Texas Commission on Environmental Quality INTEROFFICE MEMORANDUM

To:Final Documents Team LeaderChief Clerk's Office

DATE: March 23, 2022

- From: Michael Parr Staff Attorney Environmental Law Division
- **Subject:** Backup Documents Filed for Executive Director's Response to Hearing Requests

Applicant:Jonathan and Laura OsingaProposed Permit No.:WQ0002959000Program:WaterDocket No.:2022-0273-IWD

Enclosed please find a copy of the following documents for inclusion in the background material for this permit application:

- Technical Summary & Proposed Permit
- The Compliance Summaries (4) of the Applicant



TPDES Permit No. WQ0002959000 This Permit supersedes and replaces Permit No. WQ0002959000 issued on January 5, 2017 [For TCEQ use only EPA ID No. TX0121461]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY P.O. Box 13087 Austin, Texas 78711-3087

TPDES PERMIT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS

under provisions of Section 402 of the Clean Water Act Chapter 26 of the Texas Water Code and Section 382.051 of the Texas Clean Air Act

I. Permittee:

- A. Owner: Jonathan Carter Osinga and Laura Christine Osinga
- B. Business Name: Overcrest Dairy
- C. Owner Address: 17298 South US Highway 281 Hico, Texas, 76457
- **II. Type of Permit:** Major Amendment / Air & Water Quality
- III. Nature of Business Producing Waste: Concentrated Animal Feeding Operation (CAFO): Dairy Cattle; SIC No. 0241

IV. General Description and Location of Waste Disposal System:

Maximum Capacity: 2,500 total head, of which 1,500 head are milking

Site Plan: See Attachment A

Retention Control Structure (RCS) total required capacity without freeboard (Acre-Feet): RCS #1 - 28.97

Land Management Units (LMUs) (Acres): LMU #1 - 47, LMU #2 - 36, LMU #3 - 37, LMU #4 - 51; See Attachment B for locations

Terms of the Nutrient Management Plan (NMP): See Attachments E and F

Location: The facility is located at 17298 South US Highway 281, Hico, Erath County, Texas. Latitude: 32° 06′ 05″ N and Longitude: 98° 07′ 15″ W. See Attachment C

Drainage Basin: The facility is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin

This permit contained herein shall expire at midnight, five years after the date of Commission approval.

ISSUED DATE:

For the Commission

- V. Rule and Statute Applicability
- **A. Definitions.** All definitions in Chapter 26 of the Texas Water Code, 30 Texas Administrative Code (TAC) Chapters 305 and 321, Subchapter B shall apply to this permit and are incorporated by reference.
- **B**. **Amendments, renewals, transfers, corrections, revocation, and suspension of permit.** The requirements in 30 TAC Chapter 305, Subchapter D apply to this permit.

VI. Permit Applicability and Coverage

- **A. Discharge Authorization**. No discharge is authorized by this permit except as allowed by the provisions in this permit and 40 Code of Federal Regulations Chapter 412, which is adopted by reference in 30 TAC Chapter 305.541.
- **B.** Application Applicability. The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.
- **C. Air Quality Authorization**. The permittee shall comply with the requirements listed in Section VII.D. of this permit and shall:
 - 1. maintain a minimum treatment capacity of 2.21 acre-feet in RCS #1;
 - 2. identify the maximum sludge volume and the minimum treatment volume on the permanent pond marker in RCS #1;
 - 3. maintain a copy of the odor control plan in the Pollution Prevention Plan; and
 - 4. include a stage storage table for the treatment pond in the RCS Management Plan.

VII. Pollution Prevention Plan (PPP) Requirements

A. Technical Requirements

- 1. PPP General Requirements.
 - (a) The permittee shall update and implement a PPP for this facility upon issuance of this permit. The PPP shall:
 - (1) be prepared in accordance with good engineering practices;
 - (2) include measures necessary to limit the discharge of pollutants to surface water in the state;
 - (3) describe and ensure the implementation of practices which are to be used to assure compliance with the limitations and conditions of this permit;
 - (4) include all information listed in Section VII.A.;
 - (5) identify specific individual(s) who is/are responsible for development, implementation, operation, maintenance, inspections, recordkeeping, and revision of the PPP. The activities and responsibilities of the pollution prevention personnel shall address all aspects of the facility's PPP;
 - (6) be signed by the permittee or other signatory authority in accordance with 30 TAC §305.44 (relating to Signatories to Applications); and
 - (7) be retained on-site.
 - (b) The permittee shall amend the PPP:
 - (1) before any change in the number or configuration of LMUs;
 - (2) before any increase in the maximum number of animals and/or the maximum number of milking cows;
 - (3) before operation of any new control facilities;

- (4) before any change that has a significant effect on the potential for the discharge of pollutants to water in the state;
- (5) if the PPP is not effective in achieving the general objectives of controlling discharges of pollutants from the production area or LMUs; or
- (6) within 90 days following written notification from the Executive Director that the plan does not meet one or more of the minimum requirements of this permit.
- (c) Maps. The permittee shall maintain the following maps as part of the PPP.
 - (1) Site Map. The permittee shall update the site map as needed, by permit amendment, to reflect the layout of the facility. The map shall include, at a minimum, the following information: facility boundaries; pens; barns; berms; open lots; manure storage areas; areas used for composting; dead animal burial sites; RCSs or other control facilities; LMUs; water wells, abandoned and in use, which are on-site or within 500 feet of the facility boundary; and all springs, lakes, or ponds located on-site or within one mile of the facility boundary.
 - (2) Land Application Map. Natural Resource Conservation Service (NRCS) soil survey maps of all LMUs shall depict:
 - (i) the boundary of each LMU and acreage;
 - (ii) all buffer zones required by this permit; and
 - (iii) the unit name and symbol of all soils in the LMU(s).
- (d) Potential Pollutant Sources/Site Evaluation.
 - (1) Potential Pollutant Sources. The PPP shall include a description of potential pollutant sources and indicate all measures that will be used to prevent contamination from the pollutant sources. Potential pollutant sources include any activity or material that may reasonably be expected to add pollutants to surface water in the state from the facility.
 - (2) Soil Erosion. The PPP shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion. If these areas have the potential to contribute pollutants to surface water in the state, the PPP shall identify measures used to limit erosion and pollutant runoff.
 - (3) Control Facilities. The PPP shall include the location and a description of control facilities. The control facilities shall be appropriate for the identified sources of pollutants at the CAFO.
 - (4) Recharge Feature Certification. The recharge feature certification submitted in the permit application shall be implemented, updated by the permittee as often as necessary, and maintained in the PPP.
- (e) Spill Prevention and Recovery. The permittee shall take appropriate measures necessary to prevent spills and to clean up spills of any toxic pollutant. Where potential spills can occur, materials, handling procedures and storage shall be specified. The permittee shall identify the procedures for cleaning up spills and shall make available the necessary equipment to personnel to implement a clean up. The permittee shall store, use, and dispose of all pesticides in accordance with label instructions. There shall be no disposal of pesticides, solvents or heavy metals, or of spills or residues from storage or application equipment or containers, into RCSs. Incidental amounts of such substances entering a RCS as a

result of stormwater transport of properly applied chemicals is not a violation of this permit.

