelve (12) months;

6. Summary of all manure, litter and process wastewater discharges from the production area that have occurred in the previous 12 months, including, for each discharge, the date of discovery, duration of discharge, and approximate volume; and

7. A statement indicating whether the current version of the CAFO's NMP was developed or approved by a certified nutrient management planner.

8. Actual crops planted and actual yields for each field for the preceding twelve (12) months.

9. Results of all samples of manure, litter or process wastewater analyzed for nitrogen and phosphorus content and the total quantities of manure, litter and process wastewater that was land applied.

10. Results of calculations conducted in accordance with Parts III.A.3.g.i(B) (for the Linear Approach) and III.A.3.g.ii (for the Narrative Rate Approach).

11. Amount of manure, litter, and process wastewater applied to each field during the preceding twelve (12) months.

12. For CAFOs using the Narrative Rate Approach to address rates of application:

    a. The results of any soil testing for nitrogen and phosphorus conducted during the preceding twelve (12) months.

    b. The data used in calculations conducted in accordance with Part III.A.3.h.ii.

    c. The amount of any supplemental fertilizer applied during the preceding twelve (12) months.

# PART VI. STANDARD PERMIT CONDITIONS

## A. General Conditions

1. In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference all conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the "Act") as well as all applicable regulations.

2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation, and reissuance; for denial of a permit renewal application; and/or for requiring a permittee to apply for and obtain an individual NPDES permit.

3. The permittee shall comply with effluent standards and prohibitions established under section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State/Tribal or local laws or regulations.

6. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

7. Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.

8. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by Section 510 of the Act.

9. The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Bypass
    a. *Definitions*
        i. Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

ii. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. *Bypass not exceeding limitations*. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of 10.c. and 10.d. of this section.

c. *Notice*

i. *Anticipated bypass*. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass. As of December 21, 2020 all notices submitted in compliance with this section must be submitted electronically by the permittee to the Director or initial recipient, as defined in 40 CFR 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D to part 3), § 122.22, and 40 CFR part 127. See Part VI.D.4 for more information and important deadlines regarding electronic reporting.

ii. *Unanticipated bypass*. The permittee shall submit notice of unanticipated bypass as required in D.7.of this section (24-hour notice). As of December 21, 2020 all notices submitted in compliance with this section must be submitted electronically by the permittee to the Director or initial recipient, as defined in 40 CFR 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D to part 3), § 122.22, and 40 CFR part 127. See Part VI.D.4 for more information and important deadlines regarding electronic reporting.

d. *Prohibitions of bypass.*

i. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The permittee submitted notices as required under paragraph 10.c. of this section

ii. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 10.d.(i).

e. Any bypass allowed by Part VI.A.10 of this permit must, where practicable, be released to vegetated fields for filtering, or captured in secondary containment to minimize discharges to waters of the United States.

11. Upset

a. *Definition*. *Upset* means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. *Effect of an upset*. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 11.c. of this section are met.

c. *Conditions necessary for a demonstration of upset*. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An upset occurred and that the permittee can identify the cause(s) of the upset;
ii. The permitted facility was at the time being properly operated; and
iii. The permittee submitted notice of the upset as required in paragraph D.7. of this section (24-hour notice).
iv. The permittee complied with any remedial measures required under paragraph 14 of this section.

d. *Burden of proof*. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

12. *Duty to reapply*. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit, except where Part I.G of this permit applies.

13. *Need to halt or reduce activity not a defense*. It shall not be a defense for a permittee in an enforcement action to plead that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

14. *Duty to mitigate.* The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

15. *Inspection and entry.* The permittee shall allow the Director or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

## B. Proper Operation and Maintenance

The permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

## C. Monitoring and Records

1. The permittee shall allow the EPA, or an authorized representative of EPA, upon the presentation of credentials and other documents as may be required by law, to:

   a. Enter the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

   c. Inspect, at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and

   d. Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Permitting Authority at any time.

4. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;

   b. The individual(s) who performed the sampling or measurements;

   c. The date(s) analyses were performed;

   d. The individual(s) who performed the analyses;

   e. The analytical techniques or methods used; and

f. The results of such analyses.

5. The permittee shall follow the following monitoring procedures:

a. Any required monitoring must be conducted according to test procedures approved in 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.

b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.

c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

## D. Reporting Requirements

1. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in § 122.29(b); or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under § 122.42(a)(1).

c. The alteration or addition results in a significant change in the permittee's manure use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit., including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to a NMP.

2. The permittee shall give advance notice to EPA of any planned physical alterations or additions or changes in activity which may result in noncompliance with requirements in this permit.

3. This permit is not transferable to any person except after notice to EPA. EPA may require modification or revocation and reissuance of the permit to change the name or the permittee and incorporate such other requirements as may be necessary under the CWA.

4. Starting on December 21, 2016, the permittee must electronically report any Discharge Monitoring Reports (DMRs) using NetDMR. No later than December 21, 2020, the permittee must start electronically reporting the above compliance monitoring data and annual reports using EPA's NeT electronic reporting tool. To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR.epa.gov in-box for further instructions. Electronic submissions by permittees must be sent to EPA Region 6 no later than the 15th of the month following the completed reporting period. The permittee must sign and certify all

electronic submissions in accordance with the requirements of Parts VI.E and VI.F of this permit ("Signatory Requirements" and "Certification").

Until you are approved for Net DMR, you must report on the Discharge Monitoring Report (DMR) Form EPA. No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Parts VI.E and VI.F and all other reports required by Part VI to the EPA at the address below. Duplicate copies of paper DMR's and all other reports shall be submitted to the appropriate State agency at the following address:

| | |
|---|---|
| EPA Region 6: | Compliance Assurance and Enforcement Division<br>Water Enforcement Branch (6EN-W)<br>U.S. EPA, Region 6<br>1445 Ross Avenue<br>Dallas, TX 75202-2733 |
| NMED: | Program Manager<br>Surface Water Quality Bureau<br>New Mexico Environment Department<br>P.O. Box 5469<br>1190 Saint Francis Drive<br>Santa Fe, NM 87502 |

5. The permittee may seek an electronic reporting waiver from EPA Region 6. To obtain an electronic reporting waiver, a permittee must first submit an electronic reporting waiver request to EPA Region 6 (see address above). The waiver request should contain the following details:

   - Facility name;
   - NPDES permit number (if applicable);
   - Facility address;
   - Name, address and contact information for the owner, operator, or duly authorized facility representative;
   - Brief written statement regarding the basis for claiming such a temporary waiver.

   EPA Region 6 will either approve or deny this electronic reporting waiver request within 120 days. The duration of a temporary waiver may not exceed 5 years, which is the normal period for an NPDES permit term. The permittee must reapply for a new temporary waiver. Approved electronic reporting waivers are not transferrable. Only permittees with an approved reporting waiver request may submit monitoring data and reports on paper to EPA Region 6 for the period that the approved reporting waiver request is effective.

   Permittees with an approved and effective electronic reporting waiver must submit monitoring data and reports to EPA Region 6 using the address above at Part IV.D.4.

6. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

7. The permittee shall report any noncompliance that may endanger human health or the environment. Any information must be provided orally to within twenty-four (24) hours from the time that the permittee becomes aware of the circumstances to EPA at 214-665-6595. A written submission shall also be provided to EPA within fourteen (14) days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and

   c. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

8. The following shall be included as information which must be reported within twenty-four (24) hours:

   a. Any unanticipated bypass which exceeds any effluent limitation in the permit.

   b. Any upset which exceeds any effluent limitation in the permit.

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty-four (24) hours.

   The Director may waive the written report on a case-by-case basis for reports under the above if the oral report has been received within twenty-four (24) hours.

9. The permittee shall report all instances of noncompliance not reported under above and of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in D.6.

10. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to EPA, it shall promptly submit such facts or information to EPA.

## E. Signatory requirements

All applications, reports, or information submitted to EPA shall be signed and certified consistent with 40 CFR §122.22 and Part VI.F:

1. All notices of intent shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

i. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures; or

b. For a partnership or sole proprietorship: By a general partner for a partnership or the proprietor, respectively.

2. All reports required by the permit and other information requested by EPA shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or any individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,

c. The written authorization is submitted to EPA.

## F. Certification

Any person signing a document under this section shall make 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 person or 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."

