# Picture of the new TCEQ logo- blue and greenTechnical Information Packet for Concentrated Animal Feeding Operations (CAFOs)

**Submit this Form with your Individual Permit Application (TCEQ – 000728)**

**Name of Site:** Click here to enter text.

**TCEQ Permit Number, if assigned: WQ000** Click here to enter text.

**Date Prepared:** Click here to enter text.

# SECTION 1. POLLUTANT SOURCES MANAGEMENT

For each potential pollutant source listed in the table below, provide the management practices utilized or enter “Not Applicable”. Management practices should address the collection, storage and final disposition of each potential pollutant source. You may attach your list.

**Table 1: Potential Pollutant Sources and Best Management Practices**

| **Potential Pollutant Source** | **Best Management Practices** |
| --- | --- |
| Manure and Manure Stockpiles |  |
| Wastewater |  |
| Sludge |  |
| Compost |  |
| Feed and Bedding |  |
| Silage stockpiles |  |
| Dead animals |  |
| Dust |  |
| Lubricants |  |
| Pesticides |  |
| Bulk cleaning chemicals |  |
| Inorganic fertilizers |  |
| Fuel storage tanks |  |
| Other, specify:Click here to enter text. |  |

# SECTION 2. RETENTION CONTROL STRUCTURE DESIGN

## **Design Summary**

1. Design Standards, Characteristic, and Values Sources Used

[ ]    Natural Resource Conservation Service

[ ]    American Society of Agricultural and Biological Engineers

[ ]    Other; specify: Click here to enter text.

1. Total Number of Animals:

In Open Lots: Click here to enter text. In Buildings: Click here to enter text.

1. Animal Housing Location, hours/day:

Open Lots: Click here to enter text. Buildings: Click here to enter text.

1. Average Liveweight, pounds per head: Click here to enter text.
2. Volatile Solids Removed by Separator System: Click here to enter text.
3. Volatile Solids Loading Rate, lbs/day/1000 ft3: Click here to enter text.
4. Spilled Drinking Water, gallons/day: Click here to enter text.
5. Water for Cleanup, gallons/day: Click here to enter text.
6. Water for Manure Removal, gallons/day: Click here to enter text.
7. Recycled Wastewater, gallons/day: Click here to enter text.

## **Wastewater Runoff**

1. Design Rainfall Amount, inches: Click here to enter text.
2. Design Rainfall Event:

[ ]    25-year, 24 hour

[ ]    Soil Plant Air and Water (SPAW) Field and Pond Hydrology Model

[ ]    25-year, 10 day

[ ]    Other; specify: Click here to enter text.

## **Retention Control Structure(s) (RCS) Volume Allocations**

**Table 2. RCS Volume Allocations (Acre-Feet)**

| **RCS Name** | **Design Rainfall Event Runoff** | **Process Generated Wastewater** | **Minimum Treatment Volume** | **Sludge Accumulation** | **Water Balance** | **Required Capacity** | **Actual Capacity** |
| --- | --- | --- | --- | --- | --- | --- | --- |
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Indicate which RCSs are in-series: Click here to enter text.

## **RCS Liner or Lack of Hydrologic Connection Certification**

**Table 3: RCS Hydrologic Connection**

| **RCS Name** | **Construction Date** | **Type of Hydrologic Connection Certification** |
| --- | --- | --- |
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## **Playa Lakes**

Are any playa lakes used for RCSs? Yes [ ]    No [ ]

# SECTION 3. MANURE, SLUDGE, AND WASTEWATER HANDLING

## **Manure:**

1. Use or Disposal Method:

[ ]   Land Application to LMUs

[ ]   Transfer to other persons

[ ]   Third Party Fields

[ ]   Other; specify: Click here to enter text.

1. Land Application Location:

[ ]   Onsite [ ]   Offsite [ ]   Not Applicable

1. Composting Location:

[ ]   Onsite [ ]   Offsite [ ]   Not Applicable

## **Sludge:**

1. Use or Disposal Method:

[ ]   Land Application to LMUs

[ ]   Transfer to other persons

[ ]   Third Party Fields

[ ]   Other; specify: Click here to enter text.

1. Land Application Location:

[ ]   Onsite [ ]   Offsite [ ]   Not Applicable

## **Wastewater:**

1. Use or Disposal Method:

[ ]   Land Application to LMUs

[ ]   Total Evaporation

[ ]   Third Party Fields

[ ]   Other; specify: Click here to enter text.