- 2. Discharge Restrictions and Monitoring Requirements.
 - (a) Discharge Restrictions. Wastewater may be discharged to water in the state from a properly designed (25-year frequency 10-day duration (25 year/10 day)), constructed, operated and maintained RCS whenever chronic or catastrophic rainfall, or catastrophic conditions cause an overflow. There shall be no effluent limitations on discharges from RCSs which meet the above criteria.
 - (b) Monitoring Requirements. The permittee shall sample all discharges from the RCS(s) and LMU(s). The effluent shall be analyzed by a National Environmental Laboratory Accreditation Conference (NELAC) accredited lab for the parameters shown in Table 1.

Sample Type	Sample Frequency
Grab	1/day1
	Sample Type Grab Grab Grab Grab Grab Grab Grab Grab

Table 1: Monitoring Requirements

¹Sample shall be taken within the first thirty (30) minutes following the initial discharge and then once per day while discharging.

²Any pesticide which the permittee has reason to believe could be present in the wastewater.

- (c) If the permittee is unable to collect samples due to climatic conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.), the permittee shall document why discharge samples could not be collected. Once dangerous conditions have passed, the permittee shall conduct the required sampling.
- 3. RCS Design and Construction.
 - (a) RCS Certifications
 - (1) The permittee shall ensure that the design and completed construction of the RCS(s) is certified by a licensed Texas Professional Engineer prior to use. The certification shall be signed and sealed in accordance with the Texas Board of Professional Engineers requirements.
 - (2) Documentation of liner and capacity certifications must be completed for each RCS prior to use and kept on-site in the PPP. Table 2 below shows the current RCS liner and capacity certifications.

RCS Name	Liner Certification Date	Capacity Certification Date	Certified Capacity (Acre- Feet)		
RCS #1	November 10, 2008	October 27, 2008	30.94		
Settling Pond #1	July 7, 1989	Not Ap	plicable		
Settling Pond #2 (Former RCS #2)	November 10, 2008	Not Apj	plicable		

Table 2: Current Liner and Capacity Certifications

Former RCS #2 has been converted to a settling pond (Settling Pond #2).

- (b) Design and Construction Standards. The permittee shall ensure that each RCS is designed and constructed in accordance with the technical standards developed by the NRCS, American Society of Agricultural and Biological Engineers, American Society of Civil Engineers, or American Society of Testing Materials that are in effect at the time of construction. Where site-specific variations are warranted, a licensed Texas Professional Engineer must document these variations and their appropriateness to the design.
- (c) RCS Drainage Area.
 - (1) The permittee shall describe in the PPP and implement measures that will be used to minimize entry of uncontaminated stormwater into the RCS(s).
 - (2) Stormwater must be diverted, as indicated in Attachment A Site Map from contact with feedlots and holding pens, and manure and/or process wastewater storage systems. In cases where it is not feasible to divert stormwater from the production area, the retention structures shall include adequate storage capacity for the additional stormwater. Stormwater includes rain falling on the roofs of facilities, runoff from adjacent land, or other sources.
 - (3) The permittee shall maintain the drainage area to minimize ponding or puddling of water outside the RCS(s).
- (d) RCS Sizing
 - (1) The design plan must include documentation describing the sources of information, assumptions and calculations used in determining the appropriate volume capacity and structural features of each RCS, including embankment and liners.
 - (2) Design Rainfall Event. Each RCS authorized under this permit shall be designed and constructed to meet or exceed the margin of safety, equivalent to the volume of runoff and direct precipitation from the 25 year/10 day rainfall event. The design rainfall event for this CAFO is **12.1** inches.
 - (3) Any RCS capacity that is greater than the minimum capacity required by this permit may be allocated to additional sludge storage volume, which will increase the design sludge cleanout interval for the RCS. The new sludge cleanout interval will be identified in the RCS management plan maintained in the PPP, the stage storage tables will accurately reflect the new volumes, and the pond markers will visually identify the new volume levels.
- (e) Irrigation Equipment Design. The permittee shall ensure that the irrigation system design is capable of removing wastewater from the RCS(s) on a regular schedule. Equipment capable of dewatering the RCS(s) shall be available and

operational whenever needed to restore the operating capacity required by the RCS management plan.

- (f) Embankment Design and Construction. The RCS(s) have a depth of water impounded against the embankment at the spillway elevation of three feet or more, therefore the RCS(s) are considered to be designed with an embankment. The PPP shall include a description of the design specifications for the RCS embankments. The following design specifications are required for all new construction and/or the modified portions of existing RCSs.
 - (1) Soil Requirements. Soils used in the embankment shall be free of foreign material such as rocks larger than four (4) inches, trash, brush, and fallen trees.
 - (2) Embankment Lifts. The embankment shall be constructed in lifts or layers no more than eight (8) inches compacted to six (6) inches thick at a minimum compaction effort of 95 per cent (%) Standard Proctor Density (ASTM D698) at -1% to +3% of optimum moisture content.
 - (3) Stabilize Embankment Walls. All embankment walls shall be stabilized to prevent erosion or deterioration.
 - (4) Compaction Testing. Embankment construction must be accompanied by certified compaction tests including in place density and moisture in accordance with the American Society of Testing Materials (ASTM) D1556, D2167 or D2937 for density and D2216, D4643, D4944 or D4959 for moisture, or D6938 for moisture and density or equivalent testing standards. Compaction tests will provide support for the liner certification performed by a licensed Texas Professional Engineer as meeting a permeability no greater than 1×10^{-7} centimeters per second (cm/sec) over a thickness of 18 inches or its equivalency in other materials, and not to exceed a specific discharge through the liner of 1.1×10^{-6} cm/sec with a water level at spillway depth.
 - (5) Spillway or Equivalent Protection. The new or modified RCS(s), which are constructed with embankments, shall be constructed with a spillway or other outflow device properly sized according to NRCS design and specifications to protect the integrity of the embankment.
 - (6) Embankment Protection. The new or modified RCS(s) must have a minimum of two (2) vertical feet of materials equivalent to those used at the time of design and construction between the top of the embankment and the structure's spillway. RCS(s) without spillways must have a minimum of two (2) vertical feet between the top of the embankment and the required storage capacity.
- (g) RCS Liner Requirements. For all new construction and for all structural modifications of existing RCS(s), the RCS must have a liner consistent with one of the following:
 - (1) In-situ Material. In-situ material is undisturbed, in-place, native soil material. In-situ materials must at least meet the minimum criteria for hydraulic conductivity and thickness and specific discharge as described in Section VII.A.3(g)(2) of this permit. Samples shall be collected and analyzed in accordance with Section VII.A.3(g)(3) of this permit. This documentation

must be certified by a licensed Texas Professional Engineer or licensed Texas Professional Geoscientist.

