AGRICULTURAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (AgPDES)
GENERAL PERMIT FOR DISCHARGES FROM CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs) IN OKLAHOMA (OKG010000)

OKLAHOMA DEPARTMENT OF AGRICULTURE, FOOD, AND FORESTRY

AUTHORIZATION TO DISCHARGE UNDER THE AGRICULTURE POLLUTANT DISCHARGE ELIMINATION SYSTEM (AgPDES)

In compliance with provisions of the Clean Water Act, 33 USC 1251 et seq., Oklahoma Agriculture Pollutant Discharge Elimination System Act, § 2-2A-1 et seq. and Oklahoma Agriculture Environmental Permitting Act, § 2-2A-21 et seq., owners and operators of concentrated animal feeding operations (CAFOs) in Oklahoma, 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 mm/dd/yyyy.

This permit and the authorization to discharge under the AgPDES shall expire at midnight, mm/dd/yyyy.

Issued on mm/dd/yyyy.

James Rucker
AgPDES Director
Oklahoma Department of Agriculture, Food and Forestry

All the references to Federal regulations at 40 CFR Parts 122, 124, 125 and 412 in this draft permit have been incorporated into the Oklahoma's AgPDES Rules at OAC 35:44-1-2(a)(2),(3), (4) and (5).

Part I. **Permit Area and Coverage**

Part II. **Effluent Limitations and Standards**

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PART I. PERMIT AREA AND COVERAGE

A. Permit Area

This permit offers AgPDES permit coverage for discharges from operations defined as concentrated animal feeding operations (CAFOs) in the State of Oklahoma (except Indian Country).

B. Permit Coverage

This permit covers any operation that meets the definition of a CAFO (see Part VII of this permit) and discharges pollutants to waters of the state. Once an operation is defined as a CAFO, the AgPDES 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 Section D or G 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), C (Dairy Cows and Cattle Other than Veal Calves), or D (Swine, Poultry, and 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) form (see Appendix A, form AEMS095) to be covered by this permit (see Section E below).

CAFO owners/operators covered by this permit may seek to be excluded from coverage by (1) submitting a Notice of Termination (NOT) form (see Appendix B, form AEMS096) to the AgPDES Director at the address specified in Part I.E.7 or (2) by applying for an individual AgPDES Permit using the NOI in Appendix A in accordance with Part I.G. If submitting a NOT form, please see Part VI.F below.

D. Limitations on Coverage

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

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

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

3. Duck CAFOs.

4. Any new source subject to 40 CFR Part 412, Subpart D (Swine, Poultry, and Veal Calves).

5. CAFOs located on Indian lands in Oklahoma.

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

7. Proposed new discharges which were not existing on June 11, 1989 located in any of the following areas:

   a. Any new discharge located within the entire watershed of any waterbody designated Outstanding Resource Water (ORW) in Oklahoma's Water Quality Standards.

   b. Any new discharge to any waterbody designated High Quality Water (HQW) in Oklahoma's Water Quality Standards.

   c. Any new discharge to any waterbody or watershed designated Sensitive Water Supply (SWS) in Oklahoma's Water Quality Standards.

8. Any existing discharge as of June 11, 1989 in any of the following areas if any additional pollutant loading above that existing on June 11, 1989 is proposed:

   a. Facilities discharging anywhere within the entire watershed of any waterbody designated Outstanding Resource Water (ORW) in Oklahoma's Water Quality Standards.

   b. Facilities discharging to any waterbody designated High Quality Water (HQW) in Oklahoma's Water Quality Standards.

   c. Facilities discharging to any waterbody or watershed designated Sensitive Water Supply (SWS) in Oklahoma's Water Quality Standards.

9. 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 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 NOI, provides to ODAFF 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 ODAFF sufficient to demonstrate:

      i. For discharges to waters without an EPA approved or established total maximum daily load (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.

   d. Receives an affirmative determination from ODAFF that the discharge will not contribute to the existing impairment, in which case the operator must maintain such determination onsite with the NMP.

10. CAFOs, other than those subject to 40 CFR Part 412, Subpart D (Swine, Poultry, and Veal Calves), with discharges subject to New Source Performance Standards (NSPS) at 40 CFR Part 412.

11. Any CAFO located within an Ozark cavefish watershed as defined by Appendix E of this permit.

E. Application for Coverage

1. Owners/operators of CAFOs seeking to be covered by this permit must:

   a. Submit an NOI (Appendix A, form AEMS095) to the AgPDES Director.

   b. Submit a nutrient management plan (NMP) with the NOI that meets the requirements of the provisions of this permit and 40 CFR§ 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.

2. The owner/operator of any CAFO currently covered under the 2017 CAFO General Permit seeking coverage under this permit must submit a complete NMP and NOI to the AgPDES Director within 90 days of the effective date of this permit. For any CAFO covered under the 2017 CAFO General Permit that meets this deadline, authorization under the 2017 CAFO General Permit is automatically continued until coverage is granted under this permit or coverage is otherwise terminated.

3. If submitting the NOI prior to December 21, 2025, the CAFO owner/operator must prepare and submit the NOI using ODAFF form AEMS095 available on ODAFF'S website https://ag.ok.gov/wp-content/uploads/2020/11/Notice-of-Intent-NOI.pdf. If submitting the NOI on or after December 21, 2025, the owner/operator must prepare and submit the NOI using ODAFF's electronic Notice of Intent System (eNOI) on ODAFF's website (https://ag.ok.gov/divisions/agricultural-environmental-management/) unless eNOI is otherwise unavailable or the operator has obtained a waiver from the requirements to use eNOI for submission of the NOI. Operators waived from the requirement to use eNOI for NOI submission must certify on the paper NOI submitted to ODAFF that use of eNOI will incur undue burden or expense compared to using the paper Notice of Intent form and then provide a basis for this determination. ODAFF will immediately post on its website all NOIs received.

4. Late NOIs will be accepted, but authorization to discharge will not be retroactive.

5. 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 AgPDES Director within 90 days of the effective date of this permit.

6. CAFO owners/operators may submit an NOI after the applicable date in either 2 or 5 above. Regardless of when the NOI is submitted, the CAFO's authorization is only for discharges that occur after permit coverage is granted. The Permitting Authority reserves the right to take appropriate enforcement actions for any unpermitted discharges.

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

8. Where to Submit: CAFOs must submit a signed copy of the NOI and NMP by mail to:

Oklahoma Department of Agriculture, Food, and Forestry
AEMS Division
PO Box 528804
Oklahoma City, OK 73152-8804

9. Upon receipt, ODAFF will review the NOI and NMP to ensure all permit requirements are fulfilled. ODAFF may request additional information from the CAFO owner or operator if additional information is necessary to complete the NOI and NMP or clarify, modify, or supplement previously submitted material. If ODAFF 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 in accordance with Part III.A.2.c. ODAFF will respond to comments received during this period and, if necessary, require the CAFO owner or operator to revise the nutrient management plan. If determined appropriate by ODAFF, CAFOs will be granted coverage under this general permit upon written notification by ODAFF. See Part III.A.2.

F. Previous Coverage under 2017 CAFO General Permit

1. If a CAFO facility is covered under the 2017 CAFO General Permit OKG0l0000, the facility may expedite the process of application review when applying for coverage under this AgPDES General Permit Authorization so long as there have been no changes in their NOI and NMP, except the following:

   a. Changes in dates to reflect most recent NOI and NMP submissions,

   b. Updated soil, manure, compost, and/or wastewater nutrient analysis, and

   c. Updated land application information and calculations for the land application fields covered under the 2017 CAFO General Permit.

2. A CAFO facility will not be eligible for the expedited review process if the facility has had any significant physical alteration or addition at the permitted facility. Significant physical alterations or additions may include, but are not limited to:

   a. Any alteration or addition to a permitted facility that may meet one of the criteria for determining whether a facility is a new source in 40 CFR§ 122.29(b).

   b. Any alteration or addition that could significantly change the nature or increase the quantity of pollutants generated.

   c. Any alteration or addition that 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 or absent in the previous permit, including use of land application areas not covered in the previous authorization.

3. The AgPDES Director may also decide that a CAFO facility is ineligible for the expedited review process based upon, but not limited to, the following:

   a. A record of poor compliance and violations at the facility under the facility's previous AgPDES permit coverage.

   b. A history of multiple deficiencies found in the on-site NMP records during inspections under the facility's previous AgPDES permit coverage.

c. Any reasonable circumstance the AgPDES Director finds cause for an extensive review of the AgPDES permit application.

4. If a CAFO facility believes it meets the conditions above and wishes to take part in the expedited review process, the facility must fill out form AEMS145 located in Appendix C and submit it with the NOI and revised NMP.

5. This section does not relinquish the permittee's duty to comply with all other permit application procedures described in this CAFO General Permit Authorization.

G. Requiring an Individual Permit

1. ODAFF may at any time require any facility authorized by this permit to apply for, and obtain, an individual AgPDES permit. ODAFF 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 AgPDES CAFO general permit is automatically terminated when: (1) the operator fails to submit the required individual AgPDES permit application within the defined time frame; or (2) the individual AgPDES permit is issued by ODAFF.

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 AEMS095 in Appendix A) with the reasons supporting the application to ODAFF. If a final, individual AgPDES permit is issued to an owner/operator otherwise subject to this general permit, the applicability of this AgPDES CAFO general permit to the facility is automatically terminated on the effective date of the individual AgPDES permit. Otherwise, the applicability of this general permit to the facility remains in full force and effect (for example, if an individual AgPDES permit is denied to an owner/operator otherwise subject to this general permit).

H. 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 effective. If an owner/operator was 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. The authorization for coverage under a reissued permit or a replacement of this permit following 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 ODAFF 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 ODAFF not to reissue this general permit, at which time ODAFF 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.

I. Change in Ownership

1. Coverage under this permit may be automatically transferred to a new permittee if:

   a. The current permittee notifies the AgPDES Director in writing at the address specified in Part I.E.7 at least 30 days in advance of the proposed transfer date in Part I.I.1.b; the CAFO Permit Transfer Application form AEMS114 (Appendix H, form AEMS114) could be used for the transfer request;

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

   c. The AgPDES Director does not notify the existing permittee and the proposed permittee of his or her intent to modify or revoke and reissue permit coverage.

2. Any changes to the NMP must be submitted to ODAFF in accordance with Part III.A.6 and may require termination and reissuance of permit coverage.

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 state 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 state 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.

      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) Residual solids after liquid has been removed;

         (G) Necessary freeboard to maintain structural integrity; and

         (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 in a timely manner.

vi. Dispose of dead animals in accordance with a carcass disposal plan developed by the owner and approved by ODAFF which shall decrease the possibility of the spread of disease, reduce odors, and preclude contamination of waters of the state. Dead animals shall be disposed of properly in an environmentally safe manner in accordance with Federal, State, and local requirements. At all times the facility shall comply with the provisions of Section 1223 of Title 21 of the Oklahoma Statutes, in addition to compliance with the carcass disposal plan. The carcass disposal plan shall include provisions for the disposal of carcasses associated with normal mortality and shall include provisions for emergency disposal when a major disease outbreak or other emergency results in deaths significantly higher than normal mortality rates. Accepted methods of carcass disposal include the following:

(A) Rendering

(1) The owner shall use a rendering service that insures disposal of all carcasses within a reasonable period of time. The name, address, and telephone number of the rendering service shall be provided. In addition, the frequency and schedule of carcass pickup shall be included.

(2) Storage facilities shall be sealed or have lids and maintained so as to prevent pests and odors.

(3) Sealed storage facilities shall not be required for animals weighing 300 pounds or more, but the prevention of pests and odors shall be addressed.

(B) Burial

(1) Burial shall only be allowed as a method of carcass disposal if no reasonable alternative exists and the disposal plan contains

specific measures and practices which are utilized to protect the waters of the state.

(2) Prior approval by ODAFF is required of any carcass disposal plan listing burial as the method of disposal.

(C) Composting

(1) Prior approval by ODAFF is required of any carcass disposal plan listing composting as the method of disposal.

(2) ODAFF may require another method of carcass disposal other than composting if ODAFF determines a more feasible and effective method of carcass disposal exists.

(D) Incineration shall only be used as a method of carcass disposal in accordance with air quality requirements specified by the Oklahoma Department of Environmental Quality (ODEQ).

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 (5) years.

viii. CAFOs constructing new wastewater retention facilities or modifying existing retention facilities shall insure 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 properly maintained and show no sign 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 rain gauge shall be kept onsite and properly maintained. A log of all measurable rainfall events shall be kept with the NMP.

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 from contact with feedlots, 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 precipitation from the animal confinement, storage, and handling areas. 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 state. Fences may be used to restrict such access.

iii. New facilities shall not be built in waters of the state as defined in Title 2 O.S. § 2A-2(17).

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 state through groundwater with a direct hydrologic connection to such 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

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

a. Discharges to Water Quality Impaired Waters.

i. If the CAFO discharges to an impaired water with an EPA approved or established TMDL, ODAFF 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 to an impaired water without an EPA approved or established TMDL, ODAFF 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.9 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.9, and shall include these control measures or conditions in its NMP.

iv. If at any time the facility becomes aware, or ODAFF 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. Requirements for Areas with Waters of Recreational and/or Ecological Significance

If the CAFO discharges directly to waters within the boundaries of areas listed in Table 1 of Appendix B of Oklahoma Water Quality Standards [785:45] (National and State Parks, National Forests, Wildlife Areas, Wildlife Management Areas, and Wildlife Refuges), ODAFF may notify the facility that additional analyses, control measures, or other permit conditions are necessary to ensure that the recreational and ecological significance of these waters will be maintained, or that an individual permit application is necessary in accordance with Part.I.D.1. Any such additional requirements shall be included in the NMP.

c. Violation of Oklahoma Water Quality Standards

Authorization to discharge under this permit is denied for any overflow of manure, litter, or process wastewater allowed by Part II.A.1 of this permit which would result in a violation of Oklahoma's Water Quality Standards (OAC 785:45).

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

Permittees that apply manure, litter, or process wastewater to land under the permitted CAFO's ownership or operational control must implement an NMP in accordance with the requirements specified below and in Part III.A of this permit.

The NMP that is developed and implemented must incorporate 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 Oklahoma NRCS Conservation Practice Standard Code 590 (Nutrient Management). See Appendix F.

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 state.

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 prior to land application. Initially, soil must be analyzed for nitrogen and phosphorus content in all potential land application fields in order for the field to be included in the general permit. After initial sampling, only those fields being used for land application in a given year must be sampled prior to any land application activities. 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 periodically 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 waters of the state, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to waters of the state. 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 setback 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.

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. Areas shall be identified that, due to topography, activities or other factors, have a high potential for significant soil erosion. Where these areas have the potential to contribute pollutants to waters of the state, measures used to limit erosion and pollutant runoff shall be identified.

ii. Irrigation Control: Irrigation systems shall be managed so as to reduce or minimize (a) ponding or puddling of wastewater on land application fields, (b) contamination of waters of the state 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 waters of the state from a CAFO as a result of the application of manure, litter or process wastewater to land 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.

c. Water Quality-Based Effluent Limitations. There shall be no unauthorized dry weather discharges of manure or effluent from land application sites.

6. Other Limitations

a. Process wastewater discharges from outside the production area, including: wash-down of equipment that has been in contact with manure, raw materials, products or byproducts that occurs outside of the production area; runoff of pollutants from raw materials, products or byproducts (such as manure, feathers, litter, bedding and feed) from the CAFO that have been spilled or otherwise deposited outside the production area that have the potential to contribute pollutants to waters of the state shall be identified in the NMP. The NMP shall identify measures necessary to meet applicable water quality standards.

b. Discharges that do not meet the definition of process wastewater, including discharges associated with feed, 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 have potential to contribute pollutants to waters of the state shall be identified in the NMP. The NMP shall identify measures necessary to meet applicable water quality standards.

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.

7. 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 Nutrient Management Plans (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 Oklahoma NRCS Conservation Practice Standard Code 590 (Nutrient Management) (see Part II.A and Appendix F).

1. Schedule. The completed NMP must be submitted to ODAFF along with the NOI 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, ODAFF will review the NMP. If additional information is necessary to complete the NMP, or to clarify, modify, or supplement previously submitted material, the AgPDES Director may request such information from the CAFO owner or operator.

   b. The NMP will be used by the AgPDES Director to identify site specific permit terms, to include the items outlined in Part III.A.3, to be incorporated into this permit. The AgPDES Director will identify site specific permit terms with respect to protocols for the land application of manure, litter, and process wastewater. The AgPDES 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 AgPDES Director determines the NMP and NOI are complete, the AgPDES Director will publish the NOI submitted by the CAFO, including the CAFO's NMP, and the terms of the NMP to be incorporated into the permit as determined by the AgPDES Director, at ODAFF's internet site (https://ag.ok.gov/permit-applications-for-public-review/). The AgPDES Director will notice the proposal to grant coverage under the permit and the availability of the aforementioned documentation for public review and comment. The owner/operator shall make available the NOI and NMP at a public location for public viewing (i.e. county courthouse or public library) within the county that the facility is located in. Prior to the date the application will be made available for public viewing, the owner/operator shall publish the public notice as a legal notice in at least one newspaper of general circulation in the county that the facility is located in. 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 from the published public notice date.

e. The AgPDES 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 AgPDES 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 AgPDES 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 AgPDES 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 ODAFF will develop site specific terms based on the submitted NMP.

b. Ensure 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, eggs, 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 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 state. 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 state 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 state, the NMP shall identify measures used to limit erosion and pollutant runoff.

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 and the following current NRCS or OSU protocols as appropriate:

i. PSS-2248 OSU Factsheet - Sampling Animal Manure

ii. NRCS Conservation Practice Standard Waste Utilization Code 633 - Sampling Liquid Animal Waste Jobsheet (JS 633 01)

iii. NRCS Conservation Practice Standard Waste Utilization Code 633 - Sampling Poultry Litter Jobsheet (JS 633 02)

iv. F-2207 OSU Factsheet - How to Get a Good Soil Sample

v. Equivalent protocol adequately described in the NMP. In the absence of such an alternative, the permittee shall use the above protocols as appropriate.

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 Oklahoma NRCS Conservation Practice Standard 590 (Nutrient Management) shall be used for calculating these rates (see Appendix F). 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 Oklahoma NRCS Conservation Practice Standard 590 (Nutrient Management), including the Oklahoma Phosphorus Assessment Worksheet [see Oklahoma NRCS Conservation Practice Standard 590 (Nutrient Management)].

The permittee shall comply with site specific permit terms established by the AgPDES Director for land application of manure, litter, and process wastewater. Development of site-specific terms shall be based upon the AgPDES 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 AgPDES Director the following information for each crop, field, and year covered by the NMP, which will be used by the AgPDES 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 Oklahoma NRCS Conservation Practice Standard 590 (Nutrient Management), including the Oklahoma Phosphorus Assessment Worksheet [see Oklahoma NRCS Conservation Practice Standard 590 (Nutrient Management)]. 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 ODAFF 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 AgPDES Director the following information for each crop, field, and year covered by the NMP, which will be used by the AgPDES 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 Oklahoma NRCS Conservation Practice Standard 590 (Nutrient Management), including the Oklahoma Phosphorus Assessment Worksheet [see Oklahoma NRCS Conservation Practice Standard 590 (Nutrient Management)]. 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 ODAFF 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 AgPDES 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.

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

4. Signature. The NMP shall be signed by the owner/operator or other signatory authority in accordance with Part VI.F (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 nutrient management plan

a. When a CAFO owner or operator covered by this permit makes changes to the CAFO's NMP previously submitted to the AgPDES Director, the CAFO owner or operator must provide the AgPDES 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.7.f. (for the Narrative Rate Approach), which are not required to be submitted to the AgPDES Director.

b. When changes to an NMP are submitted to the AgPDES Director, the AgPDES Director will review the revised NMP to ensure it meets the requirements of Parts 11.A.4 and

III.A.3. If the AgPDES Director determines the changes to the NMP necessitate revision to the terms of the NMP incorporated into the permit issued to the CAFO, the AgPDES 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 an NMP incorporated into an existing AgPDES 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 nitrogen and phosphorus 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 state.

c. If the AgPDES Director determines the changes to the terms of the NMP are not substantial, the AgPDES 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 AgPDES Director determines the changes to the terms of the NMP are substantial, the AgPDES 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 AgPDES Director may require the permittee to further revise the NMP, if necessary. Once the AgPDES Director incorporates the revised terms of the NMP into the permit, the AgPDES Director will notify the permittee of the revised terms and conditions of the permit.

7. Requirements for implementing nutrient management plans

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. Initially, representative samples of soil for all fields under the control of the CAFO operator where manure and wastewater may be applied must be collected and analyzed for nitrogen and phosphorus content in accordance with the protocols established in the NMP under Part III.A.3.e. After initial sampling, only those fields being used for land application in a given year must be sampled and analyzed annually prior to land application. 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. 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 20 soil cores for each sample area. Take the soil cores randomly throughout the sampling area and combine the cores into a single sample.