## G. Availability of Reports

Any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

## H. Penalties for Violations of Permit Conditions

1. Criminal Penalties:
   a. Negligent violations: The Act provides that any person who negligently violates Section 301, 302, 306, 307, 308, 318, or 405 of the Act or any condition or limitation implementing those provisions in a permit issued under Section 402 is subject to a fine of not less than $2,750 nor more than $37,500 per day of violation, or by imprisonment for not more than one year, or both.
   b. Knowing violations: The Act provides that any person who knowingly violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Act or any permit conditions implementing those provisions is subject to a fine of not less than $5,500 nor more than $55,000 per day of violation, or by imprisonment for not more than three years, or both.
   c. Knowing endangerment: The Act provides that any person who knowingly violates Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act or permit conditions implementing those provisions and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than $275,000, or by imprisonment for not more than 15 years, or both.
   d. False statements: The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than $11,000, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than $22,000 per day of violation, or by imprisonment of not more than four years, or by both. [See Section 309(c)4 of the Clean Water Act]

2. Civil penalties: The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed $37,500 per day for each violation. [See Section 309(d)]

3. Administrative penalties: The Act provides that the Administrator may assess a Class I or Class II administrative penalty if the Administrator finds that a person has violated Sections 301, 302, 306, 307, 308, 318, or 405 of the Act or a permit condition or limitation implementing these provisions, as follows [See Section 309(g)]:
   a. Class I penalty: Not to exceed $16,000 per violation nor shall the maximum amount exceed $37,500.
   b. Class II penalty: Not to exceed $16,000 per day for each day during which the violation continues nor shall the maximum amount exceed $187,500.

# PART VII. DEFINITIONS

**Animal feeding operation** (AFO) means a lot or facility (other than an aquatic animal production facility) where the following conditions are met: (i) animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of forty-five (45) days or more in any 12-month period, and (ii) crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

**Application** means the EPA standard national forms for seeking coverage under an NPDES permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in "approved States," including any approved modifications or revisions [e.g. for NPDES general permits, a written "notice of intent" pursuant to 40 CFR 122.28; for NPDES individual permits, Form 1 and 2B pursuant to 40 CFR 122.1(d)].

**Concentrated animal feeding operation (CAFO)** means an AFO which is defined as a Large CAFO or Medium CAFO by 40 CFR 122.23(b)(4) and (6), or that is designated as a CAFO.

**E. coli** means the bacterial count (Parameter 1) at 40 CFR 136.3 in Table 1A, which also cites the approved methods of analysis.

**Grab sample** means a sample which is taken from a waste stream on a one-time basis without consideration of the flow rate of the waste stream and without consideration of time.

**Land application** means the application of manure, litter, or process wastewater onto or incorporated into the soil.

**Land application area** means land under the control of an CAFO 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.

**Large CAFO** means an AFO that stables or confines as many as or more than the numbers of animals specified in any of the following categories: (i) 700 mature dairy cattle, whether milked or dry; (ii)1,000 veal calves; (iii)1,000 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs; (iv) 2,500 swine each weighing 55 pounds or more; (v)10,000 swine each weighing less than 55 pounds; (vi) 500 horses; (vii) 10,000 sheep or lambs; (viii) 55,000 turkeys; (ix) 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system; (x)125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system; (xi) 82,000 laying hens, if the AFO uses other than a liquid manure handling system; (xii) 30,000 ducks (if the AFO uses other than a liquid manure handling system); or (xiii) 5,000 ducks (if the AFO uses a liquid manure handling system).

**Liquid manure handling system** means a system that collects and transports or moves waste material with the use of water, such as in washing of pens and flushing of confinement facilities. This would include the use of water impoundments for manure and/or wastewater treatment.

**Manure** is defined to include manure, litter, bedding, compost and raw materials or other materials commingled with manure or set aside for land application or other use.

**Medium CAFO** means any AFO that stables or confines as many or more than the numbers of animals specified in any of the following categories: (i) 200 to 699 mature dairy cattle, whether milked or dry cows; (ii) 300 to 999 veal calves; (iii) 300 to 999 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs; (iv) 750 to 2,499 swine each weighing 55 pounds or more; (v) 3,000 to 9,999 swine each weighing less than 55 pounds; (vi)150 to 499 horses, (vii) 3,000 to 9,999 sheep or lambs, (viii) 16,500 to 54,999 turkeys, (ix) 9,000 to 29,999 laying hens or broilers, if the AFO uses a liquid manure handling system; (x) 37,500 to 124,999 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system; (xi) 25,000 to 81,999 laying hens, if the AFO uses other than a liquid manure handling system; (xii) 10,000 to 29,999 ducks (if the AFO uses other than a liquid manure handling system); or (xiii) 1,500 to 4,999 ducks (if the AFO uses a liquid manure handling system) and either one of the following conditions are met (a) pollutants are discharged into waters of the United States through a man-made ditch, flushing system, or other similar man-made device; or (b) pollutants are discharged directly into waters of the United States which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

**New Source** means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:
(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.
(40 CFR122.2)

**Notice of Intent (NOI)** is a form submitted by the owner/operator applying for coverage under a general permit. It requires the applicant to submit the information necessary for adequate program implementation, including, at a minimum, the legal name and address of the owner or operator, the facility name and address, type of facility or discharges, and the receiving stream(s). [(40 CFR §128.28(b)(2)(ii)].

**Process wastewater** means water directly or indirectly used in the operation of the CAFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with or is a constituent of raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding.

**Production area** means that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal containment 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 storages, 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 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.

**Small CAFO** means an AFO that is designated as a CAFO and is not a Medium CAFO.

**Setback** means a specified distance from waters of the United States or potential conduits to waters of the United States where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: Open tile line intake structures, sinkholes, and agricultural well heads.

**Storage Period** means the maximum length of time anticipated between emptying events. The minimum storage period shall be based on the timing required for environmentally safe waste utilization considering the climate, crops, soil, equipment, and local, state, and federal regulations. (NM NRCS Conservation Practice Standard 313 for Waste Storage Facilities, dated July 2011)

**The Act** means Federal Water Pollution Control Act as amended, also known as the Clean Water Act as amended, found at 33 USC 1251 et seq.

**Vegetated buffer** means a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching waters of the United States.

NPDES Permit No. NMG010000

# APPENDIX A – NOTICE OF INTENT FORM- APPLICATION FORM 2B FOR CONCENTRATED ANIMAL FEEDING OPERATIONS (AND CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITIES)

**EPA I.D. NUMBER** *(copy from Item 1 of Form 1)*

| FORM 2B NPDES | EPA | U.S. ENVIRONMENTAL PROTECTION AGENCY<br>APPLICATIONS FOR PERMIT TO DISCHARGE WASTEWATER<br>CONCENTRATED ANIMAL FEEDING OPERATIONS AND AQUATIC ANIMAL PRODUCTION FACILITIES |
|---|---|---|

**I. GENERAL INFORMATION** Applying for: Individual Permit ☐ Coverage Under General Permit ☐

| A. TYPE OF BUSINESS | B. CONTACT INFORMATION | C. FACILITY OPERATION STATUS |
|---|---|---|
| ☐ 1. Concentrated Animal Feeding Operation (complete items B, C, D, and section II)<br><br>☐ 2. Concentrated Aquatic Animal Production Facility (complete items B, C, and section III) | Owner/or<br>Operator Name:.....<br>Telephone: ( ..... ) .....<br>Address:.....<br>Facsimile: (..... ).....<br>City:..... State:..... Zip Code:..... | ☐ 1. Existing Facility<br><br>☐ 2. Proposed Facility |
| | | |

D. FACILITY INFORMATION

Name: ..... Telephone: ( .....) .....
Address: Facsimile: ( .....) .....
City: ..... State: ..... Zip Code: .....
County: ..... Latitude: ..... Longitude: .....

If contract operation: Name of Integrator: .....
Address of Integrator:.....