- (2) Constructed or Installed Liner.
 - (i) Constructed or installed liners must be designed by a licensed Texas Professional Engineer. The liner must be constructed in accordance with the design and certified as such by a licensed Texas Professional Engineer. Compaction tests and post construction sampling and analyses, conducted in accordance with Sections VII.A.3(f)(4) and VII.A.3(g)(3) of this permit, will provide support for the liner certification.
 - (ii) Liners shall be designed and constructed to have hydraulic conductivities no greater than 1×10^{-7} centimeters per second (cm/sec), with a thickness of 18 inches or its equivalency in other materials, and not to exceed a specific discharge through the liner of 1.1×10^{-6} cm/sec with a water level at spillway depth.
 - (iii) Constructed or installed liners must be designed and constructed to meet the soil requirements, lift requirements, and compaction testing requirements as listed in Section VII.A.3(f)(1), (2) and (4) of this permit.
- (3) Liner Sampling and Analyses
 - (i) The licensed Texas Professional Engineer or licensed Texas Professional Geoscientist shall use best professional practices to ensure that corings or other liner samples will be appropriately plugged with material that also meets liner requirements of this subsection.
 - (ii) Samples shall be collected in accordance with ASTM D1587 or other method approved by the Executive Director. For each RCS, a minimum of two core samples collected from the bottom of the RCS and a minimum of at least one core sample from each sidewall shall be collected. Additional samples may be necessary based on the best professional judgment of the licensed Professional Engineer. Distribution of the samples shall be representative of liner characteristics, and proportional to the surface area of the sidewalls and floor. Documentation shall be provided identifying the sample locations with respect to the RCS liner.
 - (iii) Undisturbed samples shall be analyzed for hydraulic conductivity in accordance with ASTM D5084 or other method approved by the Executive Director.
- (4) Leak Detection System. If notified by the Executive Director that significant potential exists for the adverse impact of water in the state or drinking water from leakage of a RCS, the permittee shall install a leak detection system or monitoring well(s) in accordance with that notice. Documentation of compliance with the notification must be kept with the PPP, as well as copies of all sampling data.
- 4. Special Considerations for Existing RCS(s). An existing RCS that has been properly maintained without any modifications and has no apparent structural problems or leakage is considered to be properly designed with respect to the embankment design

and construction and liner requirements of this permit, provided that any required documentation was completed in accordance with the requirements at the time of construction. If no documentation exists, the RCS must be certified by a licensed Texas Professional Engineer as providing protection equivalent to the requirements of this permit.

- 5. Operation and Maintenance of RCSs.
 - (a) The permittee must operate and maintain a margin of safety in the RCS(s) to contain the volume of runoff and direct precipitation from the 25 year/10 day rainfall event.
 - (b) The permittee shall implement a RCS management plan incorporating the margin of safety developed by a licensed Texas Professional Engineer. The management plan shall become a component of the PPP, shall be developed for each RCS, and must describe or include:
 - (1) RCS management controls appropriate for the CAFO and the methods and procedures for implementing such controls;
 - (2) the methods and procedures for proper operation and maintenance of each RCS consistent with the system design;
 - (3) the appropriateness and priorities of any controls reflecting the identified sources of pollutants at the facility;
 - (4) a stage/storage table for each RCS with minimum depth increments of onefoot, including the storage volume provided at each depth;
 - (5) a second table or sketch that includes increments of water level ranges for volumes of total design storage, including the storage volume provided at each specified depth (or water level) and the type of storage designated by that depth; and
 - (6) the planned end of month storage volume anticipated for each RCS for each month of the year and the corresponding operating depth expected at the end of each month of the year, based on the design assumptions.
 - The wastewater level in the RCS shall be maintained at or below the maximum (c) operating level expected during that month, according to the design of the RCS. When rainfall volumes exceed average rainfall data used in design calculations planned end of month storage volumes may encroach into the design storm event storage provided that documentation is available to support that the design parameters have been exceeded and that the RCS is otherwise being managed according to the RCS management plan criteria. In circumstances where the RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth. Also, if the water level in the RCS encroaches into the storage volume reserved for the design rainfall event, the permittee must document, in the PPP, the conditions that resulted in this occurrence. As soon as irrigation is feasible and not prohibited by Section VII.A.8(f) and (g), the permittee shall irrigate until the RCS water level is at or below the maximum operating level expected during that month.
 - (d) Imminent Overflow. If a RCS is in danger of imminent overflow from chronic or catastrophic rainfall or catastrophic conditions, the permittee shall take reasonable steps to irrigate wastewater to the LMU(s) only to the extent necessary to prevent overflow from the RCS. If irrigation results in a discharge

from a LMU, the permittee shall collect samples from the drainage pathway at the point of the discharge from the edge of the LMU where the discharge occurs, analyze the samples for the parameters listed in Section VII.A.2.(b), and provide the appropriate notifications as required by Section VIII.B of this permit and 30 TAC §321.44.

- (e) Permanent Pond Marker. The permittee shall install and maintain a permanent pond marker (measuring device) in the RCS(s), visible from the top of the levee to show the following:
 - (1) the volume for the design rainfall event;
 - (2) one-foot increments beginning from the predetermined minimum treatment volume of the RCS, or the bottom of the RCS for those without treatment volume, to the top of the embankment or spillway; and
 - (3) design volume levels for maximum sludge accumulation and operating volume (calculated process generated wastewater plus rainfall runoff minus evaporation) must be identifiable on the marker.
- (f) Rain Gauge. A rain gauge capable of measuring the design rainfall event shall be kept on-site and properly maintained.
- (g) Sludge Removal. The permittee shall monitor sludge accumulation and depth, based upon the design sludge storage volume in the RCS. (See Special Provision X.E for additional requirements related to sludge monitoring.) Sludge shall be removed from the RCS(s) in accordance with the design schedule for cleanout in the RCS Management Plan to prevent the accumulation of sludge from exceeding the designed sludge volume of the structure. Removal of sludge shall be conducted during favorable wind conditions that carry odors away from nearby receptors. Sludge may only be beneficially utilized by land application to a LMU if in accordance with a nutrient management plan or disposed of in accordance with Section VII.A.8(e) of this permit. A sludge sample must be collected and analyzed in accordance with Section VII.A.9(a) prior to each clean out.
- (h) Liner Protection and Maintenance. The permittee shall maintain the liner to inhibit infiltration of wastewater. Liners must 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 or embankment. Any mechanical or structural damage to the liner shall be evaluated by a licensed Texas Professional Engineer within thirty (30) days of the damage.
- (i) Closure Requirements. A closure plan must be developed when a RCS will no longer be used and/or when the CAFO ceases or plans to cease operation. The closure plan shall be submitted to the appropriate regional office and the CAFO Permits Team of the Water Quality Division in Austin (MC-150) within ninety (90) days of when operation of the CAFO or the RCS terminates. The closure plan for the RCS must, at a minimum, be developed using standards contained in the NRCS Practice Standard Code 360 (Closures of Waste Impoundments), as amended, and using the guidelines contained in the Texas AgriLife Extension/NRCS publication #B-6122 (Closure of Lagoons and Earthen Manure Storage Structures), as amended. The permittee shall maintain or renew its existing authorization and maintain compliance with the requirements of this permit until the facility has been closed.