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.f and III.A.3.e.

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.f and III.A.3.e, 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. ODAFF promotes and supports the use of certified specialists to develop or modify NMPs, which will help to ensure the quality of NMPs. ODAFF encourages CAFO owners/operators to use these certified specialists to prepare their NMPs. Although a certified specialist may be used, CAFO owners/operators are solely responsible for assuring their NMPs comply with all permit conditions and are properly implemented.

B. Facility Closure Requirements

The following conditions shall apply to the closure of lagoons and other earthen or synthetic lined basins and other manure, litter, or process wastewater storage and handling structures:

1. Closure of Lagoons and Other Surface Impoundments

a. No lagoon or other earthen or synthetic lined basin shall be permanently abandoned.

b. Lagoons and other earthen or synthetic lined basins shall be maintained at all times until closed in compliance with this section.

c. All lagoons and other earthen or synthetic lined basins must be properly closed if the permittee ceases operation. In addition, any lagoon or other earthen or synthetic lined basin that is not in use for a period of twelve (12) consecutive months must be properly closed unless the facility is financially viable, intends to resume use of the structure at a later date, and either: (1) maintains the structure as though it were actively in use, to prevent compromise of structural integrity; or (2) removes manure and wastewater to a depth of

one foot or less and refills the structure with clean water to preserve the integrity of the synthetic or earthen liner. In either case, the permittee shall submit a written report to ODAFF within thirty (30) days of basin closure detailing the actions taken, and shall conduct routine inspections, maintenance, and record keeping as though the structure were in use. Prior to restoration of use of the structure, the permittee shall notify ODAFF in writing and provide the opportunity for inspection.

d. All closure of lagoons and other earthen or synthetic lined basins must be consistent with Oklahoma NRCS Conservation Practice Standard Code 360 (Closure of Waste Impoundments). Consistent with this standard the permittee shall remove all waste materials to the maximum extent practicable and dispose of them in accordance with the permittee's nutrient management plan, unless otherwise authorized by ODAFF.

e. Unless otherwise authorized by ODAFF, completion of closure for lagoons and other earthen or synthetic lined basins shall occur as promptly as practicable after the permittee ceases to operate or, if the permittee has not ceased operations, twelve (12) months from the date on which the use of the structure ceased, unless the lagoons or basins are being maintained for possible future use in accordance with the requirements above.

2. Closure Procedures for Other Manure, Litter, or Process Wastewater Storage and Handling Structure

No other manure, litter, or process wastewater storage and handling structure shall be abandoned. Closure of all such structures shall occur as promptly as practicable after the permittee has ceased to operate, or, if the permittee has not ceased to operate, within twelve (12) months after the date on which the use of the structure ceased. To close a manure, litter, or process wastewater storage and handling structure, the permittee shall remove all manure, litter, or process wastewater and dispose of it in accordance with the permittee ' s nutrient management plan or document its transfer from the permitted facility in accordance with off-site transfer requirements specified in Part III.C below, unless otherwise authorized by ODAFF.

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

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 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 and address of the recipient;

c. Provide the recipient(s) with representative information on the nutrient content of the manure, litter, and/or process wastewater; and

d. These records must be retained on-site, for a period of five (5) years, and be submitted to the Permitting Authority upon request.

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 state. 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 l. 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 an NRCS engineer or a Professional Engineer, registered in Oklahoma, 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 an NRCS engineer or Professional Engineer, registered in Oklahoma, the liner shall be constructed to have hydraulic conductivities no greater than 1 x 10 (-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 Professional Engineer, registered in Oklahoma, within thirty (30) days of the damage. Documentation of liner maintenance shall be kept with the Nutrient Management Plan (NMP). The permittee shall have an NRCS engineer or Professional Engineer, registered in Oklahoma, review the documentation and do a site evaluation a minimum of once every five (5) years. If notified by the ODAFF that the potential 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.

4. Solids, sludges, 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 state.

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 and ODAFF 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. If a discharge occurs, CAFO operators shall, to the greatest extent practicable, monitor receiving waters immediately downstream of the discharge to determine if a fish kill is occurring and report their monitoring procedure and findings to ODAFF immediately. In the event the CAFO operator has difficulty gaining access to the receiving waters immediately downstream of the discharge, ODAFF will assist in gaining access to the downstream waters.

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; and 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

All CAFO operations that discharge to the following watersheds, as specified by 11-digit Hydrologic Unit Code (HUC) (see also Appendix E of this permit), shall:

Arkansas River shiner watersheds

11040006050	11090201030
11040006060	11090201040
11040007050	11090201050
11040008030	11050003020
11040008010	11050002120
11040008060	11050002060
11050001020	11050002160
11050001030	11050002090
11050001010	11050002110
11050001040	11050002130
11050001050	11090201060
11050001080	11090201070
11050001060	11050002100
11050001090	11090202010
11050002010	11090202040
11050002040	11090202020
11050002080	11090204060

Leopard darter, Ouachita Rock Pocketbook, scaleshell, and winged mapleleaf watersheds

11140105020	11140108010
11140105030	11140105060
11140105010	11140108050
11140108010	11140107020
11140105040	11140109190
11140107010	11140105070
11140108030	11140107030
11140108040	11140107050
11140108010	11140108060
11140108010	11140105080
11140105050	11140109170
11140107040	

11050002150	11090202030
11050002020	11090204050
11090201010	11090202050
11050002050	11090202060
11050003010	11090203040
11050002030	11090202080
11090201020	11090202070

a. Develop an Emergency Action Plan (EAP). The EAP shall be implemented in the event of manure, litter, or process wastewater leaking, overflowing, or running off the site. Employees shall be assigned and trained in their emergency response duties when initially employed and no less than annually thereafter. The EAP shall be included as an element of the NMP submitted to ODAFF for review. The minimum requirements for such a plan include:

i. Phone numbers for spill recovery, spill reporting, farm personnel.

ii. A description of recovery equipment and where it its located.

iii. An action plan that addresses spills from the containment structure, spills during pumping, and spills during transport. Measures should be outlined to prevent spills from discharging into waters of the state and to minimize the effects of any discharges that occur.

iv. The identification and mapping of potential discharge conveyance pathways to receiving water bodies. Spills to be considered include lagoon ruptures, wastewater conveyance pipeline breaks/clogs, and other potential sources of spills.

v. The identification of a chain of command during spill response.

vi. Measures to be implemented prior to and during bypass including:

(1) The identification of existing application areas which are less likely to result in runoff to waters of the state, their tributaries, or any other conveyance structure (depression, manmade ditch, terrace, etc.) that could feed to a sensitive water body. These application areas may be those fields furthest from the water body, or may be within an area with no or limited hydrologic connection to the water body and should be given priority over other areas;

(2) The identification of procedures for observing runoff from bypass and potential related discharge; and

(3) The identification of temporary or permanent berms/retention structures to contain runoff from bypass, if available.

b. Implement an emergency cut-off system for any wastewater conveyance line that is operated by a pump and has a surficial hydrologic connection to waters in any of the above listed watershed areas of concern. Any wastewater conveyance line that is installed after the CAFO is granted permit coverage must be designed and installed in accordance with the Oklahoma NRCS Conservation Practice Standard Codes 430 (Irrigation Pipeline) and 634 (Waste Transfer).

c. Implement annual sampling of: (1) wastewater from any retention structure that is agitated or mixed prior to land application in order to re-suspend sludge from the bottom of the retention structure, or: 2) sludge removed from the bottom of any retention structure that will be land applied for the metals arsenic, cadmium, chromium, copper, mercury, lead, nickel, selenium, and zinc. Sampling and analysis plans shall be developed and implemented prior to land application of such materials. Guidance on manure sampling may be obtained from the Oklahoma Cooperative Extension Service Publication PSS-2248. The CAFO operator shall develop and submit a lagoon sludge sampling protocol in the NMP submittal. An approvable sampling plan would include twenty (20) grab samples taken and combined to create a representative composite sample. Sampling from various locations collected from the sludge layer or from slurry created by agitation of lagoon contents ensures sampling will be representative. Metal equipment for sampling should be avoided to minimize opportunity for contamination of samples. Quart sized bottles can be half filled with sludge/slurry, double bagged, and shipped in cardboard boxes for laboratory analysis. The state of Oklahoma maintains a web site of laboratories accredited by the state for general water quality and sludge. This list is at http://www.deq.state.ok.us/CSDnew/labcert.htm. Laboratory analysis of the CAFO lagoon sludge/slurry shall be performed in accordance with EPA Publication SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. Analytical results shall be included in the annual report. See Part V.2.m of the permit.

d. Implement soil sampling of land application sites receiving: (1) wastewater from any retention structure that is agitated or mixed prior to land application, or 2) sludge removed from the bottom of any retention structure that will be land applied for the metals arsenic, cadmium, chromium, copper, mercury, lead, nickel, selenium, and zinc. The permittee shall follow the soil sampling procedure established in the NMP in accordance with Part III.A.3.e. Samples shall be taken at the same time nutrient samples are taken and may require a larger soil sampling size.

e. If located adjacent to water bodies occupied by federally-listed aquatic species,

(1) Work to establish a riparian buffer zone with a minimum width of 160 feet (NRCS Conservation Practice Standard Code 391 titled Riparian Forest Buffer and/or Code 390 titled Riparian Herbaceous Cover, Riparian Area Management Handbook 1998). No manure, litter, or process wastewater shall be applied within these designated buffers, or

(2) Seek technical assistance from Oklahoma NRCS and work to develop measures designed to provide similar buffer protections as those outlined in Part III.D.8.e(l), while maintaining a riparian area which reflects natural undisturbed riparian habitat.

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 state, the permittee is required to make immediate oral notification within 24-hours to ODAFF AEMS Division, Oklahoma City, OK at 405-522-5892.

The permittee is also required to notify ODAFF in writing within fourteen (14) working days of the discharge from the facility (see Appendix I, Discharge Initial Report form AEMS034). In addition, the permittee shall keep a copy of the notification submitted to ODAFF together with the other records required by this permit. The discharge notification shall include the following information:

a. A description of the discharge and its cause, including a description of the flow path to the receiving water body and an estimate of the flow and volume discharged.

b. 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.

c. 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, fecal coliform, five-day biochemical oxygen demand (BOD_5), total suspended solids, pH, temperature, and any pesticides which the operator has reason to believe could be in the discharge. 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, time, and duration.

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 Part 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 ODAFF AEMS Division, within thirty (30) days of the discharge event at the address listed in Part V.1 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 the Discharge Final Report Form AEMS136 (Appendix J).

C. General Inspection, Monitoring, and Recordkeeping Requirements

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

Table IV-A AgPDES Large CAFO Permit Recordkeeping Requirements

Parameter	Units	Frequency
Permit and Nutrient Management Plan *(Note: Required by the AgPDES CAFO Regulation - applicable to all CAFOs)*		
The CAFO must maintain on-site a copy of the current AgPDES 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]	ppm Pounds/ton	At least annually after initial sampling if land application occurs
Analysis of soil in all fields where land application activities are conducted to determine phosphorus content.[1]	ppm	At least annually after initial sampling if land application occurs
Operation and Maintenance ***(Note: Required by the CAFO ELG - applicable to Large CAFOs)***		
Visual inspection of all water lines	N/A	Daily[2]
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 AgPDES Large CAFO Permit Record Keeping Requirements		
Parameter	**Units**	**Frequency**
Design documentation for all manure, litter, and wastewater storage structures including the following information:		
• Volume for solids accumulation • Design treatment volume • Total design storage volume[3] • Days of storage capacity	Cubic yards/gallons Cubic yards/gallons Cubic yards/gallons Days	Once in the permit term unless revised
Documentation of all overflows from all manure and wastewater storage structures including: ***(Note: Required by the AgPDES Regulation - applicable to all CAFOs)***		
• Date and time of overflow • Estimated volume of overflow • Analysis of overflow (as required by the Permitting Authority)	Month/day/year Total gallons ppm	Per event Per event 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:		
• Date of application • Method of application • Weather conditions at the time of application and for 24 hours prior to and following application • Total amount of nitrogen and phosphorus applied[4]	Month/day/year N/A N/A Pounds/acre	Daily Daily Daily Daily
Documentation of the crop and expected yield for each field	Bushel/acre or tons/acre	Seasonally
Documentation of the actual crop planted and actual yield for each field	Bushel/acre	Per harvest
Documentation of test methods and sampling protocols used to sample and analyze manure, litter, 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 AgPDES CAFO Regulation - applicable to Large CAFOs)***		
For all manure transfers the CAFO must maintain the following records:		
• Date of transfer • Name and address of recipient • Approximate amount of manure, litter, or wastewater transferred	N/A N/A Tons/gallons	As necessary As necessary As necessary

[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 product ion area, and residual solids.
[4] Including quantity/volume of manure, litter, or process wastewater applied and the basis for the rate of phosphorus application.

PART V. ANNUAL REPORTING REQUIREMENTS

1. The annual report shall be submitted to ODAFF at the address listed below. The annual report shall be submitted by the 31st day of March. If submitting reports prior to December 21, 2025, the required report shall be submitted to the following address:

   Agricultural Environmental Management Services (AEMS)
   Oklahoma Department of Agriculture, Food and Forestry
   (ODAFF)
   P.O. Box 528804
   Oklahoma City, OK 73152-8804

   If submitting the annual report on or after December 21, 2025, the operator must submit the report using ODAFF's eNOI system available at https://ag.ok.gov/divisions/agricultural-environmental-management/ unless eNOI is otherwise unavailable or the CAFO owner/operator has obtained a waiver from the requirements to use eNOI for submission of the annual report. Owner/operators waived from the requirement to use eNOI for annual report submission must certify on the paper annual report submitted to ODAFF that use of eNOI will incur undue burden or expense compared to using the paper annual report form and then provide a basis for this determination.

2. The annual report must include the following information; (Appendix K, the CAFO Annual Report Form AEMS120 of ODAFF should be used in reporting):

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

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

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

   d. Total number of acres for land application covered by the NMP;

   e. 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;

   f. Summary of all manure, litter, and process wastewater discharges from the production area that have occurred in the previous twelve (12) months, including date, time, and approximate volume;

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

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

   i. Results of all samples of manure, litter, or process wastewater for nitrogen and phosphorus content for manure, litter, and process wastewater that was land applied;

j. Results of calculations conducted in accordance with Parts III.A.3.g.i(B) (for the Linear Approach) and III.A.7.f (for the Narrative Rate Approach);

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

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

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

ii. The data used in calculations conducted in accordance with Part III.A.7.f.

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

m. Results of all samples of wastewater and sludge that was land applied and soil of land application sites that received such materials for the metals arsenic, cadmium, chromium, copper, mercury, lead, nickel, selenium, and zinc in accordance with Parts III.D.8.c and d.

PART VI. STANDARD PERMIT CONDITIONS

A. General Conditions

1. In accordance with the provisions of 40 CFR § 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, Oklahoma Agriculture Pollutant Discharge Elimination System Act and Oklahoma Agriculture Environmental Permitting Act (hereinafter known as the "Acts") as well as all applicable federal regulations and State AgPDES rules at OAC 35:44.

2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Acts 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 AgPDES permit.

3. The permittee shall comply with effluent standards and prohibitions established under section 307(a) of the Clean Water 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 AgPDES Director, within a reasonable time, any information which the AgPDES 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 AgPDES 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 2 O.S. §2A-9.

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 Clean Water 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.

ii. *Unanticipated bypass.* The permittee shall submit notice of unanticipated bypass as required in D.5 of this section (24-hour notice).

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 state.

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;

iii. The permittee submitted notice of the upset as required in paragraph D.5. of this section (24-hour notice); and

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. 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.H of this permit applies.

13. It shall not be a defense for a permittee in an enforcement action 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. 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. The permittee shall allow ODAFF or an authorized representative (including an authorized contractor acting as a representative of ODAFF), 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 include 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 ODAFF, or an authorized representative of ODAFF, 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 Acts, 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, 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 utilize 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 AgPDES Director.

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. The laboratory shall be an Oklahoma Department of Environmental Quality certified testing laboratory and approved by ODAFF.

D. Reporting Requirements

1. The permittee shall give notice to the AgPDES 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)(l); or

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 an NMP.

2. The permittee shall give advance notice to ODAFF 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 ODAFF. ODAFF 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.

Oklahoma Department of Agriculture, Food and Forestry (ODAFF)
P.O. Box 528804
Oklahoma City, OK 73152-8804

4. 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.

5. 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 AEMS Division of ODAFF at 405-522-5892. A written submission shall also be provided to ODAFF 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.

6. 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 AgPDES Director in the permit to be reported within twenty-four (24) hours.

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

7. The permittee shall report all instances of noncompliance not otherwise reported, at the time monitoring reports are submitted. The reports shall contain the information listed in D.5.

8. 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 ODAFF, it shall promptly submit such facts or information to ODAFF.

E. e-Reporting Requirements

EPA‘s NPDES Electronic Reporting Rule requires electronic submission of the NOI, NOT, and annual report in order to provide timely information, increase data accuracy, and improve compliance with AgPDES rules. If submitting a NOI, NOT, or annual report on or after December 21, 2025, the operator must submit them using ODAFF's eNOI system available on ODAFF's website (https://ag.ok.gov/divisions/agricultural-environmental-management/) unless eNOI is otherwise unavailable or the CAFO owner/operator has obtained a waiver from the requirements to use eNOI for submission of these documents. Owner/operators waived from the requirement to use eNOI for submission of the NOI, NOT, or annual report must certify on the paper document submitted to ODAFF that use of eNOI will incur undue burden or expense compared to using the paper document and then provide a basis for this determination.

F. Signatory Requirements

All applications, reports, or information submitted to ODAFF shall be signed and certified consistent with 40 CFR § 122.22:

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.

   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 ODAFF 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 ODAFF.

G. 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."

H. Penalties for Violations of Permit Conditions

1. Whenever there are reasonable grounds to believe there has been a violation of any of the provisions

of the Oklahoma Agriculture Pollutant Discharge Elimination System Act, any permit,any rule, or any order of the AgPDES Director of the Agriculture Pollutant Discharge Elimination System, the AgPDES Director shall have the authority and powers to proceed as specified in the Administrative Procedures Act unless otherwise provided herein. However, provisions of this section for written notice, enforcement hearing, and administrative orders shall not be conditions precedent for seeking action in the district court as provided by the Oklahoma Agriculture Pollutant Discharge Elimination System Act or other applicable provisions of law.

2. The Oklahoma Agriculture Pollutant Discharge Elimination System Act shall not in any way impair or in any way affect the right of a person to recover damages for pollution that are otherwise allowed by law in a court of competent jurisdiction.

3. Any person having any interest connected with the geographic area or waters or water system affected, including but not limited to any health, environmental, pecuniary, or property interest, which interest is or may be adversely affected, shall have the right to intervene as a party in any administrative proceeding before the Department, or in any civil proceeding, relating to violations of the Oklahoma Agriculture Pollutant Discharge Elimination System Act or rules, permits or orders issued hereunder.

4. Whenever, on the basis of any information available, the Department finds that any person regulated by the Department is in violation of any act, rule, order, permit, condition, or limitation implementing the Oklahoma Agriculture Pollutant Discharge Elimination System Act, or any previously issued discharge permit, the AgPDES Director may issue an order requiring the person or entity to comply with the provision or requirement, commence appropriate administrative enforcement proceedings, or bring a civil action. Provided, however, the issuance of a compliance order or denial, placing on probation, reinstatement, suspension or revocation of a permit shall not be considered a condition precedent to the accrual or imposition of penalties or fines in any administrative, civil, or criminal proceeding.

5. A copy of any order issued pursuant to this section shall be sent immediately to the violator. In any case in which an order or notice to a violator is issued to a corporation, a copy of the order shall be served on any appropriate individual officers or service agents.

6. Any order issued pursuant to this section shall state with reasonable specificity the nature of the violation and shall specify a time for compliance not to exceed thirty (30) days in the case of a violation of an interim compliance schedule or operation and maintenance requirement and not to exceed a reasonable time in the case of a violation of a final deadline, taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements. Any order or notice issued by the AgPDES Director may be served in any manner allowed by Oklahoma Rules of Civil Procedure applicable to a civil summons.

7. Whenever on the basis of any information available the AgPDES Director finds that any person regulated by the Department has violated any of the provisions of the Oklahoma Agriculture Pollutant Discharge Elimination System Act, or any permit, rule, order, or condition or limitation implementing any of these sections, or previously issued discharge permit or related order, the AgPDES Director may assess, after providing notice and opportunity for an enforcement hearing to the alleged violator, an administrative fine of not more than Ten Thousand Dollars ($10,000.00) per day for each violation.