1. Land Application Location:

[ ]   Onsite [ ]   Offsite [ ]   Not Applicable

## **Land Application Summary from the Nutrient Management Plan**

For each Land Management Unit (LMU), provide the name, acre, crops/yield goals and application rates on Table 4 below. Add rows if needed or attach additional pages.

**Table 4: Land Management Unit Summary from the Current NMP**

| **LMU Name** | **Acre** | **Crop(s) and Yield Goal(s)**  | **Application Rate (Ac-ft/Ac/Year OR Tons/Ac/Year)** |
| --- | --- | --- | --- |
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1. Wastewater production, ac-in/year: Click here to enter text.
2. Estimated Wastewater application, ac-in/year: Click here to enter text.
3. Manure production, tons/year: Click here to enter text.
4. Estimated manure application, tons/year: Click here to enter text.
5. Estimated manure transferred to other persons, tons/year: Click here to enter text.

## **Floodplain Information**

1. Is any part of the production area within a 100-year floodplain? Yes [ ]    No [ ]

If YES, describe management practices to protect the sites. Click here to enter text.

1. Is land application or temporary storage of manure in a 100-year floodplain or near a water course? Yes [ ]    No [ ]

If YES, describe management practices. Click here to enter text.

## **Soil Limitations**

**Table 5: Soil Limiting Characteristics and Best Management Practices**

| **Soil Types** | **Limiting Characteristics** | **Best Management Practices** |
| --- | --- | --- |
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## **Well Protection**

**Table 6: Water Well Status and Protective Measures**

| **Well ID Number** | **Well Type** | **Producing or Non-Producing** | **Open, Cased, or Capped** | **Protective Measures** |
| --- | --- | --- | --- | --- |
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# SECTION 4. AIR AUTHORIZATION SUMMARY

## **Type of Air Authorization**

[ ]   Air Standard Permit in 30 TAC § 321.43

[ ]   Permit By Rule in 30 TAC Chapter 106 Subchapter F

[ ]   Individual Air Quality Permit

If Air Standard Permit is selected, then complete Sections B and C below.

## **Indicate the AFO Status and Buffer Option.**

[ ]    Operation started after August 19, 1998:

[ ]    ½ mile buffer\*

[ ]    ¼ mile buffer\* and an odor control plan

[ ]    Operation started on or before August 19, 1998:

[ ]    ¼ mile buffer\*

[ ]    odor control plan

\*A written letter of consent from an affected landowner may be used in lieu of meeting the buffer distances specified.

## C. **Odor Receptors**

Identify the number of occupied residences or business structures, schools (including associated recreational areas), places of worship, or public parks located within the following distances from permanent odor sources as defined in 30 TAC §321.32(43):

0 - ¼ mile: Click here to enter text.

¼ - ½ mile: Click here to enter text.

½ - 1 mile: Click here to enter text.

# SECTION 5. ATTACHMENTS

## **Maps**

* 1. Site Map
	2. Land Management Unit Map
	3. Vicinity Map
	4. Original United States Geological Survey 7.5 Minute Quadrangle Map
	5. 100 Year Floodplain Map (if applicable)
	6. Runoff Control Map
	7. Natural Resource Conservation Service (NRCS) Soil Survey Map

## **Professional Certifications**

* 1. Recharge Feature Certification Statement and Supporting Documents
	2. RCS Design Calculations (Water Nutr, Animal Waste Management (AWM), or equivalent)
	3. RCS As-Built Capacity Certifications (if constructed)
	4. RCS Hydrologic Connection Certifications (if constructed)

## **Land Application**

* 1. Nutrient Management Plan
	2. Nutrient Utilization Plan. If the NUP is already approved, include the approval letter.
	3. Copy of Annual Soil Sampling Analyses (used for the NMP that was submitted with the application)
	4. Copy of Annual Manure and Wastewater Analyses (used for the NMP that was submitted with the application

## **Air Standard Permit Documentation (if required)**

* 1. Area Land Use Map,
	2. Odor Control Plan, if applicable
	3. Written Consent Letters, if applicable

## **Groundwater Monitoring (if required)**

* 1. Groundwater Monitoring Plan
	2. Groundwater Monitoring Analyses

# RECHARGE FEATURE CERTIFICATION STATEMENT

I certify that potential recharge features, as defined in 30 Texas Administrative Code 321, Subchapter B, [ ]    EXIST [ ]    DO NOT EXIST on properties used in this application. All information presented on this page and the attached supporting documents is true and accurate to the best of my knowledge.