- 6. General Operating Requirements.
 - (a) Flush/Scrape Systems. Flush/scrape systems shall be flushed/scraped in accordance with design criteria in the application.
 - (b) Pen Maintenance. The permittee shall maintain earthen pens to ensure good drainage, minimize ponding, and minimize the entrance of uncontaminated storm water to the RCSs.
 - (c) Carcass Disposal. Carcasses shall be collected within twenty four (24) hours of death and properly disposed of within three days of death in accordance with Texas Water Code, Chapter 26; Texas Health and Safety Code, Chapter 361; and 30 TAC Chapter 335 (relating to Industrial Solid Waste and Municipal Hazardous Waste) unless otherwise provided for by the commission. Animals must not be disposed of in any liquid manure or process wastewater system. Disposal of diseased animals shall also be conducted in a manner that prevents a public health hazard in accordance with Texas Agriculture Code, §161.004, and 4 TAC §31.3, §58.31(b), and §59.12. The collection area for carcasses shall be addressed in the potential pollutant sources section of the PPP with the management practices to prevent contamination of surface or groundwater, control access, and minimize odor.
 - (d) Manure and Sludge Storage
 - (1) Manure and sludge storage capacity requirements shall be based on manure and sludge production, land availability, and the NRCS Field Office Technical Guide (Part 651, Chapter 10) or equivalent standards. (See Special Provision X.I for the storage requirements applicable to slurry collected from freestall barns.)
 - (2) When manure is stockpiled, it shall be stored in a well-drained area, and the top and sides of stockpiles shall be adequately sloped to ensure proper drainage and prevent ponding of water. Runoff from manure or sludge storage piles must be retained on-site. If the manure or sludge areas are not roofed or covered with impermeable material, protected from external rainfall, or bermed to protect from runoff during the design rainfall event, the manure or sludge areas must be located within the drainage area of a RCS and accounted for in the design calculations of the RCS.
 - (3) Manure or sludge stored for more than thirty (30) days must be stored within the drainage area of a RCS or stored in a manner (i.e. storage shed, bermed area, tarp covered area, etc.) that otherwise prevents contaminated storm water runoff from leaving the storage area. All storage sites and structures located outside the drainage area shall be designated on the site map.
 - (4) Temporary storage of manure or sludge shall not exceed thirty (30) days and is allowed only in a LMU or a RCS drainage area. Temporary storage of manure and sludge, near water courses or near recharge features may be allowed if protected by berms or other structures to prevent inundation or damage that may occur.
 - (e) Composting. Composting on-site shall be performed in accordance with 30 TAC Chapter 332 (relating to Composting). The permittee may compost waste generated on-site, including manure, sludge, bedding, feed and dead animals. The permittee may add agricultural products to provide an additional carbon

source or bulking agent to aid in the composting process. If the compost areas are not roofed or covered with impermeable material, protected from external rainfall, or bermed to protect from runoff in the case of the design rainfall event, the compost areas must be located within the drainage of an RCS and must be shown on the site plan and accounted for in the design calculations of the RCS.

- 7. Site Specific Conservation Practice.
 - (a) Well Protection Requirements
 - (1) The permittee shall not locate or operate a new RCS, holding pen, or LMU within the following buffer zones:
 - (i) public water supply wells 500 feet;
 - (ii) wells used exclusively for private water supply 150 feet; or
 - (iii) wells used exclusively for agriculture irrigation 100 feet.
 - (2) Irrigation of wastewater directly over a well head will require a structure protective of the wellhead that will prevent contact from irrigated wastewater.
 - (3) Construction of any new water wells must be done by a licensed water well driller.
 - (4) All abandoned and unuseable wells shall be plugged according to 16 TAC §76.104.
 - (5) The permittee may continue the operation and use of any existing holding pens and RCSs located within the required well buffer zones provided they are in accordance with the facility's approved recharge feature evaluation and certification. Buffer zone variance documentation must be kept on-site and made available to TCEQ personnel upon request. A Well Buffer Exception request for Wells #1, #3, and #4 were submitted to and approved by the TCEQ Water Quality Assessment Team. Permittee shall implement the requirements of the Well Buffer Exception approval by TCEQ. Table 3 below shows the status of all wells on the facility and the best management practices (BMPs) used to protect them.

Well	Status	BMPs
Number"		
1	Producing	Well head is equipped with a concrete surface slab sealed to the steel casing, located outside the RCS drainage area and upgradient of the production area
2	Producing	Maintain 150 ft buffer
3	Producing	Well head is equipped with a concrete surface slab sealed to the steel casing, located outside the RCS drainage and upgradient of the production area
4	Producing	Well head is equipped with a concrete surface slab sealed to the steel casing, located outside the RCS drainage and upgradient of the production area
5	Producing	Maintain 150 ft buffer

Table 3: Well Status and Best Management Practices

*Well Numbers correspond with Attachment D

(b) Soil Limitations. The permittee shall implement the BMPs on Table 4 for the specified soil series.

Soil Series	Potential Limitations	BMPs*
Maloterre: Ma	Depth to Bedrock Droughty	Irrigation events will be managed to assist in maintaining soil moisture levels within
Nimrod-Arenosa- Patilo: NpB, NpD	Filtering Capacity Seepage Depth to Saturated Zone	capacity of that Land Management Unit. Land Application will be based upon the
Nimrod: NdC	Filtering Capacity, Seepage	Available Water Capacity (refer to the nutrient management plan (NMP) of the soil and will not exceed agronomic rates for
Selden: SdC	Depth to Saturated Zone	nutrients.
Windthorst: WnC Purves: PcB	Filtering Capacity Droughty Depth to Bedrock Slow Water Movement Percolates Slowly	No land application to inundated soils. Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit.
		Land Application will be based upon the AWC (refer to the NMP) of the soil and will not exceed agronomic rates for nutrients.
		No land application to inundated soils.
		Land application not to exceed agronomic rates for nutrients and soil hydraulic rates (refer to NMP).

Table 4: Soil Limitations and Best Management Practices

*or an equivalent protective measure identified in an NRCS Practice Standard.

(c) Pollutant Sources and Management. The permittee shall implement the BMPs on Table 5 for handling dead animals and pesticides.

Table 5: Pollutant Sources and Best Management Practices

Potential Pollutant Source	BMPs*
Dead Animals	Collect within 24 hours of death and remove within three days of death by a third-party rendering service, or compost in accordance with Section VII.A.6(e) of this permit
Pesticides/Parlor Chemicals	Store under roof Handle and dispose according to label directions

*or an alternative BMP as allowed by 30 TAC 321 Subchapter B or an equivalent protective measure identified in an NRCS Practice Standard.

- 8. Land Application.
 - (a) Nutrient Management Plan (NMP) Required. The certified NMP submitted in the permit application shall be implemented upon issuance of this permit. The

plan shall be updated as appropriate or at a minimum of annually according to NRCS Practice Standard Code 590. The permittee shall make available to the Executive Director, upon request, a copy of the site specific NMP and documentation of the implementation.