8. The total amount of the administrative fine shall not exceed One Hundred Twenty-five Thousand Dollars ($125,000.00) per violation. In determining the amount of any penalty assessed under this subsection, the AgPDES Director shall take into account the nature, circumstances, extent, and

gravity of the violation, or violations, and, with respect to the violator, the ability to pay, any prior history of violations, the degree of culpability, the economic benefit savings, if any, resulting from the violation, and any other matters as justice may require. For purposes of this subsection, a single operational upset which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation.

9. Enforcement hearings shall be conducted in accordance with the procedures set out in the Administrative Procedures Act.

10. The AgPDES Director is authorized to commence a civil action for appropriate relief, including a permanent or temporary injunction, for any violation for which the AgPDES Director is authorized to issue a compliance order under subsection D of this section.

11. Any person who violates any provision of the Oklahoma Agriculture Pollutant Discharge Elimination System Act, any permit condition or limitation implementing any of such provisions in a permit issued under the Oklahoma Agriculture Pollutant Discharge Elimination System Act, and any person who violates any order issued by the AgPDES Director under subsection D of this section, shall be subject to a civil penalty not to exceed Ten Thousand Dollars ($10,000.00) per day for each violation.

12. In determining the amount of the civil penalty, the court shall consider the seriousness of the violation or violations, the economic benefit, if any, resulting from the violation, any history of violations, any good faith efforts to comply with the applicable requirements, the economic impact of the penalty on the violator, and any other matters as justice may require. For purposes of this subsection, a single operational upset which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation.

13. Any action pursuant to this subsection may be brought in the district court for the district in which the property or defendant is located or defendant resides or is doing business, and the court shall have jurisdiction to restrain any violation and to require compliance.

14. The prior revocation of a permit shall not be a condition precedent to the filing of a civil action under the Oklahoma Agriculture Pollutant Discharge Elimination System Act.

15. Any person who violates any provision of this act, any order of the AgPDES Director, or any condition or limitation in a permit issued pursuant to this act may be punishable by a fine of not less than Five Hundred Dollars ($500.00) nor more than Ten Thousand Dollars ($10,000.00) per day for each violation, or by imprisonment for not more than six (6) months for each violation, or both.

16. Any person who knowingly makes any false material statement, representation, or certification in, omits material data from, or tampers with any application, notice, record, report, plan, or other document filed or required to be maintained under the Oklahoma Agriculture Pollutant Discharge Elimination System Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under the Oklahoma Agriculture Pollutant Discharge Elimination System Act, shall be punishable, upon conviction, by a fine of not more than Ten Thousand Dollars ($10,000.00) per day for each violation, or by imprisonment for not more than two (2) years, or by both. If a conviction of a person is for a violation committed after a first conviction of that person under this paragraph, punishment shall be by a fine of not more than Twenty Thousand Dollars ($20,000.00) per day for each violation, or by imprisonment for not more than four (4) years, or by both. In addition, the AgPDES Director shall deny issuance of the permit or require submission of a new application.

17. For purposes of this subsection, a single operational upset which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation.

18. Whenever, on the basis of information available, the Department finds that an owner or operator of any source is introducing a pollutant into a treatment works in violation of the Oklahoma Agriculture Pollutant Discharge Elimination System Act or any requirement, rule, permit, or order issued under this act, the Department shall notify the owner or operator of the treatment works of the violation.

19. If the operator of the treatment works does not commence appropriate enforcement action within thirty (30) days of the date of the notification, the Department may commence a civil action for

appropriate relief, including but not limited to a permanent or temporary injunction, against the owner or operator of the treatment works.

20. In the civil action, the Department shall join the operator of the source as a party to the action.

21. The action shall be brought in the district court in the county in which the treatment works is located.

22. The court shall have jurisdiction to restrain the violation and to require the operator of the treatment works and the operator of the source to take any action as may be necessary to come into compliance with the Oklahoma Agriculture Pollutant Discharge Elimination System Act.

23. Nothing in this subsection shall be construed to limit or prohibit any other authority the Department may have under this section.

24. Any person against whom an administrative compliance or penalty order is issued under this section may obtain review of the order by filing a petition for review in district court pursuant to the Oklahoma Administrative Procedures Act. The court shall not impose additional civil penalties for the same violation unless the assessment of the penalty constitutes an abuse of discretion. No stay of an administrative penalty order shall be granted until the amount of penalty assessed has been deposited with the reviewing district court pending resolution of the petition for review.

25. If any person fails to pay an assessment of an administrative penalty:

    a. after the order making the assessment has become final, or

    b. after a court in an action brought under paragraph 1 of this subsection has entered a final judgment in favor of the Department, as the case may be,

    a civil action may be brought in an appropriate district court to recover the amount assessed plus interest at currently prevailing rates from the date of the final order or the date of the final judgment, as the case may be. In such an action, the validity, amount, and appropriateness of the penalty shall not be subject to review.

26. Any person who fails to pay on a timely basis the amount of an assessment of an administrative or civil penalty shall be required to pay, in addition to the amount and interest, attorney fees and costs for the collection proceeding and a quarterly nonpayment penalty for each quarter during which the failure to pay persists. The nonpayment penalty shall be in an amount equal to twenty percent (20%) of the aggregate amount of the penalties of the person and nonpayment penalties which are unpaid as of the beginning of the quarter.

27. The Attorney General or the district attorney of the appropriate district court of Oklahoma may bring an action in a court of competent jurisdiction for the prosecution of a violation by any person of a provision of this act, any rule, any order of the AgPDES Director, or any condition or limitation in a permit issued pursuant to this act.

28. Any action for injunctive relief to redress or restrain a violation of any person of a provision of this act, any rule, any order of the AgPDES Director, or any condition or limitation in a permit issued pursuant to this act or recovery of any administrative or civil penalty assessed may be brought by:

    a. the district attorney of the appropriate district court of the State of Oklahoma,

    b. the Attorney General on behalf of the State of Oklahoma, or

    c. the Department on behalf of the State of Oklahoma.

29. It shall be the duty of the Attorney General and district attorney if requested by the AgPDES Director to bring such action.

PART VII. DEFINITIONS

AgPDES Director means the individual appointed by the Commissioner to perform the duties identified in 2 O.S. §2A-5 of the Oklahoma Agriculture Pollutant Discharge Elimination System Act.

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 or the ODAFF's AEMS forms for seeking coverage under an AgPDES 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 AgPDES general permits, a written "notice of intent" pursuant to 40 CFR § 122.28; for AgPDES individual permits, Form 1 and 2B pursuant to 40 CFR § 122.l(d)].

Concentrated animal feeding operation (CAFO) means an AFO which is defined as a Large CAFO or Medium CAFO by 40 CFR § 122.23 (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 a 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) l ,000 cattle other than mature dairy cows or veal calves, including but not limited to, heifers, steers, bulls, and cow/calf pairs; (iv) 2,500 swine each weighing 55 pounds or more; (v) l0,000 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 , including but 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 state through a man-made ditch, flushing system, or other similar man-made device; or (b) pollutants are discharged directly into waters of the state 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.

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 confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit 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 state or potential conduits to waters of the state 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.

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

Total maximum daily load (TMDL) means the sum of individual wasteload allocations (W.L.A.) for point sources, safety, reserves, and loads from nonpoint sources and natural backgrounds.

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 state.

APPENDIX A - NOTICE OF INTENT FORM AEMS095

Form AEMS095
Rev. 7/2020

Rev. Code 464
Amount Received: $_____
Receipt No. _____

OKLAHOMA DEPARTMENT OF AGRICULTURE, FOOD, AND FORESTRY
Agricultural Environmental Management Services Division

APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER FROM CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs) NOTICE OF INTENT (NOI)

I. GENERAL INFORMATION

A. TYPE OF AUTHORIZATION REQUESTED

1. ☐ Individual Permit ☐ Coverage Under General Permit
2. ☐ New ☐ Renewal ☐ Modification

B. APPLICANT INFORMATION

Applicant Name: _____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone: (___)_____ Facsimile: (___)_____ Email: _____

C. FACILITY OPERATION STATUS

☐ Existing Facility
AgPDES Permit No. OKG01_____

☐ Proposed Facility

D. FACILITY INFORMATION

Facility Name: _____ Phone: (___)_____ Facsimile: (___)_____

Facility Location (physical address or location description): _____

City: _____ State: _____ Zip: _____ County: _____ Latitude: _____ Longitude: _____

Legal Description (¼, ¼, ¼, Section, Township, Range): _____

Is facility located on Indian land? ☐ Yes ☐ No If yes, file your application with the EPA using EPA Form 2B.

If contract operation: Name of Integrator: _____

Address of Integrator: _____

II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS

A. SIC CODE, TYPE, AND NUMBER OF ANIMALS

1. SIC Code and Type	2. Animals	
	No. in Open Confinement	No. Housed Under Roof
☐ 0241 - Mature Dairy Cows		
☐ 0241 - Dairy Heifers		
☐ 0212 - Veal Calves		
☐ 0211 - Cattle (not dairy or veal)		
☐ 0213 - Swine (55 lbs. or over)		
☐ 0213 - Swine (under 55 lbs.)		
☐ 0272 - Horses		
☐ 0253 - Turkeys		
☐ 0251 - Chickens (Broilers)		
☐ 0252 - Chickens (Layers)		
☐ Other, specify _____ SIC Code _____		
3. Total Animals		

B. MANURE, LITTER AND/OR WASTE PRODUCTION & USE

1. How much manure, litter, and wastewater are generated annually by the facility?
_____ gallons _____ tons

2. If land applied, how many acres of land under the control of the applicant are available for applying the CAFO's manure/litter/wastewater?
_____ acres

3. How many tons of manure or litter, or gallons of wastewater produced by the CAFO will be transferred annually to other persons?
_____ gallons _____ tons

C. TOPOGRAPHIC MAP

Attach a topographic map of the geographic area in which the CAFO is located showing the perimeters of the facility and the outline of the production area including, but not limited to, animal waste storage facilities, land application sites owned or leased by the applicant, surface water bodies, drinking water wells, and other wells known to the applicant.

D. TYPE OF CONTAINMENT, STORAGE AND CAPACITY

1. Type of Containment	Total Capacity	Units

☐ Lagoon		
☐ Holding Pond		
☐ Evaporation Pond		
☐ Other: Specify _____		

2. Total number of acres contributing drainage. _____ acres

3. Type of Storage	Total Number of Storage Days	Total Capacity	Units (gallons, tons, etc.)
☐ Anaerobic Lagoon			
☐ Storage Lagoon			
☐ Evaporation Pond			
☐ Aboveground Storage Tank			
☐ Belowground Storage Tank			
☐ Roofed Storage Shed			
☐ Underfloor Pit			
☐ Concrete Pad			
☐ Impervious Soil Pad			
☐ Other Specify: _____			

E. NUTRIENT MANAGEMENT PLAN

1. Has a nutrient management plan been included with this permit application? ☐ Yes ☐ No
   If no, please explain: _____
2. Is a nutrient management plan being implemented for the facility? ☒ Yes ☐ No
   If no, when will the nutrient management plan be implemented? Date: _____
3. The date of the last review or revision of the nutrient management plan. Date: _____
4. If not land applying, describe the 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. 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 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 fines and imprisonment.

Name and Official Title (print or type)	Phone: (_____)_____
Signature	Date Signed: _____

INSTRUCTIONS FOR COMPLETING APPLICATION FORM AEMS095 FOR PERMIT TO DISCHARGE WASTEWATER FROM CAFOS

The General Permit OKG010000 for Discharges from CAFOs in Oklahoma is available online at the ODAFF website.

Completing the Form
Type or print, using uppercase letters, in the appropriate areas only. If you have any questions about this form, telephone ODAFF - AEMS Division at 405-522-5493 or 405-522-5495.

Section I. General Information
Indicate if the application is for an individual permit or coverage under a general permit and if it is a new, renewal, or modification application.

Item IA. Applicant Information
Provide the owner/operator contact information.

Item I-B. Facility Operation Status
Check "existing facility" if the facility is currently in operation as a CAFO. Check "proposed facility" if your facility is not now in operation or is expanding to meet the definition of a CAFO.

Item I-C. Facility Information
Enter a complete description of your facility's location including name, physical address or description of facility location, latitude/longitude, and legal description. Indicate whether the facility is located on Indian land. If the facility is located on Indian land, application needs to be filed with the EPA using EPA Form 2B. Also, if a contract operator, provide the name and address of the integrator.

Section II. Concentrated Animal Feeding Operation Characteristics

Item II-A. Type and Number of Animals
Enter 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. Manure, Litter, and/or Wastewater Production and Use

1. Provide the total amount of manure, litter and wastewater generated annually by the facility.
2. If manure, litter, and wastewater generated by the facility is to be land applied, provide the number of acres, under the control of the CAFO operator, suitable for land application.
3. Provide the estimated annual quantity of manure, litter, and wastewater that the applicant plans to transfer off-site to other persons (if any).

Item II-C. Topographic Map
Provide a topographic map of the geographic area in which the CAFO is located showing the perimeters of the facility, the outline of the production area including, but not limited to, animal waste storage facilities, land application sites, surface water bodies, drinking water wells, and other wells known to the applicant.

Item II-D. Type of Containment, Storage and Capacity

1. Provide information on the type of containment and the capacity of the containment structure(s).
2. Report 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. Provide storage capacity and the minimum storage period in-days.

Item II-E. Nutrient Management Plan (NMP)
Provide information concerning the status of submitting and implementation of an NMP for the facility. In those cases where the NMP has not been submitted, provide an explanation. If the NMP has not been implemented, provide an estimated date of implementation. If not land applying, describe the alternative uses of the manure, litter and wastewater (e.g., composting, pelletizing, energy generation, etc.).

Item II-F. Land Application Best Management Practices
Check any of the identified conservation practices that are being implemented at the facility to control runoff and protect water quality.

Section III. Certification
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:

- For corporation: by a principal executive officer of at least the level of vice president;
- For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- For a municipality, State, Federal, or other public facility: by either a principal executive officer or ranking elected official.

Where to File the Form
ODAFF - AEMS Division
P.O. Box 528804
Oklahoma City, OK 73152

APPENDIX B - NOTICE OF TERMINATION FORM AEMS096

OKLAHOMA DEPARTMENT OF AGRICULTURE, FOOD, & FORESTRY (ODAFF)
Agricultural Environmental Management Services (AEMS) Division

NOTICE OF TERMINATION (NOT) FOR PERMIT AUTHORIZATION TO DISCHARGE WASTEWATER FROM CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOS)

Submission of this Notice of Termination constitutes notice that the party identified in Section I of this form is no longer authorized to discharge wastewater from the CAFO facility identified in Section II under the Agricultural Pollutant Discharge Elimination System (AgPDES) program.

All requested information must be provided on this form. See instructions.

SECTION I. OPERATOR INFORMATION

AgPDES Permit Authorization Number: OKG01_____

Name: _____

Mailing Address: _____ City: _____ State: _____ Zip: _____

Phone: _____ Email: _____

SECTION II. FACILITY INFORMATION

Facility Name: _____

Facility Location (physical address or location description): _____

City: _____ State: _____ Zip: _____

Latitude: _____ Longitude: _____ County:_____

Legal Description (¼, ¼, ¼ Section, Township, Range): _____

SECTION III. REASON FOR TERMINATION OF PERMIT COVERAGE (Attach additional sheets if necessary)

_____

_____

_____

_____

Note: The closure of lagoons, other earthen or synthetic lined basins, and other manure, litter, or process wastewater storage structures must be fulfilled in accordance with Part III.B of Permit OKG010000, as appropriate, and Oklahoma State Rules at OAC 35:17-4-21.

SECTION IV. CERTIFICATION

I certify under penalty of law that I am familiar with the operation of facility, and to the best of my knowledge, the information provided is true, complete, and accurate and that all discharges associated with the identified facility/operation that were authorized by the general permit OKG010000 have been eliminated. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge wastewater under this general permit, and that discharging pollutants in wastewater to waters of the State is unlawful under the Clean Water Act and OAC 35:44-1-2 where the discharge is not authorized by an AgPDES permit. I also understand that the submittal of this Notice of Termination does not release me as an operator from liability for any violations of this permit or the Clean Water Act.

Name (*print*): _____ Title: _____

Signature: _____ Date: _____

INSTRUCTIONS FOR COMPLETING FORM AEMS096
NOTICE OF TERMINATION (NOT) FOR PERMIT TO DISCHARGE WASTEWATER FROM CAFOS

Completing the Form
Type or print, using uppercase letters, in the appropriate areas only. If you have any questions about this form, telephone ODAFF, AEMS Division at 405-522-5493.

Section I. Operator Information
Enter the existing AgPDES Permit Authorization Number assigned to the facility. If you do not know the permit authorization number, refer to the permit authorization issued by ODAFF-AEMS Division authorizing discharges under this permit or contact ODAFF-AEMS Division at 405-522-5493.

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility and is covered by the permit. Enter the complete mailing address, telephone number, and email address of the operator.

Section II. Facility Information
Enter the official or legal name and complete physical address, including city, state, zip code, and county. If the project or site lacks a street address, indicate the general location of the site (e.g. intersection of State Highways 61 and 34). Provide the GPS coordinates and legal description of the site location. Complete site information must be provided for termination of permit coverage to be valid.

Section III. Reason for Termination of Permit Coverage
Describe your reason for submitting this Notice of Termination. Please attach additional sheets if necessary. The closure of lagoons, other earthen or synthetic lined basins, and other manure, litter, or process wastewater storage structures must be fulfilled in accordance with Part III.B of Permit OKG010000, as appropriate, and Oklahoma State Rules at OAC 35:17-4-21.

Facility Closure Requirements (Part III.B of the General Permit OKG010000)

The following conditions shall apply to the closure of lagoons and other earthen or synthetic lined basins and other manure, litter, or process wastewater storage and handling structures:

1. Closure of Lagoons or WRS, and Other Surface Impoundments
   a. No lagoon or other earthen or synthetic lined basin shall be permanently abandoned.
   b. Lagoons and other earthen or synthetic lined basins shall be maintained at all times until closed in compliance with this section.
   c. All lagoons and other earthen or synthetic lined basins must be properly closed if the permittee ceases operation. In addition, any lagoon or other earthen or synthetic lined basin that is not in use for a period of twelve (12) consecutive months must be properly closed unless the facility is financially viable, intends to resume use of the structure at a later date, and either: (1) maintains the structure as though it were actively in use, to prevent compromise of structural integrity; or (2) removes manure and wastewater to a depth of one foot or less and refills the structure with clean water to preserve the integrity of the synthetic or earthen liner. In either case, the permittee shall submit a written report to ODAFF within thirty (30) days of basin closure detailing the actions taken, and shall conduct routine inspections, maintenance, and record keeping as though the structure were in use. Prior to restoration of use of the structure, the permittee shall notify ODAFF in writing and provide the opportunity for inspection.
   d. All closure of lagoons and other earthen or synthetic lined basins must be consistent with Oklahoma NRCS Conservation Practice Standard Code 360 (Closure of Waste Impoundments). Consistent with this standard the permittee shall remove all waste materials to the maximum extent practicable and dispose of them in accordance with the permittee's nutrient management plan, unless otherwise authorized by ODAFF.
   e. Unless otherwise authorized by ODAFF, completion of closure for lagoons and other earthen or synthetic lined basins shall occur as promptly as practicable after the permittee ceases to operate or, if the permittee has not ceased operations, twelve (12) months from the date on which the use of the structure ceased, unless the lagoons or basins are being maintained for possible future use in accordance with the requirements above.

2. Closure Procedures for Other Manure, Litter, or Process Wastewater Storage and Handling Structure

   No other manure, litter, or process wastewater storage and handling structure shall be abandoned. Closure of all such structures shall occur as promptly as practicable after the permittee has ceased to operate, or, if the permittee has not ceased to operate, within twelve (12) months after the date on which the use of the structure ceased. To close a manure, litter, or process wastewater storage and handling structure, the permittee shall remove all manure, litter, or process wastewater and dispose of it in accordance with the permittee's nutrient management plan or document its transfer from the permitted facility in accordance with off-site transfer requirements specified in Part III.C of the general permit OKG010000, unless otherwise authorized by ODAFF.

Section IV. Certification Information
The NOT must be signed as follows:

- For a corporation: By a responsible corporate officer. 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.
- For a partnership or sole proprietorship: By a general partner or the proprietor, respectively.
- For a municipality, state, federal, or other public facility: By either a principal executive officer or ranking elected official.