Certification Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Seal and Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# INSTRUCTIONS FOR TECHNICAL INFORMATION PACKET

## Section 1. Pollutant Sources Management

For each potential pollutant source identified, describe the best management practices that you will use or are using to reduce the potential impact of the pollutant on the environment. If a pollutant source does not apply to your facility enter “Not Applicable”.

## Section 2. Retention Control Structure Design

1. Identify the design criteria used to calculate the required size of the control facilities (collection ditches, conduits, and swales for the collection of manure, sludge, or wastewater, and all retention control structures (RCS)). Information for completing the section will be found in the design calculations provided by a licensed Texas Professional Engineer.
2. Provide the design rainfall event amount, (inches), and the design rainfall event based on the location of the facility, animal type, and margin of safety (if required). Identify the source of the design rainfall event.
3. Provide the volume allocations for each RCS. This table is a summary of the specific volumes allocated to the sources of inputs to the RCS system. Information to complete this table will be found in the design calculations provided by a licensed Texas Professional Engineer.

If applicable, identify which RCSs act in-series (i.e. an RCS that has a natural or artificial method of overflowing into another RCS).

1. For each RCS, provide the date that it was constructed and the type of hydrologic connection certification (i.e. liner certification or certification that no hydrologic connection exists).
2. Indicate if playa lakes are used for RCSs. Use of playas as RCSs for operations that were in existence prior to July 10, 1991, and that meet other conditions.

## Section 3. Manure, Sludge and Wastewater Handling

1. Provide the method used to manage manure. If land application is used, indicate the location of the land application areas (i.e. on-site or off-site). Off-site is considered to be land that is owned, operated, controlled, rented or leased by the applicant that is detached from the production area. If composting is used, indicate the location of the compost facility.
2. Provide the method used to manage sludge. If land application is used, indicate the location of the land application areas (i.e. on-site or off-site). Off-site is considered to be land that is owned, operated, controlled, rented or leased by the applicant that is detached from the production area.
3. Provide the method used to manage wastewater. If land application is used, indicate the location of the land application areas (i.e. on-site or off-site). Off-site is considered to be land that is owned, operated, controlled, rented or leased by the applicant that is detached from the production area.
4. Complete this section using information from the nutrient management plan (NMP) that was submitted with the application. Provide the acreage, crop, yield goal, and estimated application rate for each land management unit (LMU).

Provide the estimated amount of wastewater and manure produced, land applied and transferred annually to other persons, including third-party fields. These values should be taken from the RCS design calculations and NMP. The tons of manure generated, land applied and transferred must be represented either in wet or dry basis.

1. Indicate if part of the production area is in a 100-year floodplain. If yes, describe the best management practices used to protect the site from inundation and provide certification by a licensed Texas Professional Engineer that the facility is protected from inundation during a 100-year flood.

Indicate if land application or temporary storage of solids is in a 100-year floodplain or near a water course. If yes, describe the best management practices used to minimize an impact to water in the state.

1. For each soil type that has limitations to land application of manure or wastewater, provide the name of the soil type, the characteristics of those soils that may limit land application of manure or wastewater, and the best management practice used to mitigate the limitation. Limiting characteristics include, but are not limited to, texture, permeability, depth to high water table, ponding, slope, depth to bedrock, depth to cemented pan, sodium adsorption ratio, flooding, stoniness, and soil pH. For more information on soil limitations, consult the NRCS National Soil Survey Handbook, Part 620.
2. For each on-site well, provide an identification number and the type of well (drinking water, irrigation water, oil, etc.). Indicate if the well is producing or non-producing; open, cased, or plugged; and the best management practice used to minimize impacts to groundwater.