- (1) For Terms of the NMP see Attachments E and F.
- (2) The following changes to the terms of the NMP are substantial:
 - (i) Increase in animal headcount;
 - (ii) Increase in LMU acreage or a change in LMU location;
 - (iii) Change in crop and yield goal (not listed in Attachment F);
- (3) Substantial and Non-Substantial Change to the terms of the NMP
 - (i) Any changes (substantial or non-substantial) to the NMP, other than the Annual Recalculation of Application Rates outlined in Attachment E, must be submitted to the Executive Director for review, and may be subject to public comment;
 - (ii) If the Executive Director determines that the changes to the NMP are not substantial, the revised NMP will be made publicly available and included in the permit record; and
 - (iii) If the Executive Director determines that the changes to the NMP are substantial, the information provided by the permittee will be subject to a major amendment process as set in 30 TAC §§305.61-305.72.
- (b) Comprehensive Nutrient Management Plan (CNMP) required. The permittee must continue to operate under a CNMP certified by the Texas State Soil and Water Conservation Board.
- (c) Critical Phosphorus Level
 - (1) When results of the annual soil analysis show a phosphorus level in the soil of more than 200 ppm but not more than 500 ppm in Zone 1 depth (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated) for a particular LMU or if ordered by the commission to do so in order to protect the quality of water in the state, then the permittee shall:
 - (i) file with the Executive Director a new or amended nutrient utilization plan (NUP) with a phosphorus reduction component based on crop removal that is certified as acceptable by a person described in (3) below; or
 - (ii) show that the level is supported by a NUP that is certified as acceptable by a person described in (3) below.
 - (2) The permittee shall cease land application of compost, manure, sludge, slurry and wastewater to the affected area until the NUP has been approved by the TCEQ. After a NUP is approved, the permittee shall land apply in accordance with the NUP until soil phosphorus is reduced below the critical phosphorus level of 200 ppm extractable phosphorus. Thereafter, the permittee shall implement the requirements of the nutrient management plan.
 - (3) NUP. A NUP is a NMP, based on NRCS Practice Standard Code 590, which utilizes a crop removal application rate. The NUP, based on crop removal, must be developed and certified by one of the following individuals or entities:
 - (i) an employee of the NRCS;

- (ii) a nutrient management specialist certified by the NRCS;
- (iii) the Texas State Soil and Water Conservation Board;
- (iv) the Texas AgriLife Extension;
- (v) an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas; or
- (vi) a Certified Professional Agronomist certified by the American Society of Agronomy, a Certified Professional Soil Scientist certified by the Soil Science Society of America, or a licensed Texas Professional Geoscientist-soil scientist after approval by the Executive Director based on a determination by the Executive Director that another person or entity identified in this paragraph cannot develop the plan in a timely manner.
- (4) When results of the annual soil analysis for extractable phosphorus indicate a level greater than 500 ppm in Zone 1 depth (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated), the permittee shall file with the Executive Director a new or amended NUP with a phosphorus reduction component, based on crop removal, that is certified as acceptable by a person described in (3) above. After the new or amended NUP is approved, the permittee shall land apply in accordance with the NUP until soil phosphorus is reduced below 500 ppm extractable phosphorus.
- (5) If the permittee is required to have a NUP with a phosphorus reduction component based on crop removal, and if the results of tests performed on composite soil samples collected 12 months or more after the plan is filed do not show a reduction in phosphorus concentration in Zone 1 depth (0-6 inch incorporated; 0-2 or 2-6 inch if not incorporated), then the permittee is subject to enforcement action at the discretion of the Executive Director.
- (d) Buffer Requirements. The permittee shall meet the following buffer requirements for each LMU:
 - (1) Water in the State. The permittee shall not apply compost, manure, sludge, slurry and wastewater within the buffer distances as noted on Attachment B and Special Provision X.D. Vegetative buffers shall be maintained in accordance with NRCS Field Office Technical Guidance. The permittee shall maintain the filter strip (according to NRCS Code 393) between the vegetative buffer and the land application area. If the land application area is cropland, the permittee shall install and maintain contour buffer strips (according to NRCS Code 332) within the land application area in addition to the buffer distances required by this permit.
 - (2) Water Wells. The permittee shall comply with the well protection requirements listed in Section VII.A.7.(a).
- (e) Exported wastewater, sludge, and/or manure. Wastewater, sludge, and/or manure removed from the operation shall be disposed of by:
 - (1) delivery to a composting facility authorized by the Executive Director;
 - (2) delivery to a permitted landfill located outside of the major sole source impairment zone;
 - (3) beneficial use by land application to land located outside of the major sole source impairment zone;
 - (4) put to another beneficial use approved by the Executive Director; or

- (5) providing wastewater, sludge, and/or manure to operators of third-party fields, i.e. areas of land in the major sole source impairment zone not owned, operated, controlled, rented, or leased by the CAFO owner or operator, that have been identified in the PPP.
 - (i) There must be a written contract between the permittee and the recipient that includes, but is not limited to, the following provisions:
 - (A) All transferred wastewater, sludge, and/or manure shall be beneficially applied to third-party fields identified in the PPP in accordance with the applicable requirements in 30 TAC §321.36 and §321.40 at an agronomic rate based on soil test phosphorus. The requirements for development or implementation of a nutrient management plan or nutrient utilization plan, under 30 TAC §321.40, do not apply to third-party fields.
 - (B) Manure and sludge must be incorporated on cultivated fields within forty-eight (48) hours after land application.
 - (C) Land application rates shall not exceed the crop nitrogen requirement when the soil phosphorus concentration in Zone 1 depth (0-6 inch if incorporated; 0-2 or 2-6 inch if not incorporated) is less than or equal to 50 ppm phosphorus.
 - (D) Land application rates shall not exceed two times the phosphorus crop removal rate, and not to exceed the crop nitrogen requirement, when soil phosphorus concentration in Zone 1 depth (0-6 inch if incorporated; 0-2 or 2-6 inch if not incorporated) is greater than 50 ppm phosphorus and less than or equal to 150 ppm phosphorus.
 - (E) Land application rates shall not exceed one times the phosphorus crop removal rate, and not to exceed the crop nitrogen requirement, when soil phosphorus concentration in Zone 1 depth (0-6 inch if incorporated; 0-2 or 2-6 inch if not incorporated) is greater than 150 ppm phosphorus and less than 200 ppm phosphorus.
 - (F) Before commencing manure, wastewater, compost, and/or sludge application to third-party fields, at least one representative soil sample from each third-party field must be collected by a certified nutrient management specialist and analyzed in accordance with 30 TAC §321.36. Third-party fields which have had wastewater, sludge, compost, and/or manure applied during the preceding year must be sampled annually by a certified nutrient management specialist and the samples analyzed in accordance with 30 TAC §321.36. For third-party fields that have not received wastewater, sludge, compost, and/or manure during the preceding year, initial sampling must be completed before restarting land application to the third-party field.
 - (G) A copy of the annual soil analyses shall be provided to the permittee within sixty (60) days of the date the samples were taken.