Include the name and title of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

Where to File NOT
ODAFF - AEMS Division
P.O. Box 528804
Oklahoma City, OK 73152

APPENDIX C - EXPEDITED REVIEW PROCESS APPLICATION FORM AEMS145

Oklahoma Department of Agriculture, Food, and Forestry

Concentrated Animal Feeding Operation (CAFO) Agriculture Pollutant Discharge Elimination System (AgPDES) General Permit Expedited Review Application

The AgPDES General Permit (OKG01000) for CAFO facilities expires on April 2, 2022. If a CAFO would like to continue their authorization to discharge under the AgPDES General Permit, they must submit a new Notice of Intent (NOI) and Nutrient Management Plan (NMP) to apply for coverage under the new AgPDES General Permit. If a CAFO is covered under the 2017 CAFO General Permit OKG010000, the CAFO may expedite the process of application review when applying for coverage under the new permit so long as there have been no changes in their NOI and NMP, except the changes listed in Part I Section F.1 of the new permit. All other conditions found in Part I Section F of the permit must be met in order for the CAFO to apply for the expedited review process. If applicable, please sign and notarize the statement below and return this form along with a color copy of the updated NOI and NMP.

"I certify under penalty of law this document and all attachments have been reviewed under my direction or supervision by qualified personnel and accurately describe all current best management practices used for waste management. Based upon my inquiry of the person or persons directly responsible for gathering data, there have not been nor will be any changes to the operation, transfer or storage of waste, animal mortality management, or waste utilization at this facility. I am aware that there are significant penalties for knowingly submitting false, inaccurate, or incomplete information including the possibility of a fine of not more than ten thousand dollars for each violation."

If the CAFO is owned by a corporation, the principal executive officer is required to sign the application. For all other legal entities, the owner/operator is required to sign the application.

Printed Name_____ Title_____

Signature_____ Date Signed_____

State of_____ County of_____

Subscribed and sworn before me on _____, 20___.

(seal) Signature of Notary Public _____

Title (and rank): _____

My commission expires: _____

Commission number: _____

APPENDIX D - HISTORIC PROPERTIES REQUIREMENTS

Coverage 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 D:

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), State Archeologist, 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, State Archeologist, THPO, or other tribal representative and ODAFF 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, State Archeologist, THPO, or other tribal representative regarding appropriate measures to mitigate or prevent adverse effects, ODAFF 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, State Archeologist, 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.

Oklahoma SHPO, State Archeologist, THPO and Tribal officials may be contacted at the following addresses:

Historic Preservation Officers (SHPO)

State Historic Preservation Office
Oklahoma Historical Society
800 Nazih Zuhdi Drive
Oklahoma City, OK 73105
Telephone: 405-521-6249; FAX: 405-522-0816
http://www.okhistory.org/shpo_/shpom.htm

State Archeologist

State Archeologist
Oklahoma Archeological Survey
111 E. Chesapeake, Room 102
Norman, OK 73019-5111
Telephone: 405-325-7211
http://www.ou.edu/archsurvey

Tribal Government Officials

The most recent contact information for Tribal governments and Tribal Historic Preservation Officers may be accessed at: https://www.nathpo.org/# or by contacting EPA, Region 6 Tribal Program Office at:

Region 6 Tribal Program
1201 Elm Street, Suite 500
Dallas, TX 75270
Telephone 1-800-887-6063

APPENDIX E - MAP OF OKLAHOMA AREAS OF CONCERN WITH ENDANGERED SPECIES REQUIREMENTS (EXCERPTED FROM THE U.S. FISH AND WILDLIFE'S DECEMBER 14, 2011, FINAL BIOLOGICAL OPINION ON THE ISSUANCE OF THIS GENERAL PERMIT)

FIGURES

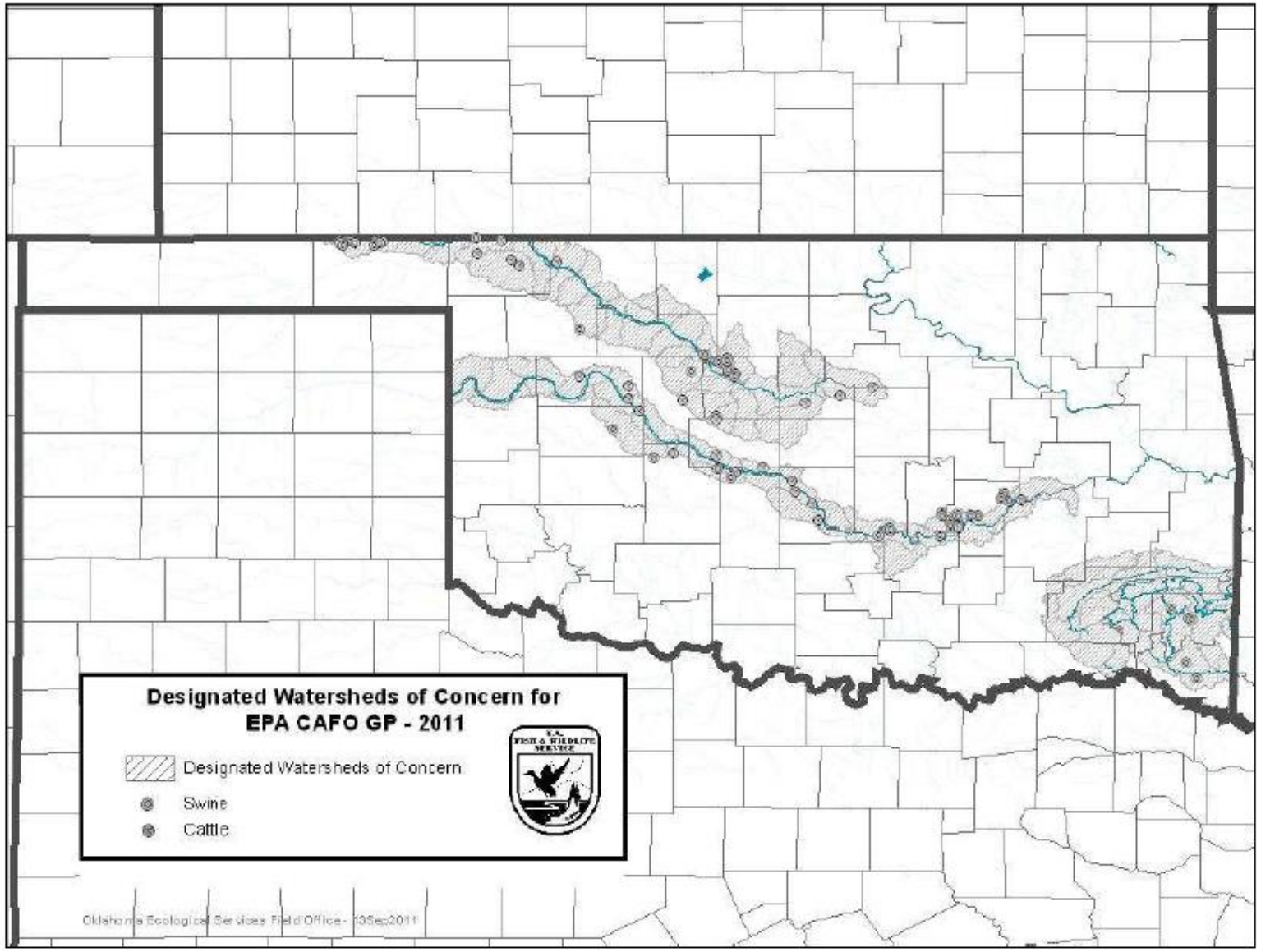

Figure 1. Designated watersheds of concern for the 2011 Oklahoma CAFO GP consultation.

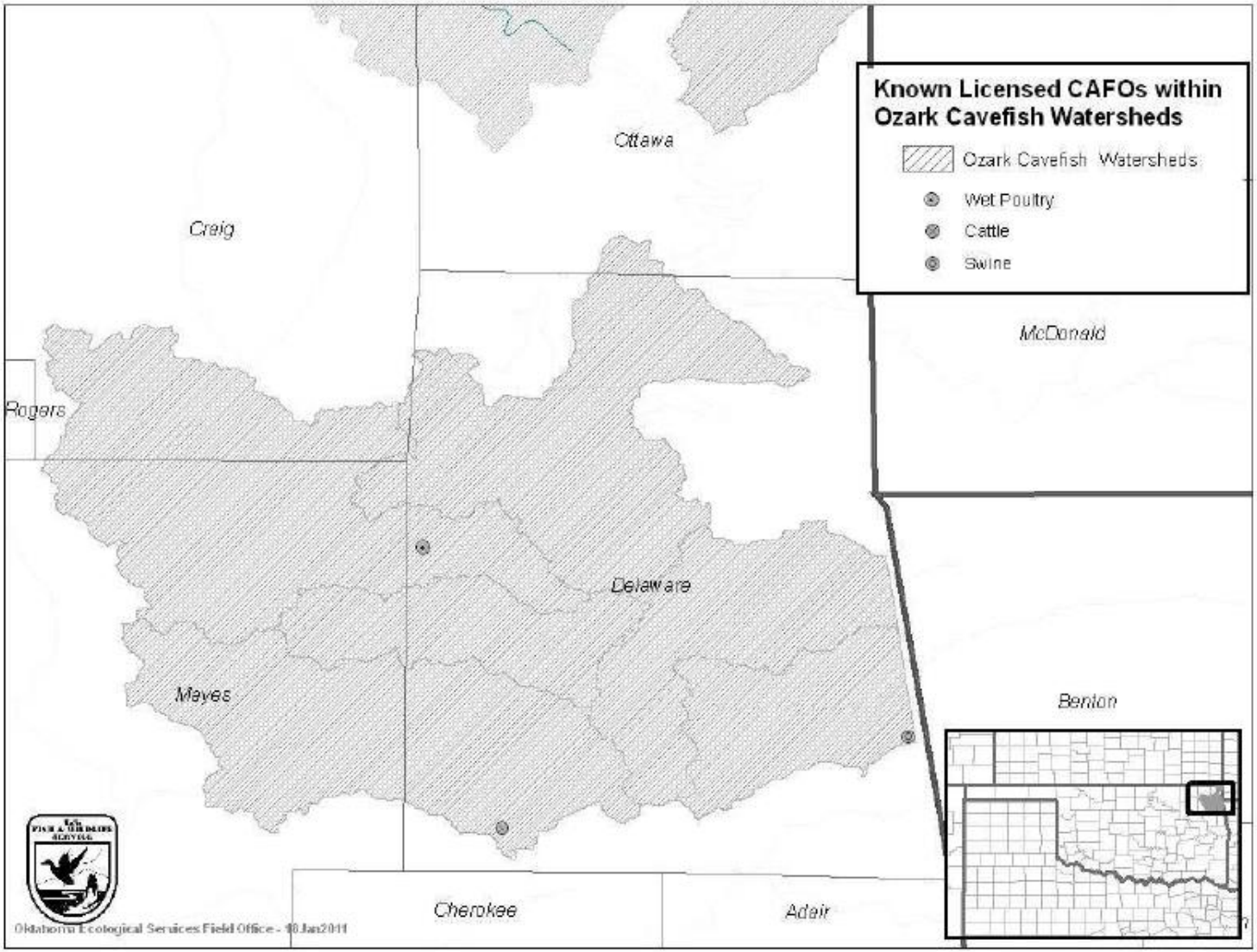

Figure 2 - Known licensed CAFOs (2004 and 2010) within Ozark cavefish watersheds. These operations are <u>not</u> covered by EPA's GP, but instead will be required to apply for an individual permit to authorize their discharge.

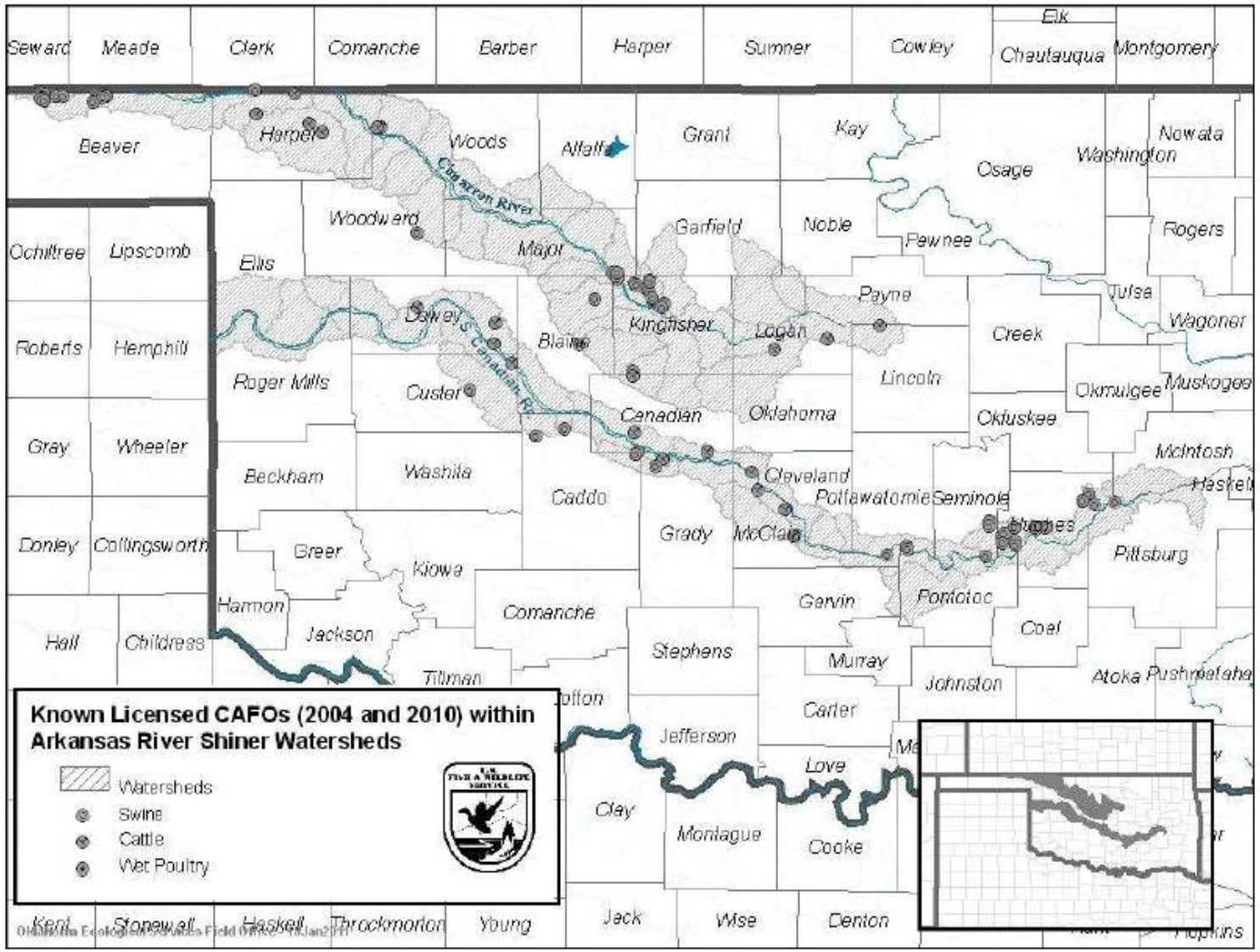

Figure 3 - Known licensed CAFOs (2004 and 2010) within Arkansas River shiner watersheds.

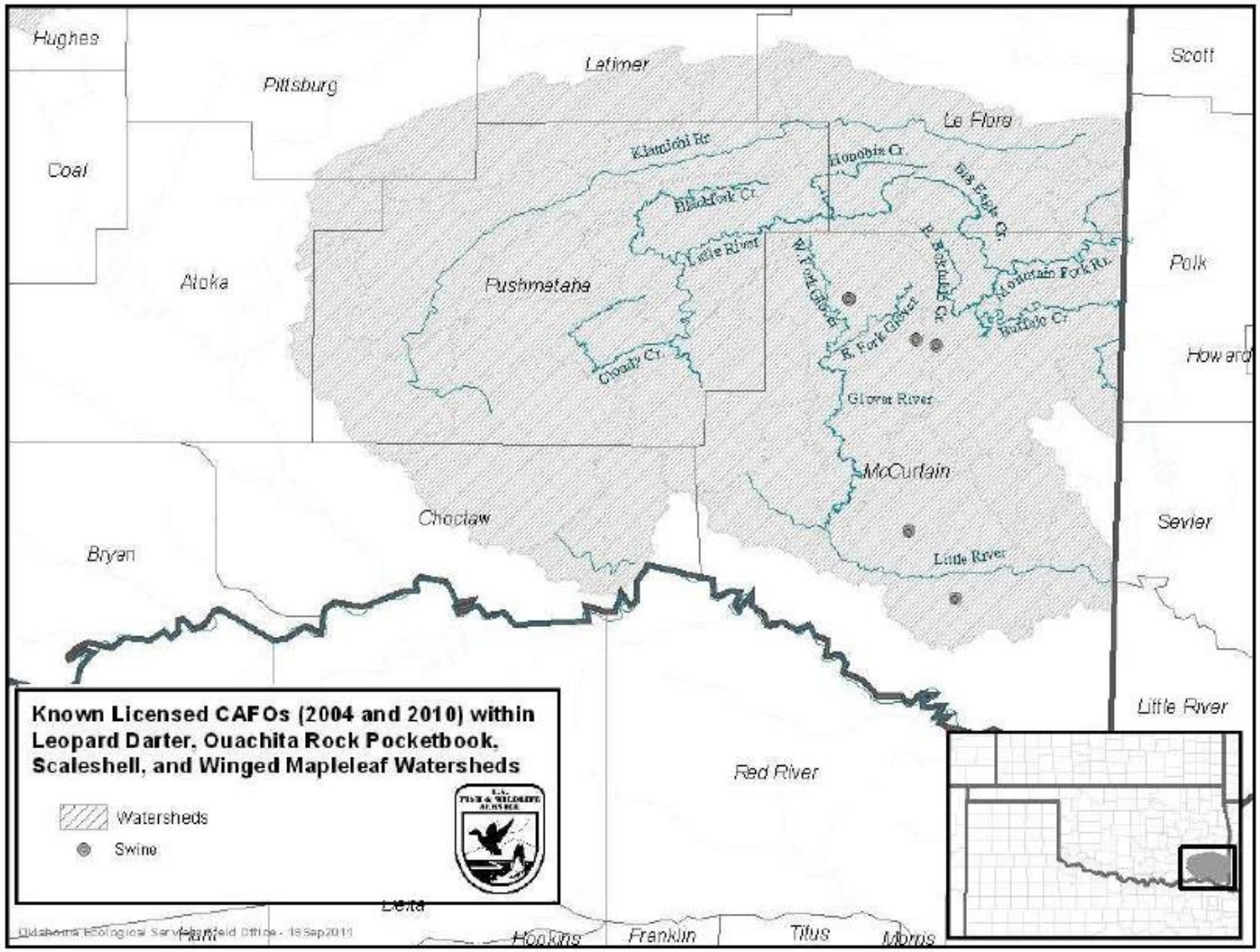

Figure 4 – Known licensed CAFOs (2004 and 2010) within leopard darter, Ouachita rock pocketbook, scaleshell and winged mapleleaf watersheds.