## Section 4. Air Authorization Summary

1. Indicate the type of air authorization this facility is seeking. All facilities must have air authorization. To determine if your facility qualifies for the Air Standard Permit, refer to 30 TAC §321.43.
2. If you selected Air Standard Permit, identify when the AFO started or plans to start operations, then select one option for meeting the buffer requirement of the Air Standard Permit.
3. Identify the number of odor receptors within each distance of permanent odor sources at the facility. Those odor sources that may emit odors 24 hours per day. Permanent odor sources include, but are not limited to, pens, confinement buildings, lagoons, retention control structures, manure stockpile areas, and solid separators. Permanent odor sources **do not** include any feed handling facilities, land application equipment, or land management units.

## Section 5. Attachments

The following items must be attached to the Technical Information Packet prior to submittal to the TCEQ.

1. Maps
2. Site map. This map must show the layout of the production area and the location of all wells, water in the state, and required buffer zones in the production area.
3. Land Management Unit map. This map must show the location of all LMUs in relation to the production area. Identify the location of all wells, water in the state, and required buffer zones in the LMUs. Indicate the LMU number and the number of acres available for land application in each LMU. The map must show topographical features, such as waterways and roads.
4. Vicinity map. This map must be a general highway map that shows the location of the CAFO in relation to the nearest town or to the nearest intersection of two major (non-county) roads. All roads should be labeled.
5. Original United States Geological Survey 7.5-minute Quadrangle map. This map must show the location of the production area and LMUs in relation to topographic features within 1 mile of the property boundary.
6. 100-year floodplain map. This is a Federal Emergency Management Agency (FEMA) map which shows the extent of a 100-year flood in relation to the production area. If a FEMA map is not available, a licensed Professional Engineer may be required to certify that the production area is not located in or is protected from a 100-year flood.
7. Runoff Control map. This map must show the direction of runoff flow in the production area and how stormwater is diverted from the production area. The runoff flow may be shown in conjunction with the site map.
8. Natural Resource Conservation Service Soil Survey Map. This map must show the location of the production area and LMUs in relation to the soil types located on the facility. This map may be included as part of the Recharge Feature Certification supporting documents.
9. Professional Certifications. The Recharge Feature Certification Statement, RCS Design Calculations, RCS as-built capacity, and RCS hydrologic connection certifications must be certified by a licensed Texas professional engineer or licensed Texas professional geoscientist, in accordance with the 30 TAC 321, Subchapter B.
10. Land Application
	1. Nutrient Management Plan (NMP) – Submit a NMP with this application. A plan based on the NRCS Practice Standard Nutrient Management Code 590, to address the amount (rate), source, placement (method of application), and timing of the application of plant nutrients and soil amendments. The NMP must be developed and certified by a Certified Nutrient Management Specialist or other approved person as listed in 30 TAC 321, Subchapter B. This plan must be developed using the NRCS 590 software.
	2. Nutrient Utilization Plan (NUP) - A NMP to evaluate and address site specific characteristics of a LMU to ensure that the beneficial use of manure, sludge, or wastewater is conducted in a manner to prevent adverse impacts on water quality. It is required when the soil phosphorus level exceeds 200 ppm phosphorus in zone 1 of an LMU. If a NUP has already been approved by the TCEQ, attach the approval letter only. A NUP must be developed and certified by a Certified Nutrient Management Specialist or other approved person as listed in 30 TAC 321, Subchapter B. This plan must be developed using the NRCS 590 software.
	3. Provide a copy of the annual soil sampling analyses for each LMU that were used to calculate the application rates.
	4. Provide a copy of the annual manure and wastewater analyses used to calculate the application rates.
11. Air Standard Permit Documentation. This attachment is only required if you are requesting air authorization under the Air Standard Permit. To determine if you qualify for the Air Standard Permit, refer to 30 TAC 321.43.
12. Area Land Use map. A map that identifies property lines, permanent odor sources, and distances and direction to any occupied residence or business structure, school (including associated recreational areas), permanent structure containing a place of worship, or public park within a one-mile radius of the permanent odor sources at the AFO. The map must include a north arrow, scale of map, buffer zones, and the date the map was generated and the date the distances were verified.
13. Odor Control Plan. This plan identifies best management practices used by the CAFO to minimize odors and nuisance conditions. It is only required if you choose a buffer option that includes an odor control plan.
14. Written Consent Letters. These letters may be used in lieu of the buffer requirements, in accordance with 30 TAC 321.43.
15. Groundwater Monitoring. If groundwater monitoring is required in the existing authorization, attach the groundwater monitoring plan and the previous year’s groundwater sampling analyses.