- (H) Temporary storage of wastewater, sludge, and/or manure is prohibited on third-party fields.
- (ii) The permittee is prohibited from delivering wastewater, sludge, and/or manure to an operator of a third-party field once the soil test phosphorus analysis shows a level equal to or greater than 200 ppm or after becoming aware that the third-party operator is not following appropriate provisions of 30 TAC §321.36, §321.40 and/or the contract.
- (iii) The permittee will be subject to enforcement action for violations of the land application requirements on any third-party field under contract.
- (iv) The permittee shall submit records to the appropriate regional office quarterly that contain the name, locations, and amounts of wastewater, sludge, and/or manure transferred to operators of third-party fields.
- (f) Irrigation Operating Requirements
 - (1) Minimize Ponding. Irrigation practices shall be managed so as to minimize ponding or puddling of wastewater on the site, prevent tailwater discharges to water in the state, and prevent the occurrence of nuisance conditions.
 - (2) Discharge Prohibited
 - (i) The drainage of compost, manure, sludge, slurry and wastewater is prohibited from the LMU(s), unless authorized under Section VII.A.5(d).
 - (ii) Where compost, manure, sludge, slurry and wastewater is applied in accordance with the nutrient management plan and/or NUP, precipitation-related runoff from the LMU(s) under the control of the permittee is authorized.
 - (iii) If a discharge from the irrigation system is documented as a violation, the permittee may be required by the Executive Director to install an automatic emergency shut-down or alarm system to notify the permittee of system problems.
 - (3) Backflow Prevention. If the permittee introduces wastewater or chemicals to water well heads for the purpose of irrigation, then backflow prevention devices shall be installed according to 16 TAC Chapter 76 (related to Water Well Drillers and Water Well Pump Installers).
- (g) Nighttime Application
 - (1) Land application at night shall only be allowed if there is no occupied residence(s) within one quarter (0.25) of a mile from the outer boundary of the actual area receiving compost, manure, sludge, slurry and wastewater application. In areas with an occupied residence within one quarter (0.25) of a mile from the outer boundary of the actual area receiving compost, manure, sludge, slurry and wastewater application, application shall only be allowed from one (1) hour after sunrise until one (1) hour before sunset, unless the current occupant of such residences have, in writing, agreed to specified nighttime applications.
 - (2) Land application of compost, manure, sludge, slurry and wastewater is prohibited between 12 a.m. and 4 a.m. during normal operating conditions.

- 9. Sampling and Testing.
 - (a) Manure and Wastewater. The permittee shall collect and analyze at least one representative sample of wastewater and one representative sample of manure each year for total nitrogen, total phosphorus, and total potassium. The results of these analyses shall be used in determining application rates.
 - (b) Soils
 - (1) Initial Sampling. Before commencing compost, manure, sludge, slurry and wastewater application to the LMU(s), the permittee shall have at least one representative soil sample from each LMU, collected and analyzed according to the following procedures.
 - (2) Annual Sampling. The TCEQ or its designee shall have soil samples collected annually for each current and historical LMU.
 - (3) Sampling Procedures. Sampling procedures shall employ accepted techniques of soil science for obtaining representative samples and analytical results, and be consistent with approved methods described in the Executive Director's guidance entitled "Soil Sampling for Concentrated Animal Feeding Operations (CAFOs) (RG-408)."
 - Soil samples must be collected by one of the following persons:
 - (A) the NRCS;
 - (B) a certified nutrient management specialist;
 - (C) the Texas State Soil and Water Conservation Board;
 - (D) the Texas AgriLife Extension; or
 - (E) an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas.
 - (ii) Samples shall be collected and analyzed within the same forty-five (45) day time frame each year, except when crop rotations or inclement weather require a change in the sampling time. The reason for a change in sampling timeframe shall be documented in the PPP.
 - (iii) Obtain one composite sample for each soil depth zone per uniform soil type (soils with the same characteristics and texture) within each LMU.
 - (iv) Composite samples shall be comprised of 10 15 randomly sampled cores obtained from each of the following soil depth zones:
 - (A) Zone 1: 0-6 inches (where the manure, sludge, slurry, or compost is physically incorporated or injected directly into the soil) or 0-2 inches (where the manure, sludge, slurry or compost is not incorporated into the soil). Wastewater is considered to be incorporated upon land application if it is less than two percent (2%) solids. Slurry from freestall barns is treated like manure for this sampling requirement. If a 0-2 inch sample is required, then an additional sample from the 2-6 inch soil depth zone shall be obtained in accordance with the provisions of this section; and
 - (B) Zone 2: 6-24 inches.
 - (4) Laboratory Analysis. Samples shall be analyzed by a soil testing laboratory. Physical and chemical parameters and analytical procedures for laboratory analysis of soil samples shall include the following:
 - (i) nitrate reported as nitrogen in ppm;

- (ii) phosphorus (extractable, ppm) using Mehlich III with Inductively Coupled Plasma (ICP);
- (iii) potassium (extractable, ppm);
- (iv) sodium (extractable, ppm);
- (v) magnesium (extractable, ppm);
- (vi) calcium (extractable, ppm);
- (vii) soluble salts (ppm) or electrical conductivity (dS/m) determined from extract of 2:1 (v/v) water/soil mixture; and
- (viii) soil water pH (soil:water, 1:2 ratio).
- 10. Preventative Maintenance Program.
 - (a) Facility Inspections
 - (1) General Requirements
 - (i) Inspections shall include visual inspections and equipment testing to determine conditions that could cause breakdowns or failures resulting in discharge of pollutants to water in the state or the creation of a nuisance condition.
 - (ii) The permittee shall draft a report, to be maintained in the PPP, to document the date of inspections, observations and actions taken in response to deficiencies identified during the inspection. The permittee shall correct all the deficiencies within thirty (30) days or shall document the factors preventing immediate correction.
 - (2) Daily Inspections. The permittee shall conduct daily inspections on all water lines, including drinking water and cooling water lines, which are located within the drainage area of a RCS.
 - (3) Weekly Inspections. The permittee shall conduct weekly inspections on:
 - (i) all control facilities, including RCSs, storm water diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated storm water to RCSs; and
 - (ii) equipment used for land application of compost, manure, sludge, slurry and wastewater.
 - (4) Monthly Inspections. The permittee shall conduct monthly inspections on:
 - (i) mortality management systems, including collection areas; and
 - (ii) disposal and storage of toxic pollutants, including pesticide containers.
 - (5) Annual Site Inspection.
 - (i) The permittee shall annually conduct a complete site inspection of the production area and the LMU(s).
 - (ii) The inspection shall verify that:
 - (A) the description of potential pollutant sources is accurate;
 - (B) the site plan/map has been updated or otherwise modified to reflect current conditions; and
 - (C) the controls outlined in the PPP to reduce pollutants and avoid nuisance conditions are being implemented and are adequate.
 - (b) Five Year Evaluation. Once every five years the permittee shall have a licensed Texas Professional Engineer review the existing engineering documentation, complete a site evaluation of the structural controls, review existing liner and

RCS capacity documentation, and complete and certify a report of their findings. The report must be kept in the PPP.

- 11. Management Documentation. The permittee shall maintain the following records in the PPP:
 - (a) a copy of the administratively complete and technically complete individual water quality permit application and the written authorization issued by the commission or Executive Director;
 - (b) a copy of the approved recharge feature certification and appropriate updates;
 - (c) a copy of the comprehensive nutrient management plan, nutrient management plan, nutrient utilization plan and appropriate updates to these plans, if required;
 - (d) the RCS liner certification(s);
 - (e) any written agreement with a landowner which documents the allowance of nighttime application of compost, manure, sludge, slurry and wastewater;
 - (f) documentation of employee and operator training, including verification of the date, time of attendance, and completion of training;
 - (g) the RCS management plan;
 - (h) the capacity of each RCS as certified by a licensed Texas Professional Engineer; and
 - (i) a copy of all third-party field contracts.