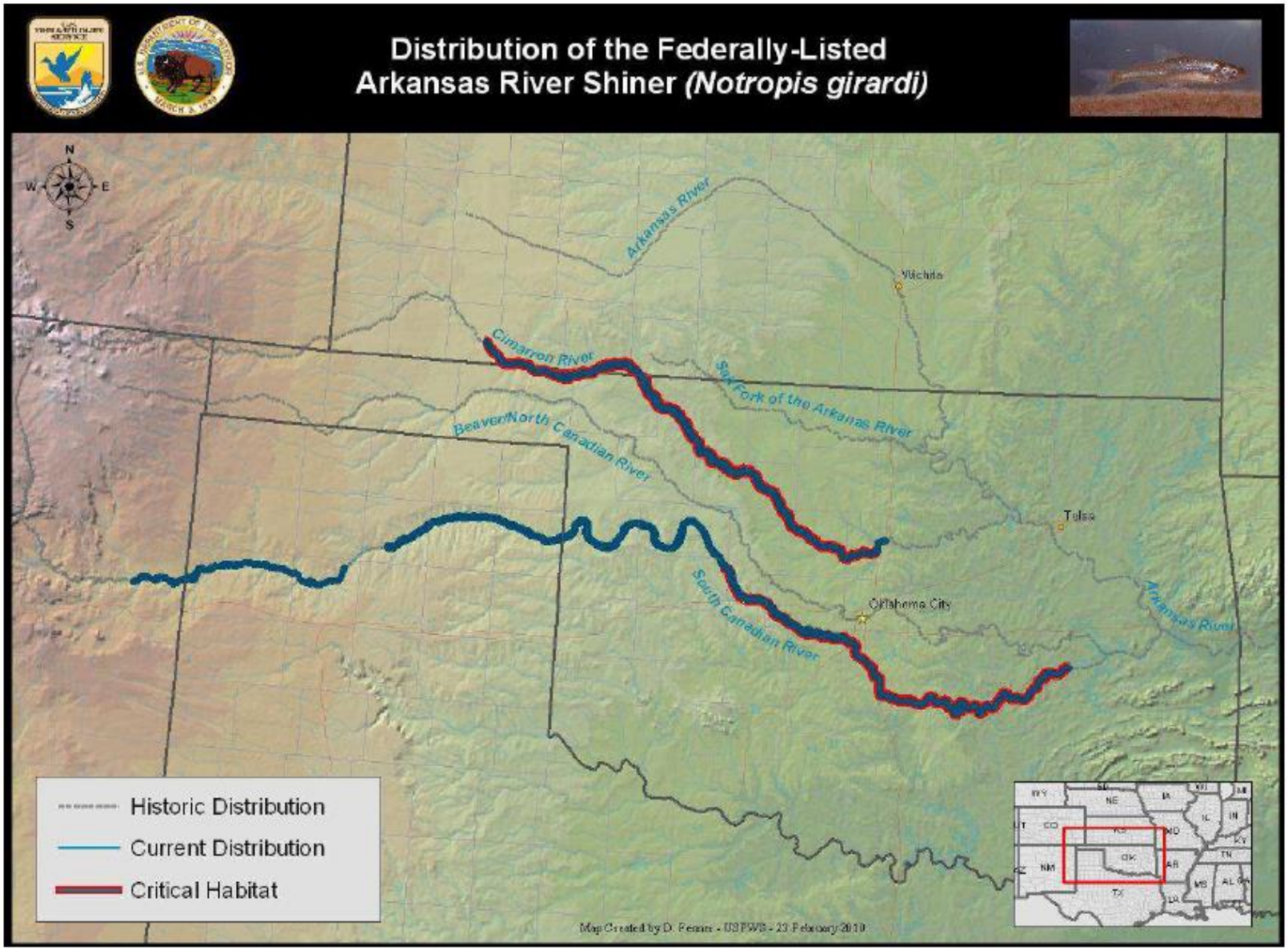

Figure 5 - 2005 Distributions and designated critical habitat for the federally-threatened Arkansas River shiner *(Notropis girardi).*

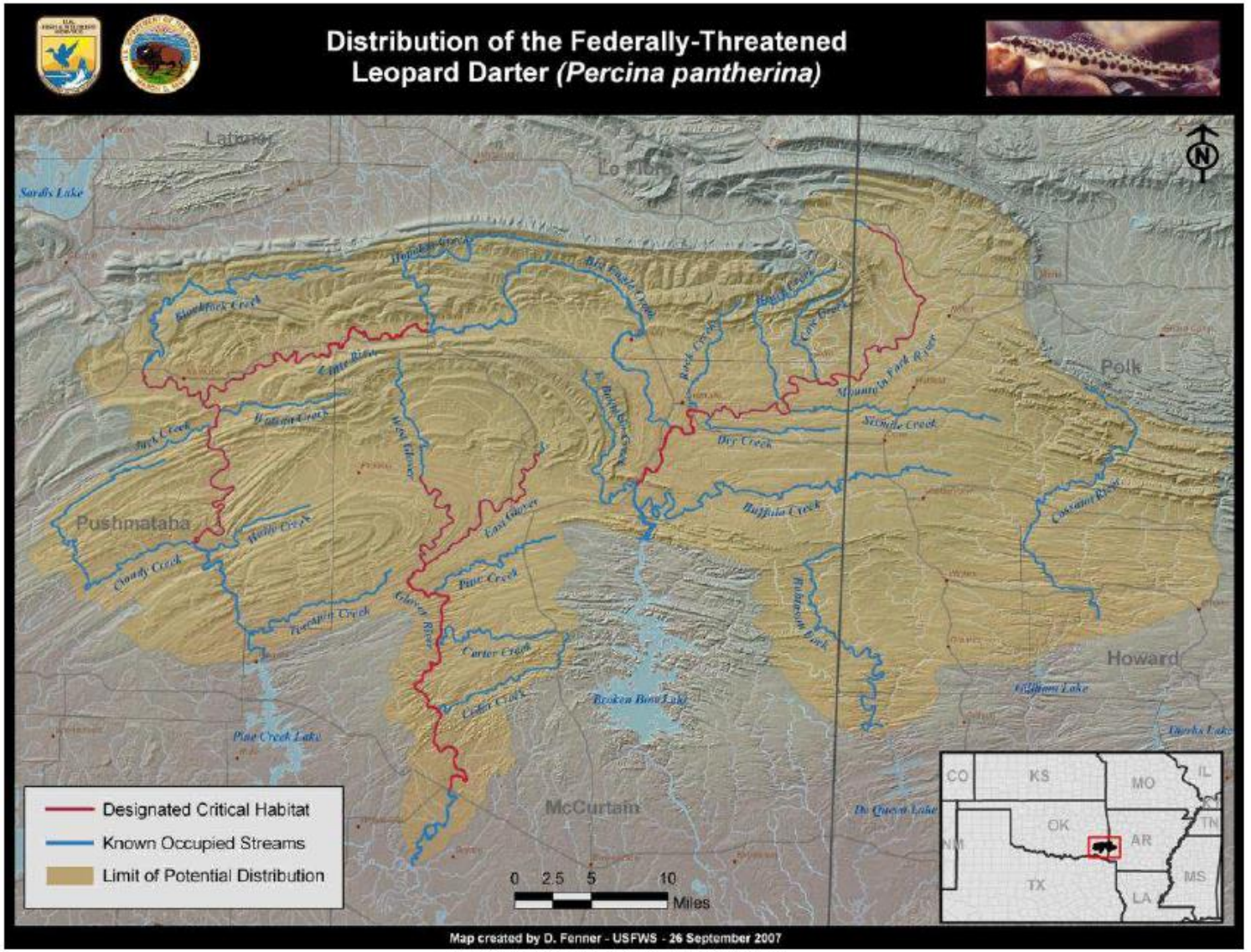

Figure 6. Distribution of the federally threatened leopard darter *(Percina pantherina)*.

APPENDIX F - OK NRCS CONSERVATION PRACTICE STANDARD CODE 590 (NUTRIENT MANAGEMENT), April 2021

United States Department of Agriculture

Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

NUTRIENT MANAGEMENT

CODE 590

(ac)

DEFINITION

Manage rate, source, placement, and timing of plant nutrients and soil amendments while reducing environmental impacts.

PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Improve plant health and productivity.
- Reduce excess nutrients in surface and ground water.
- Reduce emissions of objectionable odors.
- Reduce emissions of particulate matter (PM) and PM precursors.
- Reduce emissions of greenhouse gases (GHG).
- Reduce emissions of ozone precursors.
- Reduce the risk of potential pathogens from manure, biosolids, or compost application from reaching surface and ground water.
- Improve or maintain soil organic matter.

CONDITIONS WHERE PRACTICE APPLIES

All fields where plant nutrients and soil amendments are applied. Does not apply to one-time nutrient applications at establishment of permanent vegetation.

CRITERIA

General Criteria Applicable to All Purposes

Develop a nutrient management plan for nitrogen (N), phosphorus (P), and potassium (K), which accounts for all known measurable sources and removal of these nutrients.

Sources of nutrients include, but are not limited to, commercial fertilizers (including starter and in-furrow starter/pop-up fertilizer), animal manures, legume fixation credits, green manures, plant or crop residues, compost, organic by-products, municipal and industrial biosolids, wastewater, organic materials, estimated plant available soil nutrients, and irrigation water.

When irrigating, apply irrigation water in a manner that reduces the risk of nutrient loss to surface and ground water.

Follow all applicable state requirements and regulations when applying nutrients near areas prone to contamination, such as designated water quality sensitive areas, (e.g., lakes, ponds, rivers and streams, sinkholes, wellheads, classic gullies, ditches, or surface inlets) that run unmitigated to surface or groundwater.

Sheet, rill and wind erosion must be managed to protect soil and water quality. Concentrated flow erosion (ephemeral and classic gully) must be managed with appropriate conservation practices. When site erosion rates are greater than soil loss tolerance ("T"), a site assessment for nutrient and soil loss must be conducted to determine if mitigation practices are required to protect water quality.

Soil and tissue testing and analysis

Base the nutrient management plan on current soil test results in accordance with Oklahoma State University (OSU) guidance, or industry practice when recognized by the university. Use soil tests no older than 2 years when developing new nutrient management plans.

For nutrient management plan revisions and maintenance, take soil tests on an interval recommended by the OSU or as required by local rules and regulations.

Collect, prepare, store, and ship all samples following Oklahoma State University guidance or industry practice. The test analyses must include pertinent information for monitoring or amending the annual nutrient plan. Follow OSU guidelines regarding required analyses and test interpretations.

For soil test analyses, use laboratories successfully meeting the requirements and performance standards of the North American Proficiency Testing Program under the auspices of the Soil Science Society of America and NRCS or use an alternative NRCS or state-approved certification program that considers laboratory performance and proficiency to assure accuracy of soil test results. Alternative certification programs must have solid stakeholder support (e.g., Oklahoma Department of Agriculture Food and Forestry, Oklahoma State University, NRCS State staff, growers, and others) and be state or regional in scope.

Maintain soil pH within ranges which enhance the adequate level for plant or crop nutrient availability and utilization. Refer to Oklahoma State University for guidance.

If the area (field) represented by the soil test is extremely variable, the field shall be separated into smaller areas so that representative samples can be gathered across the field. In this way, some areas of the field will be treated differently from others to reduce variability so that the field can be sampled and treated as a unit in the future. Variability in a field can often be noted by differences in slope, soil texture, landscape position, previous crop, manure application history, surface soil color, and crop growth or yield.

Manure, organic by-product, and biosolids testing and analysis

Collect, prepare, store, and ship all manure, organic by-products, and biosolids following Oklahoma State University (OSU) guidance or industry practice when recognized by the university. In the absence of such guidance, test at least annually, or more frequently if needed to account for operational changes (e.g., feed management, animal type, manure handling strategy, etc.) impacting manure nutrient concentrations. If no operational changes occur and operations can document a stable level of nutrient concentrations for the preceding 3 consecutive years, manure may be tested less frequently, unless federal, state, or local regulations require more frequent testing. Follow OSU guidelines regarding required analyses and test interpretations. Analyze, as a minimum, total N, total P or P_2O_5, total K or K_2O, and percent solids.

When planning for new or modified livestock operations, and manure tests are not available yet, use the output and analyses from similar operations in the geographical area if they accurately estimate nutrient output from the proposed operation or use "book values" recognized by the NRCS (e.g., NRCS Agricultural Waste Management Field Handbook) and Oklahoma State University.

For manure analyses, use laboratories successfully meeting the requirements and performance standards of the Manure Testing Laboratory Certification program 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.

For nutrient management plans developed as a component of a comprehensive nutrient management plan for an animal feeding operation (AFO) follow policy in NRCS directive General Manual (GM) 190, Part 405, "Comprehensive Nutrient Management Plans." These plans must include documentation of all nutrient imports, exports, and on-farm transfers.

Nutrient values of manure, organic by-products and biosolids must be determined prior to land application.

Nutrient loss risk assessments
Use current NRCS-approved nitrogen, phosphorus, and soil erosion risk assessment tools to assess the site-specific risk of nutrient and soil loss.

Complete an NRCS-approved nutrient risk assessment for nitrogen on all fields where nutrient management is planned unless the Oklahoma NRCS, in cooperation with the Oklahoma Department of Agriculture Food and Forestry, has determined specific conditions where N leaching is not a risk to water quality, including drinking water.

Complete an NRCS-approved nutrient risk assessment for phosphorus when any of the following conditions are met—

- P application rate exceeds Oklahoma State University fertility rate guidelines for the planned crop(s).
- The planned area is within a P-impaired watershed.
- The site-specific conditions equating to low risk of P loss have not been determined by the NRCS in cooperation with the Oklahoma Department of Agriculture Food and Forestry.

Any fields excluded from a P risk assessment must have a documented agronomic need for P, based on soil test P and Oklahoma State University nutrient recommendations.

For fields receiving manure, where P risk assessment results equate to—

- LOW risk.—Manure can be applied at rates to supply P at greater than crop requirement not to exceed the N requirement for the succeeding crop.
- MODERATE risk.—Manure can be applied at rates not to exceed crop P removal rate or the soil test P recommended rate for the planned crops in rotation.
- HIGH risk.—Manure can be applied at rates not to exceed crop P removal rate if the following requirements are met:
  - A soil P drawdown strategy has been developed, documented, and implemented for the crop rotation.
  - Implementation of all mitigation practices determined to be needed by site specific assessments for nutrients and soil loss to protect water quality.
  - Any deviation from these high-risk requirements that would increase the risk of P runoff requires the approval of the Chief of the NRCS.

The 4Rs of nutrient stewardship
Manage nutrients based on the 4Rs of nutrient stewardship—apply the right nutrient source at the right rate at the right time in the right place—to improve nutrient use efficiency by the crop and to reduce nutrient losses to surface and groundwater and to the atmosphere.

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

Determine nutrient values of all nutrient sources (e.g. commercial fertilizers, manure, organic by-products, biosolids) prior to land application.

Determine nutrient contribution of cover crops, previous crop residues, and soil organic matter.

For operations following USDA's National Organic Program, apply and manage nutrient sources according to program regulations.

For enhanced efficiency fertilizer (EEF) products, use products defined by the Association of American Plant Food Control Officials as EEF and recommended for use by Oklahoma State University.

In areas where salinity is a concern, select nutrient sources that limit the buildup of soil salts. When manures are applied, and soil salinity is a concern, monitor salt concentrations to prevent potential plant or crop damage and reduced soil quality.

Apply manure or organic by-products on legumes at rates no greater than the Oklahoma State University estimated N removal rates in harvested plant biomass, not to exceed P risk assessment limitations.

For any single application of nutrients applied as liquid (e.g., liquid manure, nutrients in irrigation water, fertigation)—

- Do not exceed the soil's infiltration rate or water holding capacity.
- Apply so that nutrients move no deeper than the current crop rooting depth.
- Avoid runoff or loss to subsurface tile drains.

Nutrient rate

Plan nutrient application rates for N, P, and K using Oklahoma State University recommendations or industry practices when recognized by the university. Lower-than-recommended nutrient application rates are permissible if the client's objectives are met.

At a minimum, determine the rate based on crop/cropping sequence, current soil test results, and NRCS-approved nutrient risk assessments. Where applicable, use realistic yield goals.

For new crops or varieties where Oklahoma State University guidance is unavailable, industry-demonstrated yield and nutrient uptake information may be used.

Estimate realistic yield potentials or realistic yield goals using Oklahoma State University procedures or based on historical yield or growth data, soil productivity information, climatic conditions, nutrient test results, level of management, and/or local research results considering comparable management and production conditions. A realistic yield goal is generally the average yield over the last 5 years plus 20%.

Nutrient application timing and placement

Consider the nutrient source, management and production system limitations, soil properties, weather conditions, drainage system, soil biology, and nutrient risk assessment to develop optimal timing of nutrients. For N, time the application as closely as practical with plant and crop uptake. For P, time planned surface application when runoff potential is low. Time the application of all nutrients to minimize potential for soil compaction.

For crop rotations or multiple crops grown in one year, do not apply additional P if it was already added in an amount sufficient to supply all crop nutrient needs.

To avoid salt damage, follow Oklahoma State University recommendations for the timing, placement, and rate of applied N and K in starter fertilizer or follow industry practice recognized by the university.

Do not surface apply nutrients when there is a risk of runoff, including when—

- Soils are frozen.
- Soils are snow-covered.
- The top 2 inches of soil are saturated.

Exceptions for the above criteria related to surface-applied nutrients when there is a risk of runoff can be made when specified conditions are met and adequate conservation measures are installed to prevent the offsite delivery of nutrients. NRCS, in cooperation with the Oklahoma Department of Agriculture Food and Forestry, will define adequate treatment levels and specified conditions for applications of manure if soils are frozen and/or snow covered or the top 2 inches of soil are saturated. At a minimum, must consider the following site and management factors:

- Climate (long-term)
- Weather (short-term)
- Soil characteristics
- Slope
- Areas of concentrated flow
- Organic residue and living covers
- Amount and source of nutrients to be applied
- Setback distances to protect local water quality

Nutrient applications associated with irrigation systems shall be applied in accordance with the requirements of Oklahoma NRCS Irrigation Water Management (449) standard and according to the NRCS National Engineering Handbook, Part 652, Irrigation Guide.

Using effluent water for irrigating crops and grasses can increase salt concentrations in the soil creating a negative impact on plant growth. Oklahoma Technical Note Agronomy OK-17 contains guidance for irrigating with effluent water.

When risk assessment requires, use application methods, timing, technologies or strategies to reduce the risk of nutrient movement or loss, such as:

- Split nutrient applications.
- Banded applications.
- Injection of nutrients below the soil surface.
- Incorporate surface-applied nutrient sources when precipitation capable of producing runoff or erosion is forecast within the time of a planned application.
- High-efficiency irrigation systems and technology.
- Enhanced efficiency fertilizers
- Slow or controlled release fertilizers
- Nitrification inhibitors
- Urease inhibitors.
- Drainage water management.
- Tissue testing, chlorophyll meters, or real-time sensors.
- Pathogen management considerations.
- Other recommended technologies that improve nutrient use efficiency and minimize surface or groundwater concerns.

When applying liquid manure or effluent, the total single application:

- 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.

A soil salinity analysis shall be performed when waste water effluent used for irrigation has been applied on an area for 3 years or more. The area shall be monitored for salinity accumulation annually using a soil salinity analysis as long as effluent is being applied. This analysis should include results for Na, Ca, Mg, K, B, EC, TSS (total soluble salts), Sodium Adsorption Ratio (SAR), Exchangeable Sodium Percentage (ESP), and pH.

Additional Criteria to Minimize Agricultural Nonpoint Source Pollution of Surface and Groundwater

Apply conservation practices to avoid nutrient loss and control and trap nutrients before they can leave the field(s) by surface, leaching, or subsurface drainage (e.g., tile, karst) when there is a significant risk of transport of nutrients.

Additional Criteria to Reduce the Risk of Potential Pathogens From Manure, Biosolids, or Compost Application From Reaching Surface and Groundwater

When applicable, follow proper biosecurity measures as provided in NRCS directives GM-130, Part 403, Subpart H, "Biosecurity Preparedness and Response."

Follow all applicable federal, tribal, state, and local laws and policies concerning the application of manure, biosolids, or compost in the production of fresh, edible crops.
Apply manure, biosolids, or compost with minimal soil disturbance or by injection into the soil unless it is being applied to an actively growing crop, a minimum of 30 percent residue exists, or there is a living cover that has a fibrous root system with 75 percent or more cover. Do not surface apply manure if a storm event is forecast within 24 hours.

Additional Criteria to Reduce Emissions of Objectionable Odors, PM and PM Precursors, and GHG and Ozone Precursors

To address air quality concerns caused by odor, N, sulfur, and particulate emissions; adjust the source, timing, amount, and placement of nutrients to reduce the negative impact of these emissions on the environment and human health.

Do not surface apply solid nutrient sources, including commercial fertilizers, manure, or organic by-products of similar dryness/density when there is a high probability that wind will blow the material and emissions offsite. Do not surface apply liquid nutrient sources when there is a high probability that wind will blow the liquid droplets applied from sprinklers or other applicable methods offsite.

Reduce the potential for volatilization by applying sources subject to volatilization during cooler, higher humidity conditions or by placement that minimizes vulnerability to volatilization.

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
- windbreaks
- other technologies that minimize the impact of these emissions

Additional Criteria to Improve or Maintain Organic Matter

Design the plant or crop management systems so the soil conditioning index (SCI) organic matter subfactor is positive.

Apply manure, compost, or other organic nutrient sources at a rate and with minimal disturbance that will improve soil organic matter without exceeding acceptable risk of N or P loss.

For low residue crops or cropping systems, apply adequate nutrients to optimize plant or crop residue production to maintain or increase soil organic matter.

CONSIDERATIONS

General Considerations

Consider development of nutrient management plans by conservation management unit (CMU). A CMU is a field, group of fields, or other land units of the same land use and having similar treatment needs and planned management. A CMU is a grouping by the planner to simplify planning activities and facilitate development of conservation management systems. A CMU has definitive boundaries such as fencing, drainage, vegetation, topography, or soil lines.

Develop site-specific yield maps using a yield monitoring system, multispectral imagery or other methods. Use the data to further delineate low- and high-yield areas, or zones, and make the necessary management changes. Use variable rate nutrient application based on site-specific factor variability. See NRCS directive Agronomy Technical Note (TN) 190, AGR.3, "Precision Nutrient Management Planning."