**II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS**

| A. TYPE AND NUMBER OF ANIMALS | | | B. Manure, Litter, and/or Wastewater Production and Use |
|---|---|---|---|
| | 2. ANIMALS | | 1. How much manure, litter, and wastewater is generated annually by the facility? ..... tons ..... gallons<br><br>2. If land applied how many acres of land under the control of the applicant are available for applying the CAFOs manure/litter/wastewater? .....acres<br><br>3. How many tons of manure or litter, or gallons of waste-water produced by the CAFO will be transferred annually to other persons? ……tons ……..gallons |
| 1. TYPE | NO. IN OPEN CONFINEMENT | NO. HOUSED UNDER ROOF | |
| ☐ Mature Dairy Cows | | | |
| ☐ Dairy Heifers | | | |
| ☐ Veal Calves | | | |
| ☐ Cattle (not dairy or veal calves) | | | |
| ☐ Swine (55 lbs. or over) | | | |

| | | | |
|---|---|---|---|
| ☐ Swine (under 55 lbs.) | | | |
| ☐ Horses | | | |
| ☐ Sheep or Lambs | | | |
| ☐ Turkeys | | | |
| ☐ Chickens (Broilers) | | | |
| ☐ Chickens (Layers) | | | |
| ☐ Ducks | | | |
| ☐ Other<br>Specify ..... | | | |
| 3. TOTAL ANIMALS | | | |

C. ☐ TOPOGRAPHIC MAP

D. TYPE OF CONTAINMENT, STORAGE AND CAPACITY

| 1. Type of Containment | Total Capacity (in gallons) | |
|---|---|---|
| ☐ Lagoon | | |
| ☐ Holding Pond | | |
| ☐ Evaporation Pond | | |
| ☐ Other: Specify ..... | | |

2. Report the total number of acres contributing drainage: .....acres

| 3. Type of Storage | Total Number of Days | Total Capacity (gallons/tons) | |
|---|---|---|---|
| ☐ Anaerobic Lagoon | | | |
| ☐ Storage Lagoon | | | |
| ☐ Evaporation Pond | | | |
| ☐ Aboveground Storage Tanks | | | |
| ☐ Belowground Storage Tanks | | | |
| ☐ Roofed Storage Shed | | | |
| ☐ Concrete Pad | | | |
| ☐ Impervious Soil Pad | | | |
| ☐ Other: Specify..... | | | |

E. NUTRIENT MANAGEMENT PLAN

**Note: Effective February 27, 2009, a permit application is not complete until a nutrient management plan is submitted to the Permitting Authority.**

1. Please indicate whether a nutrient management plan has been included with this permit application. G Yes G No

2. If no, please explain:

_____

_____

3. Is a nutrient management plan being implemented for the facility? G Yes G No

4. The date of the last review or revision of the nutrient management plan. Date: .....

5. If not land applying, describe alternative use(s) of manure, litter, and or wastewater:

_____

_____

F. LAND APPLICATION BEST MANAGEMENT PRACTICES

Please check any of the following best management practices that are being implemented at the facility to control runoff and protect water quality:

☐ Buffers ☐ Setbacks ☐ Conservation tillage ☐ Constructed wetlands ☐ Infiltration field ☐ Grass filter ☐ Terrace

**III. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY CHARACTERISTICS**

A. For each outfall give the maximum daily flow, maximum 30- day flow, and the long-term average flow.

B. Indicate the total number of ponds, raceways, and similar structures in your facility.

| 1. Outfall No. | 2. Flow (*gallons per day*) | | | 1. Ponds | 2. Raceways | 3. Other |
|---|---|---|---|---|---|---|
| | a. Maximum. Daily | b. Maximum 30 Day | c. Long Term Average | C. Provide the name of the receiving water and the source of water | | |
| | | | | 1. Receiving Water | 2. Water Source | |

D. List the species of fish or aquatic animals held and fed at your facility. For each species, give the total weight produced by your facility per year in pounds of harvestable weight, and also give the maximum weight present at any one time.

| 1. Cold Water Species | | | 2. Warm Water Species | | |
|---|---|---|---|---|---|
| a. Species | b. Harvestable Weight (*pounds)* | | a. Species | b. Harvestable Weight (*pounds)* | |
| | (1) Total Yearly | (2) Maximum | | (1) Total Yearly | (2) Maximum |
| | | | | | |

| E. Report the total pounds of food during the calendar month of maximum feeding. | 1. Month | 2. Pounds of Food |
|---|---|---|

**IV. CERTIFICATION** .....

*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

| A. Name and Official Title (*print or type)* | B. Phone No. (  ) |
|---|---|
| C. Signature | D. Date Signed |

## INSTRUCTIONS

**GENERAL**

**This form must be completed by all applicants who check "yes" to Item II-B in Form 1.** Not all animal feeding operations or fish farms are required to obtain NPDES permits. Exclusions are based on size and whether or not the facility discharges proposed to discharge. *See* the description of these exclusions in the CAFO regulations at 40 CFR 122.23.

For aquatic animal production facilities, the size cutoffs are based on whether the species are warm water or cold water, on the production weight per year in harvestable pounds, and on the amount of feeding in pounds of food (*for cold water species*). Also, facilities which discharge less than 30 days per year, or only during periods of excess runoff (*for warm water fish*) are not required to have a permit.

Refer to the Form 1 instructions to determine where to file this form.

**Item I-A**

See the note above to be sure that your facility is a "concentrated animal feeding operation" (CAFO).

**Item I-B**

Use this space to give owner/operator contact information.

**Item I-C**

Check "proposed" if your facility is not now in operation or is expanding to meet the definition of a CAFO in accordance with the CAFO regulations at 40 CFR 122.23.

**Item I-D**

Use this space to give a complete legal description of your facility's location including name, address, and latitude/longitude. Also, if a contract grower, the name and address of the integrator.

**Item II**

Supply all information in item II if you checked (1) in item I-A.

**Item II-A**

Give the maximum number of each type of animal in open confinement or housed under roof (either partially or totally) which are held at your facility for a total of 45 days or more in any 12 month period. Provide the total number of animals confined at the facility.

**Item II-B**

Provide the total amount of manure, litter, and wastewater generated annually by the facility. Identify if manure, litter, and wastewater generated by the facility is to be land applied and the number of acres, under the control of the CAFO operator, suitable for land application. If the answer to question 3 is yes, provide the estimated annual quantity of manure, litter, and wastewater that the applicant plans to transfer off-site.

**Item II-C**

Check this box if you have submitted a topographic map of the entire operation, including the production area and land under the operational control of the CAFO operator where manure, litter, and/or wastewater are applied with Form 1.

**Item II-D**

1. Provide information on the type of containment and the capacity of the containment structure (s).
2. The number of acres that are drained and collected in the containment structure (s).
3. Identify the type of storage for the manure, litter, and/or wastewater. Give the capacity of this storage in days.

**Item II-E**

Provide information concerning the status of submitting a nutrient management plan for the facility to complete the application. In those cases where the nutrient management plan has not been submitted, provide an explanation. If not land applying, describe the alternative uses of the manure, litter, and wastewater (e.g., composting, pelletizing, energy generation, etc.).

**Item II-F**

Check any of the identified conservation practices that are being implemented at the facility to control runoff and protect water quality.

**Item III**

Supply all information in Item III if you checked (2) in Item I-A.

**Item III-A**

Outfalls should be numbered to correspond with the map submitted in Item XI of Form 1. Values given for flow should be representative of your normal operation. The maximum daily flow is the maximum measured flow occurring over a calendar day. The maximum 30-day flow is the average of measured daily flow over the calendar month of highest flow. The long-term average flow is the average of measure daily flows over a calendar year.

**Item III-B**

Give the total number of discrete ponds or raceways in your facility. Under "other," give a descriptive name of any structure which is not a pond or a raceway but which results in discharge to waters of the United States.

**Item III-C**

Use names for receiving water and source of water which correspond to the map submitted in Item XI of Form 1.

**Item III-D**

The names of fish species should be proper, common, or scientific names as given in special Publication No. 6 of the American Fisheries Society. "A List of Common and Scientific Names of Fishes from the United States and Canada." The values given for total weight produced by your facility per year and the maximum weight present at any one time should be representative of your normal operation.

**Item III-E**

The value given for maximum monthly pounds of food should be representative of your normal operation.