B. General Requirements

- 1. The permittee shall not construct any component of the production area in any stream, river, lake, wetland, or playa (except as defined by and in accordance with the Texas Water Code §26.048).
- 2. Animals confined on the CAFO shall be restricted from coming into direct contact with surface water in the state through the use of fences or other controls.
- 3. The permittee shall prevent the discharge of pesticide contaminated waters into water in the state. All wastes from dipping vats, pest and parasite control units, and other facilities used for the application of potentially hazardous or toxic chemicals shall be handled and disposed of in a manner that prevents any significant pollutants from entering water in the state or creating a nuisance condition.
- 4. The permittee shall operate the CAFO in such a manner as to prevent nuisance conditions of air pollution as mandated by Texas Health and Safety Code, Chapters 341 and 382.
- 5. The permittee shall take reasonable steps necessary to prevent adverse effects to human health or safety, or to the environment.
- 6. The permittee shall maintain control of the RCS(s), required LMU(s), and control facilities identified on the site map submitted in the application. In the event the permittee loses control of any of these areas, the permittee shall notify the Executive Director within five (5) working days.
- 7. If animals are maintained in pastures, the permittee shall maintain crops, vegetation, forage growth or post harvest residues in those pastures during the normal growing season, excluding the feed and/or water trough areas.

C. Training

- 1. Employee Training
 - (a) Employees at the CAFO facility who are responsible for work activities relating to compliance with provisions of this permit must be regularly trained or informed of any information pertinent to the proper operation and maintenance of the facility and land application of manure, sludge, and wastewater.
 - (b) Employee training shall address all levels of responsibility of the general components and goals of the PPP. Training shall include appropriate topics, such as land application of manure, sludge, and wastewater, proper operation and maintenance of the facility, good housekeeping, material management practices, recordkeeping requirements, and spill response and clean up.
 - (c) The permittee is responsible for determining the appropriate training frequency for different levels of personnel. The PPP shall identify periodic dates for such training.
- 2. Operator Training. The operator shall attend at least eight (8) hours of continuing education in animal waste management or its equivalent, developed by the Executive Director and the Texas AgriLife Extension, for each two year period.
- 3. Verification of the date and time(s) of attendance and completion of required training shall be documented in the PPP.

D. Air Standard Permit Requirements

- 1. Air emission limitations.
 - (a) Facilities shall be operated in such a manner as to prevent the creation of a nuisance as defined by Texas Health and Safety Code, 30 TAC §§341.011 and 321.32(32), and as prohibited by 30 TAC §101.4. Facilities shall be operated in such a manner as to prevent a condition of air pollution as defined by Texas Health and Safety Code and 30 TAC §382.003(3).
 - (b) The permittee shall take necessary action to identify any nuisance condition that occurs. The permittee shall take action to abate any nuisance condition as soon as practicable or as specified by the Executive Director.
- 2. Wastewater treatment. The permittee shall design and operate RCSs to minimize odors in accordance with accepted engineering practices. Each RCS shall be operated in accordance with the design and an operation and maintenance plan that minimizes odors. The primary lagoon in a multi-stage lagoon system shall be designed with a minimum treatment volume so that the lagoon maintains a constant level at all times unless prohibited by climatic conditions. A multi-stage lagoon system shall be designed to minimize the amount of contaminated storm water runoff entering the primary lagoon by routing the contaminated storm water runoff into a secondary RCS.
- 3. Dust Control. To minimize dust emissions, the CAFO shall be operated and maintained as follows:
 - (a) Fugitive emissions from all grain receiving pits, where a pit is used, shall be minimized through the use of "choke feeding" or through an equivalent method of control. If choke feeding is used, operation of conveyors associated with receiving shall not commence until the receiving pits are full.
 - (b) As necessary, emissions from all in-plant roads, truck loading and unloading areas, parking areas, and other traffic areas shall be controlled with one or more

of the following methods to minimize nuisance conditions and maintain compliance with all applicable commission requirements:

- (1) sprinkled with water;
- (2) treated with effective dust suppressant(s); or
- (3) paved with a cohesive hard surface and cleaned.
- (c) All non-vehicular external conveyors or other external conveying systems associated with the feedmill shall be enclosed.
- (d) On-site feed milling operations with processing equipment using a pneumatic conveying system (which may include, but are not limited to, pellet mill/pellet cooler systems, flaker systems, grinders, and roller-mills) shall vent the exhaust air through a properly-sized high efficiency cyclone collector or an equivalent control device before releasing the exhaust air to the atmosphere. This requirement does not include cyclones used as product separators.
- (e) If the Executive Director determines that the implementation and employment of these practices is not effective in controlling dust, the permittee shall implement any necessary additional abatement measures to control and minimize this contaminant within the time period specified by the Executive Director.
- 4. Maintenance and Housekeeping. The permittee shall comply with the following to help prevent nuisance conditions.
 - (a) The premises shall be maintained to prevent the occurrence of nuisance conditions from odors and dust. Spillage of any raw products or waste products causing a nuisance condition shall be picked up and properly disposed of daily.
 - (b) Proper pen drainage shall be maintained at all times. Earthen pen areas shall be maintained by scraping uncompacted manure and shaping pen surfaces as necessary to minimize odors and ponding.

VIII. Recordkeeping, Reporting, and Notification Requirements A. Recordkeeping

The permittee shall keep records on-site for a minimum of five (5) years from the date the record was created and shall submit them within five (5) days of a written request by the Executive Director.

- 1. The permittee shall update records daily to include:
 - (a) all measurable rainfall events; and
 - (b) the wastewater levels in each RCS, as shown on the depth marker. In circumstances where a RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth.
- 2. The permittee shall update records weekly to include:
 - (a) records of all wastewater, sludge, and/or manure removed from the CAFO that shows the dates, amount, and recipient. The permittee must make the most recent nutrient analysis available to any hauler; and
 - (b) inspections of control facilities and land application equipment.
 - The permittee shall update records monthly to include:
 - (a) records describing mortality management practices;
 - (b) storage and disposal of chemicals, including pesticide containers; and
 - (c) records of all compost, manure, sludge, slurry and wastewater applied on the LMU(s). Such records must include the following information:

3.

- (i) date of compost, manure, sludge, slurry and wastewater application to each LMU;
- (ii) location of the specific LMU and the volume applied during each application event;
- (iii) acreage on which compost, manure, sludge, slurry and wastewater is applied;
- (iv) basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU on a dry basis, including sources of nutrients other than compost, manure, sludge, slurry and wastewater; and
- (v) weather conditions, such as temperature, precipitation, and cloud cover, during the land application and twenty-four (24) hours before and after the land application.
- 4. The permittee shall update records annually to include:
 - (a) annual nutrient analysis for at least one representative sample of wastewater and one representative sample of manure for total nitrogen, total phosphorus, and total potassium;
 - (b) any initial and annual soil analysis reports;
 - (c) the annual site inspection report;
 - (d) percent moisture content of the manure, sludge, slurry, compost, and wastewater; and
 - (e) actual annual yield of each harvested crop for each LMU.
- 5. The Five Year Evaluation report must be updated every five (5) years.
- 6. The permittee shall keep the following records on-site:
 - (a) a list of any significant spills of potential pollutants at the CAFO that have a significant potential to reach water in the state;
 - (b) documentation of liner maintenance by an NRCS engineer, a licensed Texas Professional Engineer or a licensed Texas Professional Geoscientist;
 - (c) RCS design calculations and as built capacity certification;
 - (d) embankment certification;
 - (e) liner certification;
 - (f) a copy of current and amended site plans; and
 - (g) copies of all notifications to the Executive Director, including any made to a regional office.