Use the adaptive nutrient management learning process to improve nutrient use efficiency on farms as outlined in NRCS' national nutrient policy in GM-190, Part 402, "Nutrient Management." Consider using an adaptive approach to adjust nutrient rate, timing, form, and placement as soil biologic functions and soil organic matter changes over time. See NRCS directive Agronomy Technical Note (TN) 190, AGR.7, "Adaptive Nutrient Management Process."

When developing new nutrient management plans, consider using soil test information no older than 1 year rather than 2 years.

Develop a whole farm nutrient budget (nutrient mass balance), including all imported and exported nutrients. Imports may include feed, fertilizer, animals and bedding, while exports may include crop removal, animal products, animal sales, manure, and compost.

Provide a nutrient analysis of all nutrient source exports (manure or other materials).

Excessive levels of some nutrients can cause induced deficiencies of other nutrients, (e.g., high soil test P levels can result in zinc deficiency in corn).

Use soil tests, plant tissue analyses, and field observations to check for secondary plant nutrient deficiencies or toxicity that may impact plant growth or availability of the primary nutrients.

Do not apply K in situations where an excess (greater than soil test K recommendation) causes nutrient imbalances in crops or forages.

Use bioreactors and multistage drainage strategies to mitigate nutrient loss pathways, as applicable.

Use legume crops and cover crops to provide N through biological fixation. Cover crops with a carbon to nitrogen ratio below 20:1 can release a large amount of soluble N after being plowed or tilled into the soil when an actively growing crop is not present to take up nutrients, leading to increased risks of nitrate movement and nitrous oxide emissions. The nitrous oxide emissions often occur in high soil moisture conditions, such as when a legume cover crop is plowed down in fall or early spring. To avoid these losses, use grass-legume or grass-legume-forbs mixtures with a more balanced carbon to nitrogen ratio.

Use winter hardy grass cover crops to take up excess N after the cash crop growing season and promote contribution of the nitrogen to next plant or crop.

Use conservation practices that slow runoff, reduce erosion, and increase infiltration (e.g., filter strip, contour farming, or contour buffer strips).

When a recycled product (e.g., compost) is to be used as a nutrient source on food crops or as food for humans or animals, make sure that pathogen levels have been reduced to acceptable levels (reference the Food and Drug Administration's Food Safety Modernization Act at www.fda.gov/FSMA). When the recycled product has come from another farming operation, implement biosecurity measures and evaluate the risk of pathogen transfer that could cause plant or animal diseases.

Use manure treatment systems that reduce pathogen content from manure.

Implementing a soil health management system that reduces tillage or other soil disturbance, includes a diverse rotation of crops and cover crops, keeps roots growing throughout the year, and keeps the soils covered to reduce nutrient losses, and improves:

- Nutrient use efficiency, rooting depth, and availability of nutrients.
- Soil organic matter levels.
- Availability of nutrients from organic sources.
- Aggregate stability and soil structure.
- Infiltration, drainage, and aeration of the soil profile.
- Soil biological activity.
- Water use efficiency and available moisture.

Use targeted or prescribed livestock grazing to enhance nutrient cycling and improve soil nutrient cycling functions.

Elevated soil test P levels may lead to reduced mycorrhizal fungal associations and immobilize some micronutrients, such as iron, zinc, and copper.

Apply manure, compost, or other nutrient sources with minimal soil disturbance and at a rate that will improve soil organic matter without exceeding acceptable risk of N or P loss.

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.

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

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.

PLANS AND SPECIFICATIONS

In the nutrient management plan, document:

- Aerial site photograph(s), imagery, topography, or site map(s).
- Soil survey map of the site.
- Soil information including: soil type, surface texture, drainage class, permeability, available water capacity, depth to water table, restrictive features, and flooding and ponding frequency.
- Location of designated sensitive areas and the associated nutrient application restrictions and setbacks.
- Location of nearby residences, or other locations where humans may be present on a regular basis, that may be impacted if odors or PM are transported to those locations.
- Results of approved risk assessment tools for N, P, and erosion losses.
- Documentation establishing the application site presents a low risk for P transport to local water if P is applied in excess of crop requirement.
- Current and planned plant production sequence or crop rotation.
- All available test results (e.g. soil, water, compost, manure, organic by-product, and plant tissue sample analyses) upon which the nutrient budget and management plan are based.
- When soil P levels are increasing above an agronomic level, include a discussion of the risk associated with P accumulation and a proposed P draw-down strategy.
- Realistic yield goals for the crops (where applicable for developing the nutrient management plan).
- Nutrient recommendations for N, P, and K for the entire plant production sequence or crop rotation.
- Listing, quantification, application method and timing for all nutrient sources (including all enhanced efficiency fertilizer products) that are planned for use and documentation of all nutrient imports, exports, and onsite transfers.
- Guidance for implementation, operation and maintenance, and recordkeeping.

For variable rate nutrient management plans, also include:

- 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 per management zone. Must include site-specific yield maps using soils data, current soil test results, and a yield monitoring system with GPS receiver to correlate field location with yield.
- 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.
- After implementation, 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 nutrient or soil amendment applications.

If increases in soil P levels are expected above an agronomic level (i.e., when N-based rates are used), document:

- Soil P levels at which it is desirable to convert to P-based planning.
- A long-term strategy and proposed implementation timeline for soil test P drawdown from the production and harvesting of crops.
- Management activities or techniques used to reduce the potential for P transport and loss.
- For AFOs, a quantification of manure produced in excess of crop nutrient requirements.

OPERATION AND MAINTENANCE

Review or revise plans periodically to determine if adjustments or modifications are needed. At a minimum, review and revise plans as needed with each soil test cycle, changes in manure management, volume or analysis, plants and crops, or plant and crop management.

Monitor fields receiving animal manures and biosolids for the accumulation of heavy metals and P in accordance with LGU guidance and State law.

For animal feeding operation, 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. For products too dangerous to calibrate, follow Oklahoma State University or equipment manufacturer guidance on proper equipment design, plumbing, and maintenance.

Document the nutrient application rate. When the applied rate differs from the planned rate, provide appropriate documentation to explain the difference.

Protect workers from and avoid unnecessary contact with nutrient sources. Take extra caution when handling anhydrous ammonia or when managing organic wastes stored in unventilated tanks, impoundments, or other enclosures.

Use material generated from cleaning nutrient application equipment in an environmentally safe manner. Collect, store, or field apply excess material in an appropriate manner.

Recycle or dispose of nutrient containers in compliance with State and local guidelines or regulations.

Maintain records for at least 5 years to document plan implementation and maintenance. Records must include:

- All test results (soil, water, compost, manure, organic by-product, and plant tissue sample analyses) upon which the nutrient management plan is based.
- Listing and quantification of all nutrient sources (including all enhanced efficiency fertilizer products) that are planned for use and documentation of all nutrient imports, exports and onsite transfers.
- Date(s), method(s), and location(s) of all nutrient applications.
- Weather conditions and soil moisture at the time of application, elapsed time from manure application to rainfall or irrigation event(s).
- Plants and crops planted, planting and harvest dates, yields, nutrient analyses of harvested biomass, and plant or crop residues removed.
- Dates of plan review, name of reviewer, and recommended adjustments resulting from the review.

For variable rate nutrient management plans, also include:

- Maps identifying the variable application location, source, timing, amount, and placement of all plant and crop nutrients applied.
- GPS-based yield maps for crops where yields can be digitally collected.

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NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE GENERAL SPECIFICATION

NUTRIENT MANAGEMENT

(Ac.)

CODE 590

GENERAL SPECIFICATIONS

Procedures, technical detail, and other information listed below provide additional guidance for carrying out selected components of the (590) Nutrient Management Practice. This material is referenced from the conservation practice standard for the named practice and supplements the requirements and considerations listed therein.

Soil Test Interpretations

Soil test recommendations are located in Oklahoma Cooperative Extension Service Publication ***PSS-2225, OSU Soil Test Interpretations*** ***(http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1490/PSS-2225web.pdf)***. The information contained in the tables shall be used in conjunction with a current soil test analysis (no older than 2 years) to prepare nutrient budgets and to develop nutrient management plans for land users.

Nutrient requirements for crops not listed within the tables should be referred to Oklahoma State University (OSU) Extension Educators or Specialists.

Oklahoma State Extension Fact Sheets are available on-line at the following web site:

http://pods.dasnr.okstate.edu/docushare/dsweb/View/Collection-12

Soil Sampling Requirements

Fields used for production of cultivated crops may be sampled any time after harvest or before planting. Non-cultivated fields should be sampled during the dormant season. Do not sample immediately after lime, fertilizer or manure applications.

Soil sampling depth will follow current Oklahoma State University recommendations contained within the Soil Sampling Fact Sheet (PSS – 2207)

A minimum of 20 core samples shall be taken randomly from the field or sample area. The core samples shall be collected and mixed thoroughly in a clean plastic container. Approximately one (1) pint of the mixed core samples will be placed in a bag and sent for testing.

The Oklahoma Cooperative Extension Service Office is available to assist with the soil testing process. Additional information concerning soil sampling can be found in the Oklahoma Cooperative Extension Service Publication ***PSS-2207, How to Get a Good Soil Sample***

http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-9166/PSS-2207web.pdf.

If a soil test laboratory other than OSU is used, the lab shall use the same phosphorus and potassium extractant (Mehlich-3) as used by the OSU lab and nutrient recommendations will be the same as those used by OSU. The soil testing laboratory shall be a member of the North

American Proficiency Testing Program - Performance Assessment Program (NAPT-PAP) or Agricultural Laboratory Proficiency Program.

Soil testing shall include analysis for any nutrients for which specific information is needed to develop the nutrient management plan (e.g. N, P, K, micro-nutrients, salinity and pH).

Test result conversion factors:

PPM or mg/kg x 2 = lbs/ac.
Elemental P x 2.29915 = P_2O_5
Elemental K x 1.2047 = K_2O

Nutrient Application Timing, Method, and Placement

Timing, method, and placement of nutrient application shall correspond as closely as possible with plant nutrient uptake characteristics, cropping system limitations, weather and climatic conditions, and field accessibility. Nutrients materials will be applied uniformly to the area.

Nutrients shall be applied anytime during active forage growth by broadcasting, injection or incorporation. For warm season plants (bermudagrass, corn, etc.), late spring application is optimal. However, for cool season plants (fescue, wheat, etc.), a split application in the early fall and early spring works best.

Nutrients will be applied in a manner that avoids nutrient loss and control and trap nutrients before they leave the field(s) by surface, leaching, or subsurface drainage (e.g. tile, karst). Inorganic and organic nutrients will not be applied to the following areas:

- To areas within 100 feet of a perennial stream, pond, well, wetland or sinkhole, unless an established buffer strip is present. The width of the buffer strip will be used as a setback distance for application purposes. The buffer strip must meet the requirements for design and maintenance established in the appropriate NRCS buffer standard and specification.
- To areas within 50 feet of an intermittent stream unless an established buffer strip is present. The width of the buffer strip will be used as a setback distance for application purposes. The buffer strip must meet the requirements for design and maintenance established in the appropriate NRCS buffer standard and specification.
- To fields with >15% slope.
- To soils less than 10 inches in depth to bedrock.

Biosolids Application

When sewage sludge is applied, the accumulation of potential pollutants (including arsenic, cadmium, copper, lead, mercury, selenium, and zinc) in the soils shall be monitored in accordance with the US Code, Reference 40CFR, Parts 403 and 503, and/or any applicable state and local laws or regulations. The role of monitoring the application of sewage or municipal sludge in Oklahoma is the responsibility of the Oklahoma Department of Environmental Quality (DEQ). Contact DEQ for information concerning the use of municipal sludge. Additional information pertaining to biosolids can be found in Oklahoma Cooperative Extension Service Publication ***CR-2201, Using Biosolids as a Plant Nutrient Source.*** ***http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2646/CR-2201web.pdf***

Oil/Gas Well Waste Application

The Oklahoma Corporation Commission regulates land applications of waste material from oil and gas wells. Contact the Oklahoma Corporation Commission for information concerning regulations and permitting for land applications of these materials.

Inorganic/Commercial Nutrient Application Rates

Application rates of inorganic/commercial sources of nutrients shall be based on recommendations that consider current soil test results, realistic yield goals and management capabilities. OSU nutrient recommendations for major crops and grasses are contained in OSU Publication PSS-2225

The following guidance shall also be used when applying inorganic/commercial sources of nutrients:

- **Nitrogen Application** - N application rates shall match the plant uptake rate for the yield goal as closely as possible. The nitrogen requirement is calculated by subtracting the soil test nitrogen value from the nitrogen required for a selected crop and yield goal.
- **Phosphorus (P_2O_5) Application** - P_2O_5 application rates must not exceed OSU fertilizer recommendations.
- **Potassium (K_2O) Application** - K_2O application rates shall match the required rates as closely as possible.
- **Other Plant Nutrients** - The planned rates of application for secondary and micronutrients shall be consistent with OSU guidance *(Publication PSS-2225)*.
- **Starter Fertilizers** - Starter fertilizers containing N, P, and/or K may be applied to row crops to overcome early stress of the root environment such as a cool, wet soil. Starter fertilizers are typically applied in the row with the seed or banded alongside the seed. When fertilizers containing N and K_2O dissolve in the soil they can contribute to salt concentration in the soil solution. The distance of the fertilizer from the seed is the most important factor when considering potential salt injury. A common method of starter fertilizer placement to reduce potential salt damage is 2 inches below and 2 inches to the side of the seed row. Typically, the sum of the N and K_2O is used as a guideline as to how much can be applied without causing salt injury. In general, OSU guidance recommends no more than 30 lbs. of applied N + K_2O per acre for wheat or 7 lbs/ac for corn. No more than 90 lbs. per acre of P_2O_5 will be used in a starter fertilizer. These rates will vary with crop selection and climate conditions. The OSU Cooperative Extension Service Office is available for assistance in this area. The amount of starter fertilizer applied will be included in the nutrient budget.

Total nutrient application will be considered adequate when the applied rate is no more than 10% above the recommended target rate. Lower applied rates may be justified due to environmental, crop, or management changes.

Organic Nutrient Application Rates

All manure or organic by-products shall be tested prior to land application.

Preliminary planning decisions may be based on values found in the Agricultural Waste Management Field Handbook, Chapter 4 - Agricultural Waste Characteristics. Actual application rates will be adjusted accordingly based on the current manure analysis.

Plant nutrient removal rates can be found in Table 5. Crops not listed in Table 5 may be found in the Agricultural Waste Management Field Handbook, Chapter 6 – Role of Plants in Waste Management (Table 6-6).

Do not apply manure or organic by-products in the following situations as described in the Published County Soil Survey or Section II of the NRCS Field Office Technical Guide:

- Liquid animal manure will not be land applied within 500 feet of the corner of an occupied residence not owned or operated by the feeding operation. Adjacent landowner may record a waiver to the residence distance requirements prior to application and waiver must adhere to Oklahoma Concentrated Animal Feeding Operation Act Section 20-57.
- Liquid animal manure will not be land applied within 300 feet of an existing public or private drinking water well.
- To areas within 100 feet of a perennial stream, pond, well, wetland or sinkhole, unless an established buffer strip is present. The width of the buffer strip will be used as a setback distance for application purposes. The buffer strip must meet the requirements for design and maintenance established in the appropriate NRCS buffer standard and specification.
- To areas within 50 feet of an intermittent stream unless an established buffer strip is present. The width of the buffer strip will be used as a setback distance for application purposes. The buffer strip must meet the requirements for design and maintenance established in the appropriate NRCS buffer standard and specification.
- To fields with >15% slope.
- To soils less than 10 inches in depth to bedrock.
- On soils that are frequently flooded.
- On soils that are frozen, snow covered, or water saturated (including periods of heavy rain when water ponding has occurred on the soil surface).
- On soils where the rock fragments in the surface layer are 3 to 10 inches in diameter and exceed 50% of the surface.
- On soils where the rock fragments in the soil surface layer are >10" in diameter and exceed 25% of the surface.
- On soils where the rock fragments are >10 inches in diameter which covers >3% of the soil surface and the slope is >8%. (Soil map unit name will include the description of Extremely Stoney, Extremely Bouldery, or Extremely Rubbly or Very Rubbly)
- On areas eroding at levels greater than the soil loss tolerance, "T", from wind or water erosion or active gullies unless following a conservation plan that will reduce erosion below "T". Use current Oklahoma NRCS soil loss prediction methods.

- On soils that are occasionally flooded. However, manure may be applied between June 20 and September 20 on soils classified as occasionally flooded. Manure may also be applied to soils classified as occasionally flooded between February 1 and April 20 if the area is established to cool season grasses 4 inches in height at the time of application. In no case will manure be applied when the soil is water saturated or when ponding has occurred on the soil surface after periods of heavy rain.

Timing and method of nutrient application shall correspond as closely as possible with plant nutrient uptake characteristics, cropping system limitations, weather and climatic conditions, and field accessibility. Nutrients materials will be applied uniformly to the area.

Nutrients shall be applied to perennial plants (Bermuda, fescue) anytime during active forage growth or annual crops (corn, wheat, sorghum) up to 30 days prior to planting by broadcasting, injection or incorporation. For warm season plants (bermudagrass, corn, etc.), late spring application is optimal. However, for cool season plants (fescue, wheat, etc.), a split application in the early fall and early spring works best.

The application rate for waste water effluent applied with irrigation shall not exceed field capacity for the soil, create runoff and shall minimize ponding. Refer to Agronomy Technical Note OK-18 Determining Infiltration Rates when Irrigating with Liquid Animal Waste.

The following shall also be used when applying manure or organic by-products:

- **Nitrogen Application** – The amount of N applied from manure will not exceed the annual crop requirement for N. In some situations, additional N from inorganic/commercial sources may be required to supplement the organic sources. Manure may be applied to a legume crop at a rate equal to the estimated N removal in the harvested plant biomass.
- **Phosphorus Application** – The maximum planned rates of organic P application shall be determined using the Oklahoma Phosphorus Assessment Worksheet and not exceed Nitrogen needs of the crop.

Field Scale Sensor Based Technologies

This nutrient management technique involves the utilization of N-Rich (Nitrogen) Strips in conjunction with a GreenSeeker™ hand held sensor and the Sensor Based Nitrogen Rate Calculator to make top-dress nitrogen rate recommendations to an entire field. This technology is adapted to winter wheat, canola, cotton, corn, and grain sorghum.

An N-Rich Strip is an area within the field that has received enough nitrogen fertilizer so that nitrogen will not be deficient during the growing season within that area or strip. The N-Rich strip should receive 40-60 lbs of nitrogen above preplant application. If pre-plant nitrogen is applied to the rest of the field, nitrogen application should be no more than 50% of the total nitrogen needed for the yield goal. The application of the N-Rich Strip should take place at the time of pre-plant fertilizer application, planting, or soon thereafter. For winter wheat, the placement of the strips can be delayed for up to one month after sowing.

The N-rich strip will then be used in conjunction with the GreenSeeker™ hand held sensor to determine mid-season N rates. By knowing the yield potential of the reference strip and the yield potential of the rest of the field, the N rate can then be calculated by using the "Sensor-Based Nitrogen Rate Calculator" *(http://www.soiltesting.okstate.edu/SBNRC/SBNRC.php)*.

Refer to Oklahoma State University, Department of Plant and Soil Sciences, Nitrogen Use Efficiency webpage (***http://nue.okstate.edu/***) and the Oklahoma Cooperative Extension Service Current Report "Reference Strip Series: Applying your Nitrogen-Rich and Ramp Calibration Strips" (***http://npk.okstate.edu/referencestrips/Documents/CR-2255web.pdf***) for additional information and guidance.

The N-Rich Strip will be managed with basic 590 requirements for management of P, K, and pH, which includes soil testing and nutrient budgeting.

Precision Application (Variable Rate)

The basic principles of soil sampling still apply to precision sampling. An adequate number of samples should be collected to accurately characterize the field or management unit. Samples should be collected to the proper depth for non-mobile and mobile nutrients and field conditions. When the sampling technique only measures one nutrient (e.g. GreenSeeker), the other nutrients will be managed to meet basic 590 requirements.

Sensor Based:
Utilizing optical sensors mounted on fertilizer applicators or variable rate Nitrogen top-dressing. Aerial imagery can also be used to create application maps prior to nitrogen fertilization. Proper sensor technologies require the use of N-Rich strips. Application of N-rich strip should follow the methods described in the *Field Scale Sensor Based Technologies* section.

Variable rate systems incorporate biomass sensors mounted on the fertilizer applicator, sprayer or spreader. The sensors collect canopy reflectance measurement and according to predetermined algorithms, changes nitrogen rate as the applicator moves through a field. The result is infinite application zones for nitrogen based on real time canopy measurements.