**Item IV**

The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(C)(2) of the Clean Water Act provides that "Any person who knowingly makes any false statement, representation, or certification in any application, shall upon conviction, be punished by a fine of no more than $10,000 or by imprisonment for not more than six months, or both."

| | |
|---|---|
| | **Federal regulations require the certification to be signed as follows:**<br><br>A. For corporation, by a principal executive officer of at least the level of vice president.<br><br>B. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or<br><br>C. For a municipality, State, federal, or other public facility, by either a principal executive officer or ranking elected official.<br><br>**Paper Reduction Act Notice**<br><br>**The public reporting and recordkeeping burden for this collection of information is estimated to average 9.5 hours per response. The public reporting and recordkeeping burden for development of the nutrient management plan to be submitted with the form is estimated to average 46 hours per response. The estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the collection of information. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address. Send comments regarding the burden estimate or any other aspect of this collection of information to the Chief, Information Strategies Branch (2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460, and the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please refer to EPA ICR No. 1989.05 for additional information.** |

## APPENDIX B – SUGGESTED FORMAT FOR NOTICE OF TERMINATION

Notice of Termination (NOT)

NPDES Permit Number: _____

Date NOI was submitted: _____

Name and Address of Facility (include County):

_____
_____
_____
_____
_____

Telephone Number: _____

Name of Operator: _____

Reason for the termination of permit coverage:

_____
_____
_____
_____
(Add attached sheets if necessary.)

Note: The closure of lagoons and other earthen or synthetic lined basins and other manure, litter, or process wastewater storage and handling structures must be fulfilled in accordance with Part III.B of NMG010000 as appropriate.

I certify that I am familiar with the operation of this facility and to the best of my knowledge, the information provided is true, complete, and accurate.

Name (print): _____ Title:_____

Signature: _____ Date Signed: _____
Signature must be in accordance with Part VI.E of NMG010000

## APPENDIX C HISTORIC PROPERTIES REQUIREMENTS

**C**overage under this permit is available only if your CAFO discharges and discharge- related activities meet one of the eligibility criteria below, following the procedures in Appendix C:

Criterion A. Your CAFO discharges do not have the potential to have an effect on historic properties and you are not constructing or installing new control measures on your site that cause subsurface disturbance; or

Criterion B. Your discharge-related activities (i.e., construction and/or installation of control measures that involve subsurface disturbance) will not affect historic properties; or

Criterion C. Your CAFO discharges and discharge-related activities have the potential to have an effect on historic properties; you have consulted with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative regarding measures to mitigate or prevent any adverse effects on historic properties; and, you have either (1) obtained and are in compliance with a written agreement that outlines all such measures, or (2) been unable to reach agreement on such measures; or

Criterion D. You have contacted the SHPO, THPO, or other tribal representative and EPA in writing informing them that you have the potential to have an effect on historic properties and you did not receive a response from the SHPO, THPO, or tribal representative within 30 days of receiving your letter.

If you have been unable to reach agreement with a SHPO, THPO, or other tribal representative regarding appropriate measures to mitigate or prevent adverse effects, EPA may notify you of additional measures you must implement to be eligible for coverage under this permit.

CAFO operators must determine whether their permit-related activities have potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places. CAFO operators must contact the SHPO, THPO, and/or any Indian tribe that attaches religious and cultural significance to historic properties that may be affected. In instances where a Tribe does not have a THPO, CAFO operators should contact the appropriate Tribal government office.

New Mexico SHPO, THPO and Tribal officials may be contacted at the following addresses:

**Historic Preservation Officers (SHPO)**
New Mexico State Historic Preservation Officer
Department of Cultural Affairs
Historic Preservation Division
228 East Palace Avenue, Santa Fe, NM 87503
Telephone 505-827-6320; FAX: 505-827-6338
www.nmhistoricpreservation.org

**Tribal Government Officials and THPOs**
The most recent contact information for Tribal Historic Preservation Officers may be accessed at: http://www.nathpo.org/THPO/state_list.htm. The most recent list of Region 6 tribes is available at http://www.epa.gov/earth1r6/6dra/oejta/tribalaffairs/index.html and additional information can be obtained by contacting EPA, Region 6 Tribal Affairs Office at:

Region 6 Office of Environmental Justice and Tribal Affairs
1445 Ross Ave., Suite 1200
Dallas, TX 75202
Telephone 1-800-887-6063

# APPENDIX D – NM NRCS CONSERVATION PRACTICE STANDARD CODE 590 (NUTRIENT MANAGEMENT) FROM JANUARY 2012

## NATURAL RESOURCES CONSERVATION SERVICE
## CONSERVATION PRACTICE STANDARD
## NUTRIENT MANAGEMENT
**(Ac.)**
**CODE 590**

**DEFINITION**
Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments.

**PURPOSE**
• To budget, supply, and conserve nutrients for plant production.

• To minimize agricultural nonpoint source pollution of surface and groundwater resources.

• To properly utilize manure or organic by-products as a plant nutrient source.

• To protect air quality by reducing odors, nitrogen emissions (ammonia, oxides of nitrogen), and the formation of atmospheric particulates.

• To maintain or improve the physical, chemical, and biological condition of soil.

**CONDITIONS WHERE PRACTICE APPLIES**
This practice applies to all lands where plant nutrients and soil amendments are applied. This standard does not apply to one-time nutrient applications to establish perennial crops.

**CRITERIA**
**General Criteria Applicable to All Purposes**
A nutrient budget for nitrogen, phosphorus, and potassium must be developed that considers all potential sources of nutrients including, but not limited to, green manures, legumes, crop residues, compost, animal manure, organic by-products, biosolids, waste water, organic matter, soil biological activity, commercial fertilizer, and irrigation water.
Organic and inorganic fertilizer recommendation budgets will be developed using New Mexico State University's (NMSU) Soil Test Interpretation Software (Excel Spreadsheet), or other NRCS approved software.
Enhanced efficiency fertilizers, used in the State must be defined by the Association of American Plant Food Control Officials (AAPFCO) and be accepted for use by the State fertilizer control official, or similar authority, with responsibility for verification of product guarantees, ingredients (by AAPFCO definition) and label claims.
For nutrient risk assessment policy and procedures see Title 190, General Manual (GM), Part 402, Nutrient Management and Title 190, National Instruction (NI), Part 302, Nutrient Management Policy Implementation.
http://directives.sc.egov.usda.gov/Default.aspx
To avoid salt damage, the rate and placement of applied nitrogen and potassium in starter fertilizer must be consistent with New Mexico State University guidelines, or industry practice recognized by NMSU.
The NRCS-approved nutrient risk assessment for nitrogen must be completed on all sites unless the State NRCS, with the concurrence of New Mexico Environment Department (NMED), has determined specific conditions where nitrogen leaching is not a risk to water quality, including drinking water.
The NRCS-approved nutrient risk assessment for phosphorus must be completed when:
• phosphorus application rate exceeds NMSU fertility rate guidelines for the planned crop(s), or

• the planned area is within a phosphorus-impaired watershed (contributes to 303d-listed water bodies), or

• the NRCS and NMED have not determined specific conditions where the risk of phosphorus loss is low.

A phosphorus risk assessment will not be required when the State NRCS, with concurrence of the NMED, has determined specific conditions where the risk of phosphorus loss is low. These fields must have a documented agronomic need for phosphorus; based on Soil Test Phosphorus (STP) and NMSU nutrient recommendations.
On organic operations, the nutrient sources and management must be consistent with the USDA's National Organic Program.
Areas contained within minimum application setbacks (e.g., sinkholes, wellheads, gullies, ditches, or surface inlets) must receive nutrients consistent with the setback restrictions.
Applications of irrigation water must minimize the risk of nutrient loss to surface and groundwater.
Soil pH must be maintained in a range that enhances an adequate level for crop nutrient availability and utilization. Refer to NMSU documentation for guidance.

**Soil, Manure, and Tissue Sampling and Laboratory Analysis (Testing)**

Nutrient planning must be based on current soil, manure, and (where used as supplemental information) tissue test results developed in accordance NMSU guidance, or industry practice, if recognized by NMSU.
Current soil tests are those that are no older than 3 years, but may be taken on an interval recommended by NMSU. The area represented by a soil test must be that acreage recommended by NMSU. Request analysis specified in NMSU Extension Guide A-122 http://aces.nmsu.edu/pubs/_a/a-122.html.
Where a Conservation Management Unit (CMU) is used as the basis for a sampling unit, all acreage in the CMU must have similar soil type, cropping history, and management practice treatment.
The soil and tissue tests must include analysis pertinent to monitoring or amending the annual nutrient budget, e.g., pH, Electrical Conductivity (EC) and sodicity where salts are a concern, soil organic matter, phosphorus, potassium, or other nutrients and test for nitrogen where applicable. Follow NMSU guidelines regarding recommended analysis.
Many soils and crops in New Mexico also show a need for sulfur, zinc, manganese and other micronutrients.
If the saturated paste $pH_e$ is greater than 7 an Olsen, (Sodium Bicarbonate) P-test will be done. If the pH is < 7 the Bray P- test will be used. The K-test shall be done using the water extraction method or the ammonium acetate extraction method. Soil pH and Electrical Conductivity (EC) will be determined by saturation extract (salinity assessment).
Exchangeable calcium, magnesium and sodium shall also be determined during salinity assessment to assess the sodium adsorption ratio and exchangeable sodium percentage.
Tissue sampling and testing, if used, shall be done in accordance with NMSU standards or recommendations. See NMSU Extension Guide A-123. http://aces.nmsu.edu/pubs/_a/a-123.html
Additional nutrients above the budget amount may be added if interpretation of the tissue test indicates a need.
Soil test analysis must be performed by laboratories successfully meeting the requirements and performance standards of the North American Proficiency Testing Program-Performance Assessment Program (NAPT-PAP) under the auspices of the Soil Science Society of America (SSSA) and NRCS, or other NRCS-approved program that considers laboratory performance and proficiency to assure accuracy of soil test results.
Alternate proficiency testing programs must have solid stakeholder (e.g., water quality control entity, NRCS State staff, growers, and others) support and be regional in scope.
Nutrient values of manure, organic by-products and bio-solids must be determined prior to land application.
Manure analysis must include, at minimum, total nitrogen (N), ammonium N, total phosphorus (P) or $P_2O_5$, total potassium (K) or $K_2O$, and percent solids, or follow NMSU guidance regarding required analysis.
Manure, organic by-products, and bio-solids samples must be collected and analyzed at least annually, or more frequently if needed to account for operational changes (feed management, animal type, manure handling strategy, etc.) impacting manure nutrient concentrations. If no operational changes occur, less frequent manure testing is allowable where operations can document a stable level of nutrient concentrations for the preceding three consecutive years, unless Federal, State, or Local regulations require more frequent testing.
Samples shall be collected, prepared, stored, and shipped, following NMSU Extension Guide A-114 http://aces.nmsu.edu/pubs/_a/a-114.html. Fields must have 10-15 sub-samples taken to make up the composite samples to be analyzed.
When planning for new or modified livestock operations, acceptable "book values" recognized by the NRCS (e.g., NRCS Agricultural Waste Management Field Handbook http://directives.sc.egov.usda.gov/Default.aspx) and NMSU, or analysis from similar operations in the geographical area, may be used if they accurately

estimate nutrient output from the proposed operation.

Manure testing analysis must be performed by laboratories successfully meeting the requirements and performance standards of the Manure Testing Laboratory Certification Program (MTLCP) under the auspices of the Minnesota Department of Agriculture, or other NRCS- approved program that considers laboratory performance and proficiency to assure accurate manure test results.

**Nutrient Application Rates**

Planned nutrient application rates for nitrogen, phosphorus, and potassium must not exceed NMSU guidelines or industry practice when recognized by the university.

At a minimum, determination of rate must be based on crop/cropping sequence, current soil test results, realistic yield goals, and NRCS- approved nutrient risk assessments.

Recommended nutrient application rates shall be based on NMSU recommendations, see NMSU Fertilizer Guide Extension A-128 http://140.254.84.215/cached.jsp?idx=0&id=150797 and/ or industry practice when recognized by NMSU that consider current test results realistic yield goals and management capabilities. NMSU Fertilizer Interpretation software, (Excel Spreadsheet), or other NRCS approved software may be used to generate a nutrient budget for a given crop.

Realistic yield goals must be established based on historical yield data, soil productivity information, climatic conditions, nutrient test results, level of management, and local research results considering comparable production conditions.

Estimates of yield response must consider factors such as poor soil quality, drainage, pH, salinity, etc., prior to assuming that nitrogen and/or phosphorus are deficient.

For new crops or varieties, industry- demonstrated yield, and nutrient utilization information may be used until land-grant university information is available. The NRCS State Agronomist and NMSU shall establish yield goals and nutrient requirements for new crops as soon as possible.

Lower-than-recommended nutrient application rates are permissible if the grower's objectives are met.

Applications of bio-solids, starter fertilizers, or pop-up fertilizers must be accounted for in the nutrient budget.

The application rate (in/hr) for material applied through irrigation should not exceed the soil intake/infiltration rate and must consider the water holding capacity of the soil root zone and the leaching fraction. See the Irrigation Guide in the NM Field Office Technical Guide (FOTG, Sec I) http://www.nm.nrcs.usda.gov/technical/fotg/section-1/irrigationguide.html for local soil water holding capacities and soil intake rates. Application rates must be adjusted to match the soil intake rate.

**Nitrogen Application**

**Normal N test –** When the application rate is based on N (P Index <27) and the preplant/preapplication soil nitrate reading is less than 30 ppm, the **normal agronomic rates of application will be used** (as explained under Nutrient Application Rates).

**High N test** –When the soil N test is between 30-200 ppm nitrate, **additional testing will be done** to determine when more manure can be added. Additional testing will be done 25% of the way into the growth period of the crop (120 day corn would be tested 30 days after planting). If the pre-application (crop growing) soil test is less than 80 ppm, a maximum rate of 30 lbs/ac of N can be applied.

**Excessive N test** – When the soil N test is greater than 200 ppm nitrate, **no additional organic nutrient sources containing N can be applied** until the level drops below 80 ppm. Additional testing will be done 25% of the way into the growth period of the crop (120 day corn would be tested 30 days after planting). If the pre-application (crop growing) soil test is less than 80 ppm, a maximum rate of 30 lbs/ac of N can be applied.

**Nutrient Sources**

Nutrient sources utilized must be compatible with the application timing, tillage and planting system, soil properties, crop, crop rotation, soil organic content, and local climate to minimize risk to the environment.

Nutrient Application Timing and Placement

Timing and placement of all nutrients must correspond as closely as practical with plant nutrient uptake (utilization by crops), and consider nutrient source, cropping system limitations, soil properties, weather conditions, drainage system, soil biology, and nutrient risk assessment results.

Nutrients must not be surface-applied if nutrient losses offsite are likely. This precludes spreading on:

- frozen and/or snow-covered soils, and
- when the top 2 inches of soil are saturated from rainfall or snow melt..

Exceptions for the above criteria can be made for surface-applied manure when specified conditions are met and adequate conservation measures are

installed to prevent the offsite delivery of nutrients. The adequate treatment level and specified conditions for winter applications of manure must be defined by NRCS in concurrence with the water quality control authority in the State. At a minimum, the following site and management factors must be considered:
• slope,
• organic residue and living covers,
• amount and form of nutrients to be applied, and
• adequate setback distances to protect local water quality.

Additional Criteria to Minimize Agricultural Nonpoint Source Pollution of Surface and Groundwater
Planners must use the current NRCS-approved nitrogen, phosphorus, and soil erosion risk assessment tools to assess the risk of nutrient and soil loss. Identified resource concerns must be addressed to meet current planning criteria (quality criteria). Technical criteria for risk assessments can be found in National Instruction, NI-190-302.
http://directives.sc.egov.usda.gov/Default.aspx
When there is a high risk of transport of nutrients, conservation practices must be coordinated to avoid, control, or trap manure and nutrients before they can leave the field by surface or subsurface drainage (e.g., tile).

The number of applications and the application rates must also be considered to limit the transport of nutrients to tile.

Nutrients must be applied with the right placement, in the right amount, at the right time, and from the right source to minimize nutrient losses to surface and groundwater. The following nutrient use efficiency strategies or technologies must be considered:
• slow and controlled release fertilizers
• nitrification and urease inhibitors
• enhanced efficiency fertilizers
• incorporation or injection
• timing and number of applications
• soil nitrate and organic N testing
• coordinate nutrient applications with optimum crop nutrient uptake
• Corn Stalk Nitrate Test (CSNT), Pre-Sidedress Nitrate Test (PSNT), and Pre-Plant Soil Nitrate Test (PPSN)
• tissue testing, chlorophyll meters, and spectral analysis technologies
• other land-grant university recommended technologies that improve nutrient use efficiency and minimize surface or groundwater resource concerns.