Zone Management:

Utilize information to determine a minimum of 3 nutrient management zones within a field to collect soil samples or determine yield goals. Data / information may consist of but is not limited to: soil type, soil texture, depth to limiting layer, soil electrical conductivity (EC), landscape position, and yield monitor data. Zones delineate areas of a field with similar characteristics. Composite soil samples are collected from each zone. Fertilizer rates will be based upon OSU, Department of Plant and Soil Sciences recommendations as described in the *Nutrient Application Rates* section. Sampling and testing standards should be followed as described in *Soil Sampling Requirements* section.

Grid Sampling:

Use of grid soil sampling, at a resolution of 0.5 – 6 acre grids, to determine needs of essential plant nutrients or lime.

A field is laid out into quadrants of equal size and proportion. Quadrant (grid) size may range from 0.5 to 6.5 acres is size depending upon field, environment, and crop potential. Composite soil samples are collected from each quadrant. Each nutrient, measured through soil testing, spatial distribution is independently analyzed. Distribution maps and recommendation maps are then developed for each nutrient. Fertilizer rates should be based upon Oklahoma State University, Department of Plant and Soil Sciences recommendations as described in the *Nutrient Application Rates* section. Sampling and testing standards should be followed as described in *Soil Sampling Requirements* Section.

Due to the expense of grid sampling, grid sampling results for phosphorus can be used for up to 3 years. Since nitrogen is a mobile nutrient, yield monitor data or field sensor data will be used to correlate nitrogen needs with the grid maps.

Field Risk Assessment

The NRCS-approved nutrient risk assessment for nitrogen shall be completed, as listed below, on all sites when the application of inorganic or organic amendments is planned.

When applications of manure or other organic by-product amendments are planned, a field specific NRCS approved nutrient risk assessment of the potential for phosphorus transport from the site shall be completed, as listed below.

Nitrogen

Nitrogen is most often associated with the impairment of the quality of groundwater. Nitrogen leaching out of the root zone may enter and contaminate the ground water drinking supply.

To supply the needed plant nutrients to achieve realistic yield goals and minimize the transport of nitrogen to the ground water, a nutrient risk assessment procedure for nitrogen has been developed. This risk assessment procedure was developed to assist with the identification of fields or areas of a field that have varying risks of nitrogen transport and to assist with the development of land treatment and management alternatives to minimize nitrogen transport.

A nutrient risk assessment for nitrogen shall be completed by determining the Leaching Index (LI) from the Revised Universal Soil Loss Equation (RUSLE2) or Nitrogen Leaching Index Worksheet referenced in Oklahoma Agronomy Technical Note 20 and determining the Vulnerability Class from the Nutrient Vulnerable Groundwater Map of Oklahoma (**Exhibit 1**).

The minimum number of mitigating activities shall be applied according to **Table 1**:

Table 1 Nitrogen Risk Assessment Rating

Leaching Index (LI)	Groundwater Vulnerability Rating	Mitigating Activities	RATING
0 - 5	Very Low/Low	None (0)	LOW
	Moderate	None (0)	
	High	One (1) activity	
	Very High	One (1) activity	
5 - 10	Very Low/Low	None (0)	MODERATE
	Moderate	One (1) activity	
	High	Two (2) activities	
	Very High	Two (2) activities	
10+	Very Low/Low	One (1) activity	HIGH
	Moderate	Two (2) activities	
	High	Three (3) activities	
	Very High	Four (4) activities	

Mitigating Activities:

- Delay nitrogen application until plants are actively growing (4" minimum height).
- Apply split applications of 50% of the total nitrogen needs.
- Seasonal nitrogen requirements for actively growing plants shall be split to provide no more than 40 lbs of actual nitrogen every 4-6 weeks. Warm season plants – apply ≤40 lbs/acre Nitrogen during early spring (green up), after first cutting or grazing (late May - early June), or late summer. Cool season plants - apply ≤40 lbs/ac in the fall at planting. Add the remaining recommended amount in the early spring (Feb-March).
- Nitrogen will not be applied during expected heavy rainfall months (April, May, and June) on warm season plants.
- Lower realistic yield expectation by 25%.
- Use enhanced efficiency fertilizer products (sulfur coated urea products, polymer coated fertilizers, uncoated slow release fertilizers).
- Utilize nitrogen rich strip and GreenSeeker sensors to make mid-season nitrogen applications.
- Use precision agricultural technologies to precisely apply variable rates of nitrogen fertilizer.
- Utilize annual soil testing.
- Banding nitrogen applications.
- Use legume crops and cover crops to provide nitrogen through biological fixation and nutrient recycling.

Mitigation Products such as Enhanced Efficiency Fertilizer Products

Enhanced Efficiency Fertilizer products are formulations or coatings to fertilizer which alter reactions to reduce nutrient losses. There are many different formulations and mechanisms for reducing losses. Most products target nitrogen losses (**Table 2**) however some target phosphorus.

Nitrification inhibitors are substances which are added to fertilizers for the purpose of inhibiting conversion of ammonium-N to nitrate-N. These inhibitors can reduce N loss from leaching and denitrification but are only effective on fertilizers that either contain or are converted to ammonium, including anhydrous ammonia, urea, ammonium nitrate and ammonium sulfate.

Urease inhibitors are substances that inhibit conversion of urea to ammonia and carbon dioxide, reducing ammonia volatilization losses. Urease inhibitors can be effective for up to ten to fourteen days which can allow more time for rain to incorporate the N fertilizer.

Controlled release fertilizers reduce nutrient losses and increase nutrient availability by either slowing release or altering reactions that lead to losses. These products are commonly applied fertilizers such as urea which has been coated with sulfur or a polymer. The coating delays the availability of the nutrient for plant uptake after application and controls nutrient release over time.

Table 2 Nitrogen Mitigating Products

Type of Product	Active Ingredient	Examples of Product Names*
Nitrification Inhibitors	2-Chloro-6 trichloromethyl pyridine (Nitrapyrin)	N-Serve, Instinct
	Terrazole	
	Dicyandiamide	Super U, Guardian
	Dicyandiamide + 2-chloro-6 trichloromethyl pyridine	
Urease Inhibitors	N-butyl-thiophosphoric triamide (NBPT)	Agrotain
Controlled Release Fertilizers		
Sulfur Coated Urea Products		SCU, Poly S
Polymer-coated Fertilizer		ESN, Multicoate, Osmocote, Polyon, Duration, Nutricote, Tricote, Poly S
Uncoated Slow Release Fertilizers	Isobutylidene diurea (IBDU)	Par Ex, IB Nitrogen
	Methylene urea (MU)	CoRon Nitamin,
	Urea formaldehyde (UF)	Nitroform
	Triazone	N-Sure

*Example product names are not inclusive of all products or promoting products. Use chemical name to determine if the product contains the active ingredients listed.

Phosphorus

Phosphorus is most often associated with the impairment of the quality of surface water. Phosphorus leachate or runoff entering the surface water may contribute to excessive algae growth which may cause low oxygen levels in surface water. This in turn may impair aquatic life and adversely affect the taste of water.

To minimize the transport of phosphorus to surface water, a nutrient risk assessment procedure for phosphorus has been developed. This risk assessment procedure was developed to assist with the identification of fields or areas of a field that have varying risks of phosphorus transport and to assist with the development of land treatment and management alternatives to minimize phosphorus transport.

A nutrient risk assessment for phosphorus will be completed when:

- Manure or organic by-products amendments are applied.

This assessment shall be prepared using the Oklahoma Phosphorus Assessment Worksheet **(Exhibit 2 and Table 3)**.

Table 3 Nutrient Risk Assessment for Phosphorus – Organic Source Application Rates

Soil Test P Index	0 – 8% Slope	8 - 15% Slope	0 - 15% Slope
	Soil > 20" Deep	Soil > 20" Deep	Soil 10" to 20" Deep
0 – 120	Low Risk	Low Risk (1)	Low Risk (2)
121-300	Low Risk (3)	Low Risk (2&3)	Moderate Risk
>300	Moderate Risk	High Risk	High Risk

Manure or Organic by-products Amendment Application Rates

The following rates are maximum P_2O_5 rates and are not to exceed the Nitrogen requirement of the crop:

Low risk Sites

Maximum Rate per application allowed: 200 lbs P_2O_5 per acre or 300 lbs P_2O_5 per acre when applied by sprinkler irrigation and managed to prevent runoff from the field.

(1) Split Application Only: Application will be no more than ½ the maximum allowed P_2O_5 rate per application at least 30 days apart and total application will not exceed Nitrogen requirement of the crop
(2) Reduced rate Only: 100 lbs P_2O_5 per acre or 150 lbs P_2O_5 per acre when applied by sprinkler irrigation and managed to prevent runoff from the field.
(3) Split Application of Maximum Rate if the following conditions are met:
    - Crop field contains a grass buffer or filter strip with a minimum width of 30 feet, between the crop and transition to a water body (perennial stream, intermittent stream, pond, well, or wetland)
    - Hay field is not grazed, hay is transported off site, and is not fed in the same field. When grazed and hayed, the field must meet pasture conditions below.
    - Pasture has the following conditions:
        i. Perennial vegetation covers >80% with less than 5% bare ground.
        ii. Pasture is grazed evenly throughout with minimal overgrazing.
        iii. Livestock concentration areas are more than 100 feet to perennial or intermittent stream, pond, or wetland and cover less than 0.1 acre.
        iv. Compaction is minor
        v. Evidence of erosion from sheet and rill and wind is minimal, gullies are stable with vegetative cover.

When the above conditions are not met, then a "Moderate Rating" applies. Ratings may be reevaluated following management improvements to meet the above conditions.

Moderate Risk

Application will be no more than the expected P_2O_5 crop removal rate based on Table 5 and a realistic yield goal. It may not be feasible or practical to apply nutrients at P_2O_5 removal rate.

High Risk

No manure application

TABLE 4 NITROGEN CREDITS

Average Nitrogen Remaining After Legume Crop

Legume	*Nitrogen remaining for next crop (Legume hayed or harvested) Lbs of N/Ac	**Green manure crop nitrogen remaining (Legume unharvested) Lbs of N/Ac
Alfalfa	80	200
Ladino Clover	60	180
Sweet Clover	60	120
Red Clover	40	115
White Clover	20	100
Soybeans	20	60
Cowpeas	30	90
Vetch	40	80
Lespedeza (annual)	20	85
Peas	40	70
Peanuts	20	40
Beans	20	40

* These numbers are derived from crops that are harvested and have the remaining crop residues returned to the soil by tillage. (Reference - Oklahoma Soil Fertility Handbook, Sixth Edition (2006), pg. 18)

** A green manure crop is not harvested or grazed and is returned to the soil just prior to maturity. These numbers reflect the amount of nitrogen available for the next crop when the legume is used as a green manure crop. The numbers are adjusted to account for 30% nitrogen loss due to volatilization, leaching, and microbial action. (Reference – Soil Fertility and Fertilizers, Tidsdale and Nelson, pg. 128 and 566)

TABLE 5 CROP NUTRIENT REMOVAL *

% of Dry Material Harvested					
Crop	Unit	Weight/Unit	% N	% P	% K
Barley	grain	48 lbs/bu	1.82	0.34	0.43
	straw	72 lbs/bu	0.75	0.11	1.25
Corn	grain	56 lbs/bu	1.61	0.28	0.40
	stover	56 lbs/bu	1.11	0.20	1.34
Oats	grain	32 lbs/bu	1.95	0.34	0.49
	straw	64 lbs/bu	0.63	0.16	1.66
Rye	grain	56 lbs/bu	2.08	0.26	0.49
	straw	84 lbs/bu	0.50	0.12	0.69
Sorghum	grain	56 lbs/bu	1.67	0.36	0.42
	stover	56 lbs/bu	1.08	0.15	1.31
Soybeans	beans	60 lbs/bu	6.25	0.64	1.90
	stover	75 lbs/bu	2.25	0.22	1.04
Wheat	grain	60 lbs/bu	2.08	0.62	0.52
	straw	102 lbs/bu	0.67	0.07	0.97
Cotton	lint & seed	500 lbs/bale	2.67	0.58	0.83
	burs & stalks	3 lbs/lb of lint	1.75	0.22	0.83
% of Dry Material Harvested					
Forage Crop			% N	% P	% K
Alfalfa			2.25	0.22	1.87
Bermuda			1.88	0.19	1.40
Tall Fescue			1.97	0.20	2.00
Ryegrass			1.67	0.27	1.42
Wheatgrass			1.42	0.27	2.68
Dallisgrass			1.92	0.20	1.72
Native Hay			1.06	0.40	1.58
Clovers			2.00	0.22	1.66
Lespedeza			2.33	0.21	1.06

* These crop nutrient removal figures come from the NRCS Agricultural Waste Management Field Handbook, Chapter 6, Role of Plants in Waste Management (Table 6-6). The handbook lists additional crops not listed above. These numbers represent average figures taken from multiple sources and are nutrients removed in the harvested portion of the crop. These figures can be used as guidance for waste management planning purposes. Actual waste application will be based on soil test.

Example calculation to estimate nutrients removed:

Wheat: Yield 40 bu/ac = 60 lbs/bu x 40 bu = 2400 lbs of grain

40 bu/ac x 102 lbs/bu straw = 4080 lbs/ac straw produced

1 ton/ac straw baled and removed from field = 1 ton/ac x 2000 lbs = 2000 lbs of straw/ac

Grain: 2400 lbs/ac x 0.0208 (%N/lb) = 49.92 lbs/ac Nitrogen in grain

2400 lbs/ac x 0.0062 (%P/lb) = 14.88 lbs/ac Phosphorus in grain

2400 lbs/ac x 0.0052 (%K/lb) = 12.48 lbs/ac Potassium in grain

Straw: 2000 lbs/ac x 0.0067 (%N lb) = 13.40 lbs/ac Nitrogen in straw

2000 lbs/ac x 0.0007 (%P lb) = 1.40 lbs/ac Phosphorus in straw

2000 lbs/ac x 0.0097 (%K/lb) = 19.40 lbs/ac Potassium in straw

Total Nutrient Removed = 63.32 lbs/ac N removed, 16.28 lbs/ac P removed, 31.88 lbs/ac K removed.

NRCS, OK

April 2021

EXHIBIT 1

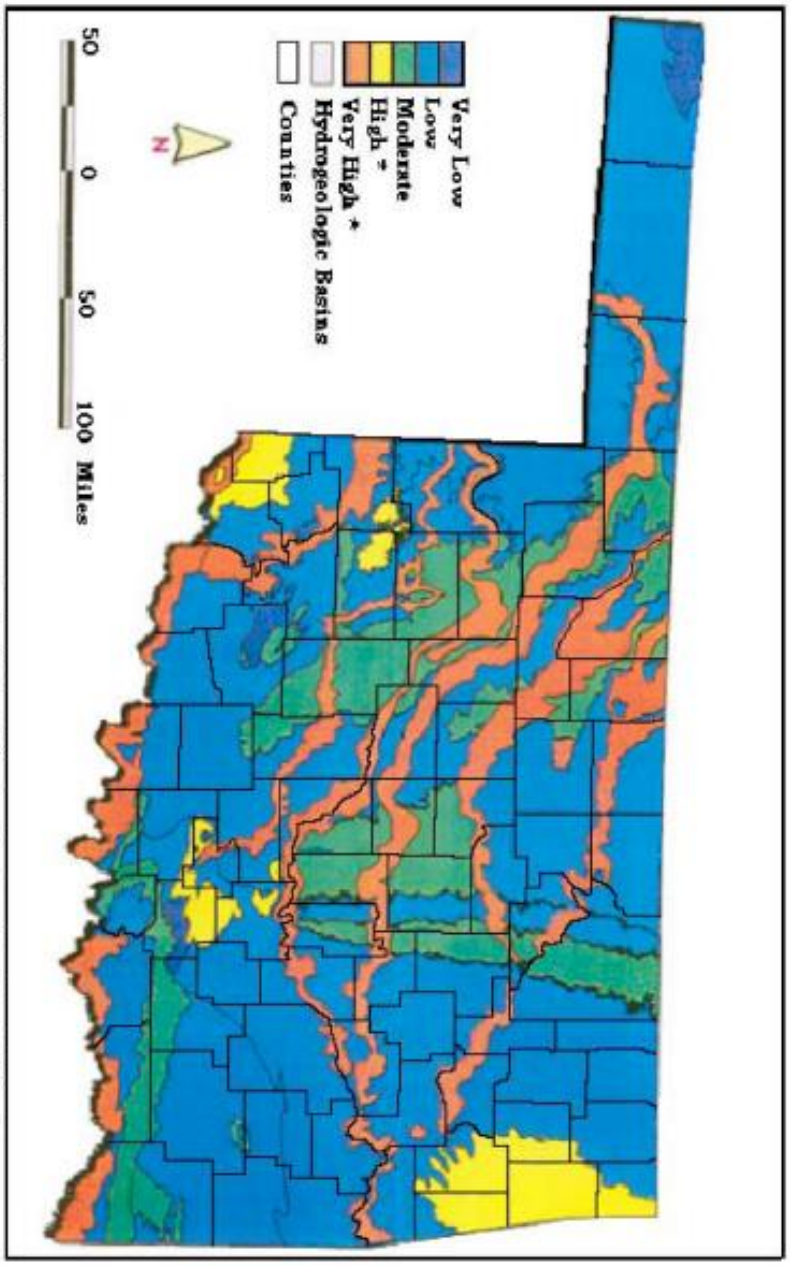

Figure 13. Groundwater vulnerability map of Oklahoma showing Vulnerability classifications by hydrogeologic basin.

* **Only these 2 classes are considered nutrient-vulnerable groundwater.**

NUTRIENT-VULNERABLE GROUNDWATER

NRCS, OK
April 2021

EXHIBIT 2

OKLAHOMA PHOSPHORUS ASSESSMENT WORKSHEET					
Client Name:		Field(s):		Date:	
Planner:		Location:		Crop:	
Land Use:			Ctrl + Shift + C clears worksheet		
Site Characteristics					
Soil Test P Index Mehlich III (lbs./ac)					Missing data
Application Method	Surface applied during the growing season		Surface applied on frozen, snow covered, or water saturated ground		
					Missing data
Land Slope %	0 - 8 %	8.1 - 15 %	> 15.1 %		
					Missing data
Transport Characteristics					
Erosion Rate Greater Than "T"	No	Yes			
					Missing data
Flooding Frequency	None	Occasionally	Frequently		
					Missing data
Landuse Management					Missing Data
					Missing data
Distance of Manure Application to Perennial Stream, Pond, Well, Sinkhole, or Residence	> 100 ft. to perennial stream, pond, well, sinkhole or a buffer strip is established. Liquid Manure Applications > 300 ft. to Drinking Water Well and > 500 ft. to an Occupied Residence		< 100 ft. to perennial stream, pond, well, or sinkhole Liquid Manure Applications < 300 ft. to Drinking Water Well or < 500 ft. to an Occupied Residence		
					Missing data
Distance of Manure Application to Intermittent	> 50 ft. or a Buffer Strip is Established		< 50 ft.		
					Missing data
Depth of Soil	> 20.1 in.	10.1 - 20 in.	0 - 10 in.		
					Missing data
Rocks 3" - 10" in diameter and exceed 50% of the soil surface	No		Yes		
					Missing data
Rocks > 10" in diameter and exceed 25% of the soil surface	No		Yes		
					Missing data
Rocks > 10" in diameter which cover > 3% of the soil surface	No		Yes		
					Missing data
Manure Application Rates					
	Incomplete data or invalid data has been entered				

NRCS, OK

April 2021

APPENDIX G - OPTIONAL CHECKLIST FOR PREPARING COMPLETE NUTRIENT MANAGEMENT PLANS

The following optional checklist was created to help nutrient management plan (NMP) preparers ensure theirplans address all of the elements required by AgPDES Permit No. OKG010000. While its use is not required, ODAFF anticipates this checklist will facilitate timely review and approval of NMPs.

This document is intended for planning purposes only. It is not meant to be a comprehensive list of permit requirements. NMP preparers and CAFO owners/operators should carefully review the entire permit and familiarize themselves with its limitations and prohibitions. Please contact AEMS at (405) 522-5493 with any questions about developing a complete NMP.

Part A: All facilities seeking coverage under AgPDES Permit No. OKG0l0000 must include the following items in their NMP as appropriate:

1) Ensure adequate storage of manure, litter, and process wastewater (see Parts II.A.l.a-b, III.A.3.a, and III.A.7.a).

2) Ensure proper management of mortalities [see Parts I.E.1.b, and 40 CFR § 122 .42(e)(l)(ii)].

3) Ensure clean water is diverted from the production area (see Parts III.A.3.b and III.A.7.b).

4) Prevent direct contact of confined animals with waters of the state, if necessary [see Parts I.E.l.b and 40 CFR § 122.42(e)(l)(iv)].