Additional Criteria Applicable to Properly Utilize Manure or Organic By-Products as a Plant Nutrient Source

When manures are applied, and soil salinity is a concern, salt concentrations must be monitored to prevent potential crop damage and/or reduced soil quality.
The total single application of liquid manure:
• must not exceed the soil's infiltration or water holding capacity
• be based on crop rooting depth
• must be adjusted to avoid runoff or loss to subsurface tile drains.

Crop production activities and nutrient use efficiency technologies must be coordinated to take advantage of mineralized plant-available nitrogen to minimize the potential for nitrogen losses due to de-nitrification or ammonia volatilization.
Nitrogen, and phosphorus application rates must be planned based on risk assessment results as determined by NRCS-approved nitrogen, and phosphorus, risk assessment tools.

For fields receiving manure, where phosphorus risk assessment results equate to:
• LOW risk, additional phosphorus and potassium can be applied at rates greater than crop removal not to exceed the nitrogen requirement for the succeeding crop.

•MODERATE risk, additional phosphorus and potassium may be applied at a phosphorus crop removal rate for the planned crops in the rotation.

•HIGH risk, additional phosphorus and potassium may be applied at phosphorus crop removal rates if the following requirements are met:

• a soil phosphorus drawdown strategy has been implemented, and
• a site assessment for nutrients and soil loss has been conducted to determine if mitigation practices are required to protect water quality,
• any deviation from these high risk requirements must have the approval of the Chief of the NRCS.

The Phosphorous Index, (PI) for NM is described Agronomy Technical Note 57. Download "Worksheet" under Agronomy Tech note 57.
http://www.nm.nrcs.usda.gov/technical/tech-notes/agro.html
Manure or organic by-products may be applied on legumes at rates equal to the estimated removal of

nitrogen in harvested plant biomass, not to exceed NMSU recommendations.
Manure may be applied at a rate equal to the recommended phosphorus application, or estimated phosphorus removal in harvested plant biomass for the crop rotation, or multiple years in the crop sequence at one time. When such applications are made, the application rate must not exceed the acceptable phosphorus risk assessment criteria, must not exceed the recommended nitrogen application rate during the year of application or harvest cycle, and no additional phosphorus must be applied in the current year and any additional years for which the single application of phosphorus is supplying nutrients.

Setbacks are required for application of manure, litter, and lagoon or pond waste water. No application can be made closer than 100-feet to any down gradient surface open tile line intake structure, sink holes, well heads, or other conduits to surface or ground water. A vegetated buffer (grass, no shrubs) 35- feet wide or more will allow organic application adjacent to the buffer.

Nutrient Values
Nutrient values of manure and other organic by-products shall be determined prior to land application based on laboratory analysis, acceptable “book values” recognized by the NRCS and/or NMSU, or historic records for the operation (two or three years of no operational change), if they accurately estimate the nutrient content of the materials. At a minimum, manure analysis shall identify nutrient and specific ion concentrations, percent moisture, and percent organic matter. Salt concentration shall be monitored so that manure applications do not cause plant damage or negatively impact soil quality.
Book values recognized by NRCS may be found in the Agricultural Waste Management Field Handbook (AWMFH), Chapter 4 – Agricultural Waste Characteristics.
http://directives.sc.egov.usda.gov/Default.aspx
Acceptable values for NM can be found in the NM Nutrient Management specification. Heavy metals in bio-solids have additional criteria.

Additional Criteria to Minimize Agricultural Non point Source Pollution of Surface and Ground Water Resources
An assessment shall be completed of the potential for nitrogen and/or phosphorus transport from the field if any waters of concern may be affected. Waters of concern include but are not limited to waters of the US, 303d listed steams, wells, other streams, high ground water, ponds, arroyos that flow part of the year, and lakes. The Leaching Index (LI) and/or Phosphorus Index (PI), or other recognized assessment tools, may be used to make these assessments. The results of these assessments and recommendations shall be discussed with the client and included in the practice planning.
Nutrient Management practices developed to minimize agricultural non-point source pollution of surface or ground water resources shall include practices and/or management activities that can reduce the risk of nitrogen or phosphorus movement from the field.

Additional Criteria to Protect Air Quality by Reducing Odors, Nitrogen Emissions and the Formation of Atmospheric Particulates
To address air quality concerns caused by odor, nitrogen, sulfur, and/or particulate emissions; the source, timing, amount, and placement of nutrients must be adjusted to minimize the negative impact of these emissions on the environment and human health. One or more of the following may be used:
• slow or controlled release fertilizers
• nitrification inhibitors
• urease inhibitors
• nutrient enhancement technologies
• incorporation
• injection
• stabilized nitrogen fertilizers
• residue and tillage management
• no-till or strip-till
• other technologies that minimize the impact of these emissions

Do not apply poultry litter, manure, or organic by-products of similar dryness/density when there is a high probability that wind will blow the material offsite.

Additional Criteria to Improve or Maintain the Physical, Chemical, and Biological Condition of the Soil to Enhance Soil Quality for Crop Production and Environmental Protection
Time the application of nutrients to avoid periods when field activities will result in soil compaction.
In areas where salinity is a concern, select nutrient sources that minimize the buildup of soil salts.
Nutrients shall be applied and managed in a manner that maintains or improves the physical, chemical and biological condition of the soil. Use of nutrient sources with high salt content relative to the nutrient value will be minimized to prevent damage to plants. Salt levels will be monitored by soils testing to see that they do not exceed the permissible EC rate for the crop to be grown. See Table 4 in the NM

Irrigation Guide in Sec. 1 of the FOTG for the maximum allowable salt levels by crop.
Nutrients shall not be applied to flooded or saturated soils by ground equipment when the potential for soil compaction and creation of ruts is high.

Additional Criteria for Subsurface Drip Irrigation
If nutrients are added to Subsurface Drip Irrigation (SDI) systems, a jar test must be done to determine if any of the material being added to the system will cause solids to precipitate out causing the system to plug and fail. The jar test is simply a mixture of the fertilizers (at the field concentration) applied to the water and left to stand to see if any of material settles out. See Agronomy Tech Note 71. http://www.nm.nrcs.usda.gov/technical/tech-notes/agro.html

CONSIDERATIONS
Consider induced deficiencies of nutrients due to excessive levels of other nutrients.
Elevated soil test phosphorus levels are detrimental to soil biota. Soil test phosphorus levels should not exceed State-approved soil test thresholds established to protect the environment.
Consider the potential for nitrogen leaching into shallow ground water and potential health impacts.
Volatilization losses can become significant, if manure is not immediately incorporated into the soil after application.

Soil test information no older than one year, particularly if organic nutrients are used.
Conduct annual reviews to determine if changes in the nutrient budget are needed especially if livestock numbers or land acreage changes up or down 20%.
To prevent leaf burn for some crops, apply liquids according to local climatic conditions or the NRCS irrigation guide. Application rate should vary according to the salt content (electrical conductivity for the liquid and the salt tolerance of the crop). See Table 4 in the Irrigation Water Quality section of the Irrigation Guide in Section I of the FOTG.
Use no-till/strip-till in combination with cover crops to sequester nutrients, increase soil organic matter, increase aggregate stability, reduce compaction, improve infiltration, and enhance soil biological activity to improve nutrient use efficiency.
Use nutrient management strategies such as cover crops, crop rotations, and crop rotations with perennials to improve nutrient cycling and reduce energy inputs.

Use variable-rate nitrogen application based on expected crop yields, soil variability, soil nitrate or organic N supply levels, or chlorophyll concentration.

Use variable-rate nitrogen, phosphorus, and potassium application rates based on site-specific variability in crop yield, soil characteristics, soil test values, and other soil productivity factors.
Develop site-specific yield maps using a yield monitoring system. Use the data to further diagnose low- and high- yield areas, or zones, and make the necessary management changes. See Title 190, Agronomy Technical Note (TN) 190.AGR.3, Precision Nutrient Management Planning.

Use manure management conservation practices to manage manure nutrients to limit losses prior to nutrient utilization.

Apply manure at a rate that will result in an “improving” Soil Conditioning Index (SCI) without exceeding acceptable risk of nitrogen or phosphorus loss.

Avoid applying manure and organic byproducts upwind of occupied structures.

When applying manure with irrigation equipment, modify equipment to reduce the potential for volatilization of nitrogen from the time the manure leaves the application equipment until it reaches the surface of the soil (e.g. reduced pressure, drop down tubes for center pivots). N volatilization from manure in a surface irrigation system will be reduced when applied under a crop canopy.