5) Ensure chemicals and other contaminants 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/contaminants. Include references to any chemical handling procedures (see Parts III.A.3.c and III.A.7.c).

6) Protocols for appropriate testing of manure, litter, and process wastewater, if land applying or transferring such materials to other persons (see Parts III.A.7.d and III.C.l .c).

7) Process wastewater discharges from outside the production area (see Part II.A.6.a).

8) Discharges that do not meet the definition of process wastewater (see Part II.A.6.b).

9) The NMP must be signed by the owner/operator or other signatory authority (see Part III.A.4).

10) Handling procedures for spills of any toxic and other pollutants and storage for these materials must be specified in the NMP (see Part III.D.3).

11) Identify and maintain all records necessary to document the development and implementation of the NMP and compliance with the permit (see Part III.A.3.h).

12) If the facility discharges directly to waters within the boundaries of areas listed in Table 1 of Appendix B of Oklahoma Water Quality Standards [785:45] (National and State Parks, National Forests, Wildlife Areas, Wildlife Management Areas, and Wildlife Refuges), additional NMP requirements may be necessary (see Part II.A.3.b).

13) If the facility discharges to water quality impaired waters, any additional limits or controls necessary to meet water quality standards or for consistency with any available wasteload allocation must be included in the NMP (see Part II.A.3.a).

14) If the facility is a new discharger to water quality impaired waters, additional documentation is required in theNMP (see Part I.D.9).

15) If permit coverage relies on Part I.D.9 (see #14 above), the NMP must include any control measures or conditions used to enable the CAFO to become eligible for permit coverage (see Part II.A.3.iii).

16) Facilities that discharge to any of the watersheds listed in Part III.D.8 of the permit must address additional endangered species requirements (see Part III.D.8).

Part B: Facilities that land apply manure, litter, and/or process wastewater must include the following additional items in their NMP:

17) Identify protocols for appropriate testing of manure, litter, process wastewater, and soil (see Parts II.A.4.f, III.A.3.e, III.A.7.d , III.A.7.e).

18) Establish protocols to land apply manure, litter, or process wastewater (see Parts II.A.4 and III.A.3.f.) thatincludes:

- a. Nutrient transport potential (see Part II.A.4.a).
- b. Form, source, amount, timing, and method of application (see Part II.A.4.b).
- c. Determination of application rates (see Part II.A.4.c).
- d. Site specific conservation practices (see Parts 11.A.4.d and III.A.3.d).
- e. Protocols to apply manure, litter, or process wastewater (see Part II.A.4.e).
- f. Manure and soil sampling results (see Part II.A.4.f).
- g. Inspection of land application equipment for leaks (see Part II.A.4.g).
- h. Land application setback requirements (see Part II.A.4.h).
    - i. 100-foot setbacks
    - ii. 35-foot vegetated buffers
    - iii. Specific conservation practices used as compliance alternatives
- i. On-site records (see Part II.A.4.i).

19) Determination of land application rates (see Part III.A.3.g):

- a. Linear rate approach (see Part III.A.3.g.i)
    - i. Must address Part III.A.3.g.i(A)(l)-(12) for *each*
        1. crop,
        2. field,
        3. and year covered by the NMP.
    - ii. Annual calculations [see Part III.A.3.g.i(B)].
- b. Narrative rate approach (See Part III.A.3.g.ii)
    - i. Must address Part III.A.3.g.ii(A)(l)-(7) for *each*
        1. crop,
        2. field,
        3. and year covered by the NMP.
    - ii. Must include projections that address Part III.A.3.g.ii(B)
    - iii. Annual calculations (see Part III.A.7.f).

APPENDIX H - CAFO PERMIT TRANSFER APPLICATION FORM AEMS114

OKLAHOMA DEPARTMENT OF AGRICULTURE, FOOD, AND FORESTRY
Agricultural Environmental Management Services Division
P.O. Box 528804
Oklahoma City, Oklahoma 73152
(405) 522-5493

AGPDES CAFO GENERAL PERMIT TRANSFER

E. CURRENT PERMITTEE	F. NEW PERMITTEE
Name: _____	Name: _____
Mailing Address: _____	Mailing Address: _____
City: _____ State: _____ Zip: _____	City: _____ State: _____ Zip: _____
Contact Name: _____ Title: _____	Contact Name: _____ Title: _____
Phone: (___)_____ Facsimile: (___)_____	Phone: (___)_____ Facsimile: (___)_____
Email: _____	Email: _____

G. FACILITY INFORMATION

AgPDES Permit No. OKG01_____

Current Name of the Facility: _____

New Name of the Facility: _____

Facility Location (physical address or location description): _____

City: _____ State: _____ Zip: _____ County: _____ Latitude: _____ Longitude: _____

Legal Description (¼, ¼, ¼, Section, Township, Range): _____

H. TRANSFER AGREEMENT

☐ 1. Attach a transfer agreement between the existing and the new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between the existing and the new permittee.

☐ 2. Attach a signed statement from the new permittee certifying that:

a. The new permittee has personally examined and is familiar with the information submitted in the previous owner's Notice of Intent (NOI) and Nutrient Management Plan (NMP).
b. The new permittee believes that the information is true, accurate and complete.
c. The new permittee agrees to comply with any applicable terms, conditions, or other requirements of the general permit OKG010000 and the authorization and terms issued to the facility listed in Section C.

I. CERTIFICATION

I certify under penalty of law this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for knowingly submitting false, inaccurate, or incomplete information, including the possibility of fines for each violation.

Current Permittee _____ New Permittee _____
(Type or print name and title) (Type or print name and title)

Signature _____ Date _____ Signature _____ Date _____

State of _____)
)
County of _____)

Subscribed and sworn to before me this _____ day of _____, 20_____.

My commission expires: _____ _____
Notary Public

Commission number: _____ (SEAL)

APPENDIX I - DISCHARGE INITIAL REPORT FORM AEMS034

**Oklahoma Department of Agriculture,
Food, and Forestry (ODAFF)**
Agricultural Environmental Management Services

P. O. Box 528804
Oklahoma City, Oklahoma 73152
405/522-5892

Discharge Initial Report

Discharge #_____ Received By: _____

Date Received: _____ Received From: _____

Time Received: _____ Phone: _____

Facility: _____ County: _____

Oklahoma License #: _____ AgPDES Permit #: _____
(if applicable)

Date & Time
Discharge Began: _____ Date & Time
Discharge Ended: _____

Cause of Discharge: _____

_____

_____

Estimated Volume: _____

Describe flow path: _____

_____

_____

Receiving Water Body: _____

Fish or Wildlife Kill: _____ If yes, ODWC Notified _____

Sample Collected for Analysis: _____

Person responsible for submitting report to ODAFF, AEMS: _____

Initial Steps Taken to Remedy Situation: _____

_____

_____

ODAFF Inspector: _____

APPENDIX J - DISCHARGE FINAL REPORT FORM AEMS136

Oklahoma Department of Agriculture,

Food, and Forestry (ODAFF)
Agricultural Environmental Management Services
P. O. Box 528804
Oklahoma City, Oklahoma 73152
405/522-5892

Discharge Final Report

Owner Name:_____

Facility Name:_____

Address: _____ City: _____ State: _____

County: _____ Telephone: ____ ____ ____ Discharge #_____

ODAFF License No. (If applicable):_____

AgPDES Permit # (If applicable): _____

Please answer the following questions. If additional space is needed to answer the questions, please attach additional pages as well.

1. Please describe the details of the discharge in your own words (what, when, where, and why). Please include an estimated of the total volume of the discharge and amount recovered (liquid and solid portions).

2. Please describe the actions taken to clean up the discharge, including where and how recovered material was disposed of.

3. Describe any actions taken to correct the problems that lead to the discharge.

4. Please include the following attachments:
   - ☐ (a) An aerial map (such as google earth printout) and illustrate the discharge area and any flow path associated with the discharge;
   - ☐ (b) Photos to document the clean-up; and
   - ☐ (c) A copy of the analytical analysis of the discharge. (Minimal analysis requires Fecal Coliform bacteria, 5-day BOD, total suspended solids (TSS), ammonia Nitrogen, and TKN.)

Owner Signature:_____ Date:_____

APPENDIX K - CAFO ANNUAL REPORT FORM AEMS120

ANNUAL REPORT
FOR AGPDES
CONCENTRATED ANIMAL FEEDING OPERATIONS

This form must be submitted by March 31st of each year to the address below or online using eNOI (see section 13 on the attached instructions sheet).

Oklahoma Department of Agriculture, Food, and Forestry
Agricultural Environmental Management Services (AEMS) Division
P. O. Box 528804
Oklahoma City, OK 73152

Date: _____

Reporting Period: _____ Reporting Year: _____

Electronic Submission Waiver (skip if submitting through ODAFF's eNOI system)

□ I hereby acknowledge my waiver request from the use of ODAFF's electronic Notice of Intent system (eNOI) because my use of eNOI will incur undue burden or expense over my use of this paper annual report form, or if eNOI is otherwise unavailable.

Briefly describe the reason why use of the electronic system causes undue burden or expense.

_____

_____

1. GENERAL INFORMATION

a. Permit Number: OKG010_____
b. Owner Name:_____
c. Owner Address:_____
d. Facility Name: _____
e. County where facility is located: _____

2. TYPES AND NUMBERS OF ANIMALS IN OPERATION DURING THE REPORTING PERIOD

Animal Type	Number in Open Confinement	Number Housed Under Roof

3. MANURE, SLUDGE, AND PROCESS WASTEWATER PRODUCTION

a. Amount of manure generated during the reporting period: _____ tons.

b. Amount of sludge generated during the reporting period: _____ gallons.

c. Amount of process wastewater generated during the reporting period: _____ gallons.

4. MANURE, SLUDGE, AND WASTEWATER TRANSFERRED TO OTHER PERSONS

a. Amount of manure transferred during the reporting period: _____ tons.

b. Amount of sludge transferred during the reporting period: _____ gallons.

c. Amount of wastewater transferred during the reporting period: _____ gallons.

5. NUTRIENT MANAGEMENT PLAN

a. Has the facility implemented a nutrient management plan?

☐ Yes

☐ No – When will a nutrient management plan be implemented?

b. The nutrient management plan has been developed and certified by a Certified Nutrient Management Specialist.

☐ Yes

6. LAND APPLICATION OF MANURE, SLUDGE, AND WASTEWATER

a. Actual crop(s) planted, actual yield(s), permitted spreadable area (acres), and actual area (acres) that were used for land application during the reporting period for each land management unit (LMU). Make additional copies of Table 1 as needed.

Table 1: Land Application Area and Cropping Scheme Information

LMU Name	**Permitted Spreadable Area** (acres)	**Area Received Application** (acres)	**Actual Crop(s) Planted**	**Actual Yields**		**Nitrogen Requirement of Actual Crop(s)** (lbs/acre)
				Yield Value	**Unit**	

b. Total amounts of manure, sludge, and wastewater that were land applied to each LMU during the reporting period. Make additional copies of Table 2 as needed.

Table 2: Manure, Sludge, and Wastewater Application

LMU Name	**Manure** (tons/acre/year)	**Sludge** (gallons/acre/year)	**Wastewater** (gallons/acre/year)

c. Total amounts of nutrients that were applied to LMU(s) during the reporting period. Make additional copies of Table 3 as needed.

Table 3: Total Amounts of Nutrients Applied to LMU(s)

LMU Name	Total Nutrients Received from Manure, Sludge, and Wastewater		Supplemental Fertilizer	
	Nitrogen (lbs/acre)	**Phosphorus (as P_2O_5)** (lbs/acre)	**Nitrogen** (lbs/acre)	**Phosphorus (as P_2O_5)** (lbs/acre)

d. Nitrogen and phosphorus application limitations

Approach used to determine application rates: ☐ Linear ☐ Narrative

Table 4: Nitrogen and Phosphorus Limitations (1)

LMU Name	Nitrogen (lbs/acre)	Phosphorus (as P_2O_5) (lbs/acre)

(1) Results of calculations conducted in accordance with the following parts of the General Permit OKG010000: Part III.A.3.g.i(B) (for the Linear Approach) or Part III.A.7.f (for the Narrative Approach) must be provided.

7. ANALYTICAL RESULTS OF MANURE, SLUDGE, AND PROCESS WASTEWATER APPLIED ON LMUs

Table 5: Nutrient Contents of Manure, Sludge, and Process Wastewater (1)

LMU Name	Manure (lbs/ton)		Sludge (lbs/1000 gallons)		Process Wastewater (lbs/1000 gallons)	
	Total Nitrogen	**Phosphorus (as P_2O_5)**	**Total Nitrogen**	**Phosphorus (as P_2O_5)**	**Total Nitrogen**	**Phosphorus (as P_2O_5)**

(1) Copies of laboratory analytical reports must be provided. See part 11 of this form.

8. SOIL TEST RESULTS

Table 6: Soil Nutrient Contents

LMU Name	**Nitrate Nitrogen** (lbs/acre)	**Soil Test P** (Mehlich III Method) (lbs/acre)	**Soil Test K** (lbs/acre)

9. ADDITIONAL ANALYSES APPLICABLE TO FACILITIES LOCATED WITHIN DESIGNATED ENDANGERED SPECIES SENSITIVE WATERSHEDS IDENTIFIED IN PART III.D.8 OF THE GENERAL PERMIT OKG010000

Permittees located within designated endangered species sensitive watersheds identified in Part III.D.8 of the General Permit OKG010000 shall submit the following analytical results when applicable.

a. Results of sludge sampling for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium and Zinc for sludge that was removed from the bottom of any retention structure and applied to LMUs during the reporting period.

b. Results of wastewater sampling for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium and Zinc for wastewater from any retention structure that was agitated or mixed prior to land application in order to re-suspend sludge from the bottom of the retention structure.

c. Results of soil sampling for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium and Zinc for soils at LMUs that received application of removed sludge and/or wastewater from any retention structure that was agitated or mixed during the reporting period.

10. DISCHARGES

Were there any discharges of manure, sludge, and/or process wastewater from the production area(s) that occurred during the reporting period?

☐ No.

☐ Yes. Attach a discharge summary including dates, times, and approximate volumes of all discharges occurred during the reporting period.

11. ATTACHMENTS

a. Soil test reports for all permitted LMUs**.**

b. Manure, sludge, and wastewater analytical reports.

c. Groundwater monitoring results (if required).

d. Discharge summary report.

e. Application rates calculations for all permitted LMUs.

12. CERTIFICATION

I,_____ _____
Typed or printed name Title

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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date:_____
(Use blue ink)

INSTRUCTIONS FOR AgPDES CAFO ANNUAL REPORT

1. GENERAL INFORMATION

Provide the:

- beginning and ending dates of the annual reporting period and the reporting year;
- assigned permit or permit authorization number that begins with OKG010 (example OKG010001);
- name of the CAFO owner(s) and mailing address;
- name of the CAFO facility; and
- county where the CAFO facility is located.

2. TYPE AND NUMBER OF ANIMALS

For each animal type, report the maximum number of animals in open confinement and housed under roof at the facility during the 12-month period covered by this report. "Open confinement" refers to open lots and freestall barns. "Housed under roof" refers to dairy cattle milked or animals maintained entirely in houses or barns (swine and poultry).

3. MANURE, SLUDGE, AND PROCESS WASTEWATER PRODUCTION

Report the estimated amounts of manure, sludge, and wastewater that were generated at this facility in the 12-month period covered by this report.

4. MANURE, SLUDGE, AND WASTEWATER TRANSFERRED TO OTHER PERSONS

Report the estimated amounts of manure, litter, and wastewater that were transferred to other persons in the 12-month period covered by this report.

5. NUTRIENT MANAGEMENT PLAN

a. Indicate if the facility has implemented a nutrient management plan (NMP). If the answer is 'No', provide the date when a NMP will be implemented by the CAFO.

b. By signing the form, you are acknowledging that your NMP was developed and certified by a Certified Nutrient Management Specialist.

6. LAND APPLICATION OF MANURE, SLUDGE, AND WASTEWATER

a. Report the following information for each of the land management units (LMUs) covered by the nutrient management plan, whether or not they were used for land application during the 12-month period covered by the report: total permitted spreadable area, actual area used for land application, actual crop(s) planted, yield(s) of actual crop(s), and nitrogen requirement(s) of the crops. Attach additional sheets, if needed.

b. Report amounts of manure, sludge and/or wastewater that were land applied to each of the permitted LMUs during the 12-month period covered by the report. Attach additional sheets, if needed.

c. Report the total amounts of nutrients that each of the LMUs received via application of manure, sludge, wastewater, and fertilizer during 12-month period covered by the report. Attach additional sheets, if needed.

d. Report the calculated maximum amount of nitrogen and phosphorus that can be applied to each of the LMUs during the 12-month period covered by the report. Attach additional sheets, if needed.

7. ANALYTICAL RESULTS OF ALL SAMPLES OF MANURE, SLUDGE AND WASTEWATER APPLIED ON LMUs

Report the nutrient contents (Nitrogen and Phosphorus) of manure, sludge, and wastewater that were land applied to each of the permitted LMUs. Attach additional sheets, if needed.

8. SOIL TEST RESULTS

Report soil test results for nitrate-nitrogen, soil test P, and soil test K in lbs/acre. Soil test P must be performed using Mehlich III

method. Attach additional sheets, if needed.

9. ADDITIONAL ANALYSES APPLICABLE TO FACILITIES LOCATED WITHIN DESIGNATED ENDANGERED SPECIES SENSITIVE WATERSHEDS IDENTIFIED IN PART III.D.8 OF THE GENERAL PERMIT OKG010000

Pursuant to Part III.D.8.c and d of the General Permit OKG010000, facilities located within designated endangered species sensitive watersheds identified in Part III.D.8 must report the following testing results for metals including Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium and Zinc, when applicable:

a. Sludge that was removed from the bottom of any of the retention structures and applied to permitted LMUs during the 12-month period covered by this report.

b. Wastewater from any of the retention structures that was agitated or mixed prior to land application in order to re-suspend sludge from the bottom of the retention structures during the 12-month period covered by this report.

c. Soil sampling for soils at LMUs that received application of removed sludge and/or wastewater from any retention structure that was agitated or mixed during the 12-month period covered by this report.

Metal contents shall be reported in terms of lbs/1000 gallons for wastewater and either lbs/ton or lbs/1000 gallons for sludge.

10. DISCHARGES

Provide a summary of all discharges that occurred during the 12-month reporting period. The report summary must include date, time, and estimated volume of discharge for each of the discharge events occurred during the reporting period.

11. ATTACHMENTS

The following documentation must be attached to the annual report:

a. Soil test reports for all permitted LMUs.

b. Manure, sludge, and wastewater laboratory analytical reports.

c. Groundwater monitoring results, if groundwater monitoring is required for your CAFO.

d. A discharge summary report including dates, times, and approximate volumes of all discharges occurred during the 12-month period covered by the report, if applicable.

e. Application rates calculations for all permitted LMUs.

12. CERTIFICATION

The certification must bear an original signature of a person meeting the signatory requirements specified in the CAFO permit. The printed name and title of the person signing the form must be provided. Forms with stamped or copied signatures will not be accepted.

IF YOU ARE A CORPORATION:

Any corporate representative may sign the annual report form so long as the authority to sign such a document has been delegated to that person in accordance with corporate procedures. By signing the form, you are certifying that such authority has been delegated to you. ODAFF may request documentation evidencing such authority.

IF YOU ARE A MUNICIPALITY OR OTHER GOVERNMENT ENTITY:

Only a ranking elected official or principal executive officer may sign the annual report form. Persons such as the City Mayor or County Commissioner will be considered ranking elected officials. In order to identify the principal executive officer of your government entity, it may be beneficial to consult your city charter, county or city ordinances, or the Oklahoma statute(s) under which your government entity was formed. The signatory requirement may not be delegated to a government representative other than those identified in the regulation. By signing the form, you are certifying that you are either a ranking elected official or principal executive officer as required by administrative code. Documentation demonstrating your position as a ranking elected official or principal executive officer may be requested by the ODAFF.

13. SUBMITTING THIS FORM

a. The annual report must be submitted by **March 31st** of each year.

b. If submitting the annual report prior to December 21, 2025, the report shall be submitted to ODAFF at the following address:

Oklahoma Department of Agriculture, Food, and Forestry
Agricultural Environmental Management Services (AEMS) Division
P. O. Box 528804
Oklahoma City, OK 73152

c. If submitting the annual report on or after December 21, 2025, the report must be submitted using ODAFF's eNOI system available on the ODAFF webpage unless eNOI is otherwise unavailable or the CAFO owner/operator has obtained a waiver from the requirements to use eNOI for submission of the annual report. Owner/operators waived from the requirement to use eNOI for annual report submission must certify on the paper annual report submitted to ODAFF that use of eNOI will incur undue burden or expense compared to using the paper annual report form and then provide a basis for this determination.