Use legume crops and cover crops to provide nitrogen through biological fixation and nutrient recycling.

Modify animal feed diets to reduce the nutrient content of manure following guidance contained in Conservation Practice Standard (CPS) Code 592, Feed Management.

Soil test information should be no older than 1 year when developing new plans. Excessive levels of some nutrients can cause induced deficiencies of other nutrients, e.g., high soil test phosphorus levels can result in zinc deficiency in corn. Use soil tests, plant tissue analysis, and field observations to check for secondary plant nutrient deficiencies or toxicity that may impact plant growth or availability of the primary nutrients.

Use the adaptive nutrient management learning process to improve nutrient use efficiency on farms as outlined in the NRCS’ National Nutrient Policy in GM 190, Part 402 Nutrient Management.

Potassium should not be applied in situations where an excess (greater than soil test potassium recommendation) causes nutrient imbalances in crops or forages.

Workers should be protected from and avoid unnecessary contact with plant nutrient sources. Extra caution must be taken when handling anhydrous ammonia or when dealing with organic wastes stored in unventilated enclosures.
Material generated from cleaning nutrient application equipment should be utilized in an environmentally safe manner. Excess material should be collected and stored or field applied in an appropriate manner.
Nutrient containers should be recycled in compliance with State and local guidelines or regulations.

Considerations to Minimize Agricultural Nonpoint Source Pollution of Surface and Groundwater
Use conservation practices that slow runoff, reduce erosion, and increase infiltration, e.g., filter strip, contour farming, or contour buffer strips. These practices can also reduce the loss of nitrates or soluble phosphorus.

Use application methods and timing strategies that reduce the risk of nutrient transport by ground and surface waters, such as:
• split applications of nitrogen to deliver nutrients during periods of maximum crop utilization,
• banded applications of nitrogen and/or phosphorus to improve nutrient availability,
• drainage water management to reduce nutrient discharge through drainage systems, and
• incorporation of surface-applied manures or organic by-products if precipitation capable of producing runoff or erosion is forecast within the time of planned application,
• avoid winter nutrient application for spring seeded crops,
• avoid winter plow out of alfalfa to release nitrate when plants can use it in the spring,
• use precision agricultural techniques to apply nutrient materials uniformly,
• incorporation of applied manure or organic by-products immediately,
• delay field application of animal manures or other organic by-products if precipitation capable of producing runoff and erosion is forecast within 24 hours of the time of the planned application,
• ammonia based N fertilizers should be incorporated the same day applied.

Use the agricultural chemical storage facility conservation practice to protect air, soil, and water quality.

Use bioreactors and multistage drainage strategies when approved by the land-grant university.

Considerations to Protect Air Quality by Reducing Nitrogen and/or Particulate Emissions to the Atmosphere

Avoid applying manure and other by-products upwind of inhabited areas.
Use high-efficiency irrigation technologies (e.g., reduced-pressure drop nozzles for center pivots) to reduce the potential for nutrient losses.

PLANS AND SPECIFICATIONS
The following components must be included in the nutrient management plan, (See NM Nutrient Management Specification 590):
• aerial site photograph(s)/imagery or site map(s), and a soil survey map of the site,
• soil information including: soil type surface texture, pH, drainage class, permeability, available water capacity, depth to water table, restrictive features, and flooding and/or ponding frequency,
• location of designated sensitive areas and the associated nutrient application restrictions and setbacks,
• for manure applications, location of nearby residences, or other locations where humans may be present on a regular basis, and any identified meteorological (e.g., prevailing winds at different times of the year), or topographical influences that may affect the
transport of odors to those locations,
• results of approved risk assessment tools for nitrogen, phosphorus, and erosion losses,
• documentation establishing that the application site presents low risk for phosphorus transport to local water when phosphorus is applied in excess of crop removal,
• current and/or planned plant production sequence or crop rotation,
• soil, water, compost, manure, organic by-product, and plant tissue sample analyses applicable to the plan,
• soil test phosphorus and/or risk assessment levels at which the plan would require that no phosphorus in any form be applied,
• when soil phosphorus levels are increasing, include a discussion of the risk associated with phosphorus accumulation and a proposed phosphorus draw-down strategy,
• realistic yield goals for the crops,

• complete nutrient budget for nitrogen, phosphorus, and potassium for the plant production sequence or crop rotation,
• listing and quantification of all nutrient sources and form,
• all enhanced efficiency fertilizer products that are planned for use,
• in accordance with the nitrogen and phosphorus risk assessment tool(s), specify the recommended nutrient application source, timing, amount (except for precision/variable rate applications specify method used to determine rate), and placement of plant nutrients for each field or management unit, and
• guidance for implementation, operation and maintenance, and recordkeeping.

In addition, the following components must be included in a precision/variable rate nutrient management plan:
• Document the geo-referenced field boundary and data collected that was processed and analyzed as a GIS layer or layers to generate nutrient or soil amendment recommendations.
• Document the nutrient recommendation guidance and recommendation equations used to convert the GIS base data layer or layers to a nutrient source material recommendation GIS layer or layers.
• Document if a variable rate nutrient or soil amendment application was made.
• Provide application records per management zone or as applied map within individual field boundaries (or electronic records) documenting source, timing, method, and rate of all applications that resulted from use of the precision agriculture process for nutrient or soil amendment applications.
• Maintain the electronic records of the GIS data layers and nutrient applications for at least 5 years.

If increases in soil phosphorus levels are expected (i.e., when N-based rates are used), the nutrient management plan must document:
• the soil phosphorus levels at which it is desirable to convert to phosphorus based planning and/or no further phosphorus application,
• the potential plan for soil test phosphorus drawdown from the production and harvesting of crops, and
• management activities or techniques used to reduce the potential for phosphorus transport and loss,
• for AFOs, a quantification of manure produced in excess of crop nutrient requirements, and
• a long-term strategy and proposed implementation timeline for reducing soil P to levels that protect water quality and allow for application of P at crop-removal rates,
• a rationale for P applications in excess of crop removal when the phosphorus risk assessment equates to a low risk for P transport to surface or groundwater.

OPERATION AND MAINTENANCE
Conduct periodic plan reviews to determine if adjustments or modifications to the plan are needed. At a minimum, plans must be reviewed and revised, as needed with each soil test cycle, changes in manure volume or analysis, crops, or crop management.
Fields receiving animal manures and/or bio-solids must be monitored for the accumulation of heavy metals and phosphorus in accordance with land-grant university guidance and State law.
Significant changes in animal numbers, management, and feed management will necessitate additional manure analyses to establish a revised average nutrient content.
Calibrate application equipment to ensure accurate distribution of material at planned rates. Document the nutrient application rate. When the applied rate differs from the planned rate, provide appropriate documentation for the change.
Records must be maintained for at least 5 years to document plan implementation and maintenance. As applicable, records include:
• soil, plant tissue, water, manure, and organic by-product analyses resulting in recommendations for nutrient application,
• quantities, analysis and sources of nutrients applied,
• dates, and method(s) of nutrient applications, source of nutrients, and rates of application,
• weather conditions and soil moisture at the time of application; lapsed time to manure incorporation; rainfall or irrigation event,
• crops planted, planting and harvest dates, yields, nutrient analyses of harvested biomass, and crop residues removed,
• dates of plan review, name of reviewer, and recommended changes resulting from the review, and
• all enhanced efficiency fertilizer products used.

Additional records for precision/variable rate sites must include:
• maps identifying the variable application source, timing, amount, and placement of all plant nutrients applied, and
• GPS-based yield maps for crops where yields can be digitally collected.

REFERENCES

Association of American Plant Food Control Officials (AAPFCO). 2011. AAPFCO Official Publication no. 64. AAPFCO Inc., Little Rock, AR.

Follett, R.F. 2001. Nitrogen transformation and transport processes. In Nitrogen in the environment; sources, problems, and solutions, (eds.) R.F. Follett and J. Hatfield, pp. 17-44. Elsevier Science Publishers. The Netherlands. 520 pp.

Schepers, J.S., and W.R. Ruan, (eds.) 2008. Nitrogen in agricultural systems. Agron. Monogr. no. 49, American Society of Agronomy (ASA), Crop Science Society of America (CSSA), Soil Science Society of America (SSSA). Madison, WI.

Sims, J.T. (ed.) 2005. Phosphorus: Agriculture an the environment. Agron. Monogr. no. 46. ASA, CSSA, and SSSA, Madison, WI.

Stevenson, F.J. (ed.) 1982. Nitrogen in agricultural soils. Agron. Series 22. ASA, CSSA, and SSSA, Madison, WI.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2010. Agronomy Technical Note, (TN) 190-AGR-3, Precision Nutrient Management Planning. Washington, DC.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2011. Title 190, General Manual, (GM), Part 402, Nutrient Management. Washington, DC.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2011, Title 190, National Instruction (NI), Part 302, Nutrient Management Policy Implementation. Washington, DC

# Appendix E: State of New Mexico Tier 2 and Tier 3 Surface Waters

**Tier 2**

All classified waters of the state (20.6.4.100 – 899 of NMWQS) are Tier 2 except for those waters that are Tier 3 (Outstanding National Resource Waters (ONRWs)). Some of these Tier 2 waters are considered to be Tier 1 for certain pollutants as described on the current 303(d) list (see http://www.nmenv.state.nm.us/swqb/303d-305b/).

**Tier 3**

(1) Rio Santa Barbara, including the west, middle and east forks from their headwaters downstream to the boundary of the Pecos Wilderness; and

(2) the waters within the United States forest service Valle Vidal special management unit including:

(a) Rio Costilla, including Comanche, La Cueva, Fernandez, Chuckwagon, Little Costilla, Holman, Gold, Grassy, LaBelle and Vidal creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit;

(b) Middle Ponil creek, including the waters of Greenwood Canyon, from their headwaters downstream to the boundary of the Elliott S. Barker wildlife management area;

(c) Shuree lakes;

(d) North Ponil creek, including McCrystal and Seally Canyon creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit; and

(e) Leandro creek from its headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit.

(3) the named perennial surface waters of the state, identified in Subparagraph (a) below, located within United States department of agriculture forest service wilderness. Wilderness are those lands designated by the United States congress as wilderness pursuant to the Wilderness Act. Wilderness areas included in this designation are the Aldo Leopold wilderness, Apache Kid wilderness, Blue Range wilderness, Chama River Canyon wilderness, Cruces Basin wilderness, Dome wilderness, Gila wilderness, Latir Peak wilderness, Pecos wilderness, San Pedro Parks wilderness, Wheeler Peak wilderness, and White Mountain wilderness.

(a) The following waters are designated in the Rio Grande basin:

(i) in the Aldo Leopold wilderness: Byers Run, Circle Seven creek, Flower canyon, Holden Prong, Indian canyon, Las Animas creek, Mud Spring canyon, North Fork Palomas creek, North Seco creek, Pretty canyon, Sids Prong, South Animas canyon, Victorio Park canyon, Water canyon;

(ii) in the Apache Kid wilderness Indian creek and Smith canyon;

(iii) in the Chama River Canyon wilderness: Chavez canyon, Ojitos canyon, Rio Chama;

(iv) in the Cruces Basin wilderness: Beaver creek, Cruces creek, Diablo creek, Escondido creek, Lobo creek, Osha creek;

(v) in the Dome wilderness: Capulin creek, Medio creek, Sanchez canyon/creek;

(vi) in the Latir Peak wilderness: Bull creek, Bull Creek lake, Heart lake, Lagunitas Fork, Lake Fork creek, Rito del Medio, Rito Primero, West Latir creek;

(vii) in the Pecos wilderness: Agua Sarca, Hidden lake, Horseshoe lake (Alamitos), Jose Vigil lake, Nambe lake, Nat lake IV, No Fish lake, North Fork Rio Quemado, Rinconada, Rio Capulin, Rio de las Trampas (Trampas creek), Rio de Truchas, Rio Frijoles, Rio Medio, Rio Molino, Rio Nambe, Rio San Leonardo, Rito con Agua, Rito Gallina, Rito Jaroso, Rito Quemado, San Leonardo lake, Santa Fe lake, Santa Fe river, Serpent lake, South Fork Rio Quemado, Trampas lake (East), Trampas lake (West);

(viii) in the San Pedro Parks wilderness: Agua Sarca, Cañon Madera, Cave creek, Cecilia Canyon creek, Clear creek (North SPP), Clear creek (South SPP), Corralitos creek, Dove creek, Jose Miguel creek, La Jara creek, Oso creek, Rio Capulin, Rio de las Vacas, Rio Gallina, Rio Puerco de Chama, Rito Anastacio East, Rito Anastacio West, Rito de las Palomas, Rito de las Perchas, Rito de los Pinos, Rito de los Utes, Rito Leche, Rito Redondo, Rito Resumidero, San Gregorio lake;

(ix) in the Wheeler Peak wilderness: Black Copper canyon, East Fork Red river, Elk lake, Horseshoe lake, Lost lake, Sawmill creek, South Fork lake, South Fork Rio Hondo, Williams lake.

(b) The following waters are designated in the Pecos River basin:
(i) in the Pecos wilderness: Albright creek, Bear creek, Beatty creek, Beaver creek, Carpenter creek, Cascade canyon, Cave creek, El Porvenir creek, Hollinger creek, Holy Ghost creek, Horsethief creek, Jack's creek, Jarosa canyon/creek, Johnson lake, Lake Katherine, Lost Bear lake, Noisy brook, Panchuela creek, Pecos Baldy lake, Pecos river, Rio Mora, Rio Valdez, Rito Azul, Rito de los Chimayosos, Rito de los Esteros, Rito del Oso, Rito del Padre, Rito las Trampas, Rito Maestas, Rito Oscuro, Rito Perro, Rito Sebadilloses, South Fork Bear creek, South Fork Rito Azul, Spirit lake, Stewart lake, Truchas lake (North), Truchas lake (South), Winsor creek;

(ii) in the White Mountain wilderness: Argentina creek, Aspen creek, Bonito creek, Little Bonito creek, Mills canyon/creek, Rodamaker creek, South Fork Rio Bonito, Turkey canyon/creek.

(c) The following waters are designated in the Gila River basin:

(i) in the Aldo Leopold wilderness: Aspen canyon, Black Canyon creek, Bonner canyon, Burnt canyon, Diamond creek, Falls canyon, Fisherman canyon, Running Water canyon, South Diamond creek;

(ii) in the Gila wilderness: Apache creek, Black Canyon creek, Brush canyon, Canyon creek, Chicken Coop canyon, Clear creek, Cooper canyon, Cow creek, Cub creek, Diamond creek, East Fork Gila river, Gila river, Gilita creek, Indian creek, Iron creek, Langstroth canyon, Lilley canyon, Little Creek, Little Turkey creek, Lookout canyon, McKenna creek, Middle Fork Gila river, Miller Spring canyon, Mogollon creek, Panther canyon, Prior creek, Rain creek, Raw Meat creek, Rocky canyon, Sacaton creek, Sapillo creek, Sheep Corral canyon, Skeleton canyon, Squaw creek, Sycamore canyon, Trail canyon, Trail creek, Trout creek, Turkey creek, Turkey Feather creek, Turnbo canyon, West Fork Gila river, West Fork Mogollon creek, White creek, Willow creek, Woodrow canyon.

(d) The following waters are designated in the Canadian River basin: in the Pecos wilderness Daily creek, Johns canyon, Middle Fork Lake of Rio de la Casa, Middle Fork Rio de la Casa, North Fork Lake of Rio de la Casa, Rito de Gascon, Rito San Jose, Sapello river, South Fork Rio de la Casa, Sparks creek (Manuelitas creek).

(e) The following waters are designated in the San Francisco River basin:

(i) in the Blue Range wilderness: Pueblo creek;

(ii) in the Gila wilderness: Big Dry creek, Lipsey canyon, Little Dry creek, Little Whitewater creek, South Fork Whitewater creek, Spider creek, Spruce creek, Whitewater creek.

(f) The following waters are designated in the Mimbres Closed basin: in the Aldo Leopold wilderness Corral canyon, Mimbres river, North Fork Mimbres river, South Fork Mimbres river.

(g) The following waters are designated in the Tularosa Closed basin: in the White Mountain wilderness Indian creek, Nogal Arroyo, Three Rivers.

(h) The wetlands designated are identified on the maps and list of wetlands within United States forest service wilderness areas designated as outstanding national resource waters published at the New Mexico state library and available on the department's website.