B. Reporting and Notifications

- 1. The permittee shall provide written notice to the appropriate TCEQ regional office as soon as the RCS cleaning is scheduled, but not less than ten (10) days before cleaning. The permittee shall also provide written verification of completion to the same regional office within five (5) days after the cleaning has been completed. This paragraph does not apply to the cleaning of solid separators or settling basins that are functioning as solid separators.
- 2. The permittee shall notify the appropriate TCEQ regional office in writing or by electronic mail with the date, time, and location at least ten (10) working days before collecting soil samples from current and historical LMUs; and third-party fields.
- 3. Discharge Notification. If for any reason there is a discharge of manure, sludge or wastewater into water in the state, the permittee shall notify the appropriate TCEQ regional office orally within one (1) hour of discovery; unless it is not reasonably

possible to do so in which event the discharge shall be reported as soon as reasonably possible, but in no event later than twenty-four (24) hours from when the discharge occurred. The permittee shall also submit written notice, within fourteen (14) working days of the discharge to the Office of Compliance and Enforcement, Enforcement Division (MC 224). In addition, the permittee shall document the following information, keep the information on-site, and submit the information to the appropriate regional office within fourteen (14) working days of becoming aware of such discharge. The written notification must include:

- (a) a description and cause of the discharge, including a description of the flow path to the receiving water body and an estimation of the volume discharged;
- (b) the period of discharge, including exact dates and times, and, if not corrected, the anticipated time the discharge is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the discharge;
- (c) if caused by a precipitation event(s), the date(s) of the event(s) and the rainfall amount(s) recorded from an on-site rain gauge; and
- (d) discharge monitoring analyses required by this permit.
- 4. In the event of a discharge of manure, sludge, or wastewater from a RCS or a LMU during a chronic or catastrophic rainfall event or resulting from catastrophic conditions, the permittee shall orally notify the appropriate TCEQ regional office within one (1) hour of the discovery of the discharge. The permittee shall send written notification to the appropriate regional office within fourteen (14) working days.
- 5. Chronic Rainfall Discharge. In the event of a discharge of manure, sludge or wastewater from a RCS or a LMU due to chronic rainfall, the permittee shall submit a report to the appropriate TCEQ regional office showing the CAFO records that substantiates that the overflow was a result of cumulative rainfall that exceeded the design rainfall event without the opportunity for dewatering, and was beyond the control of the permittee. After review of the report, if required by the Executive Director, the permittee shall have an engineering evaluation by a licensed Texas Professional Engineer developed and submitted to the Executive Director. This requirement is in addition to the discharge notification requirement in this permit.
- 6. Impacts to Human Health or Safety, or the Environment. The permittee shall provide the following noncompliance notifications:
 - (a) Any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally, by e-mail, or electronic facsimile transmission (Fax) to the TCEQ regional office within twenty four (24) hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the TCEQ regional office and the Enforcement Division (MC 224) within five (5) days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times. If the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance and to mitigate its adverse effects.
 - (b) In the event the permittee discharges manure, sludge, or wastewater other than as authorized in the permit, the permittee shall give twenty four (24) hour oral,

e-mail, or fax notice and five (5) day written notice to TCEQ as required by paragraph (a) above.

- 7. The permittee shall submit an annual report to the appropriate regional office and the Enforcement Division (MC 224) by March 31 of each year for the 12-month reporting period of January 1 to December 31 of the previous year. The report shall be submitted on forms prescribed by the Executive Director to include, but not limited to:
 - (a) number and type of animals, whether in open confinement or housed under roof;
 - (b) estimated total manure, sludge, and wastewater generated during the reporting period;
 - (c) total compost, manure, sludge, slurry and wastewater land applied during the last twelve (12) months on-site at the CAFO facility;
 - (d) total wastewater, sludge, and/or manure transferred to other persons during the reporting period;
 - (e) total number of acres for land application under the control of the permittee and all third-party acreage;
 - (f) summary of discharges of manure, sludge, or wastewater from the production area that occurred during the reporting period including dates, times, and approximate volume;
 - (g) a statement indicating that the NMP/NUP, under which the CAFO is operating, was developed and approved by a certified nutrient management specialist;
 - (h) a copy of the initial soil analysis for each new LMU, regardless of whether manure, wastewater, or sludge has been applied;
 - (i) soil monitoring reports of all soil samples collected in accordance with the requirements of this permit;
 - (j) groundwater monitoring reports (if applicable);
 - (k) the actual crop(s) planted and yield(s) for each LMU;
 - (1) the actual nitrogen and phosphorus content of manure, sludge or process wastewater that was land applied;
 - (m) the results of data used in calculations and the results of calculations conducted in accordance with Attachment E;
 - (n) the results of any soil testing for nitrogen and phosphorus conducted during the previous 12 months;
 - (o) the amount of any supplemental fertilizer applied during the previous 12 months; and
 - (p) any other information requested by the Executive Director.
- 8. The permittee shall furnish to the appropriate regional office, and the Enforcement Division (MC 224), soil testing analysis for third-party fields of all soil samples within sixty (60) days of the date the samples were taken in accordance with the requirements of this permit.

IX. Standard Permit Conditions

- A. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit conditions is a violation of the permit and statutes under which it was issued and is ground for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- B. The permittee must apply for an amendment or renewal before the expiration of the existing permit in order to continue a permitted activity after the expiration date of the

permit. Authorization to continue such activity terminates upon the effective denial of said permit.

- C. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.
- D. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.
- E. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) installed or used by the permittee to achieve compliance with the permit conditions. Proper operation and maintenance also includes adequate laboratory and process controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the permit conditions.
- F. The permittee shall furnish any information, at the request of the Executive Director, which is necessary to determine whether cause exists for revoking, suspending, or terminating authorization under this permit. The requested information must be provided within a reasonable time frame and in no case later than thirty (30) days from the date of the request.
- G. The permittee shall give notice to the Executive Director before physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements.
- H. Authorization from the Commission is required before beginning any change in the permitted facility or activity that would result in noncompliance with other permit requirements.
- I. Inspection and entry shall be allowed under Texas Water Code, Chapters 26-28, Health and Safety Code, §§361.032-361.033 and §361.037, and 40 Code of Federal Regulations (CFR) §122.41(I). The statement in Texas Water Code, §26.014 that the Commission entry of a facility shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during inspection.
- J. Standard Monitoring Requirements
 - 1. Samples required by this permit shall be collected and measurements shall be taken at times and in a manner so as to be representative of the monitored discharge or activity. Samples shall be delivered to the laboratory immediately upon collection, in accordance with any applicable analytical method and required maximum holding time. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.
 - 2. Records of monitoring activities must include:
 - (a) the date, time, and place of sample or measurement;
 - (b) the identity of any individual who collected the sample or made the measurement;
 - (c) the chain-of-custody procedures used to maintain sample integrity from sample collection to laboratory delivery;

- (d) the date and time of laboratory analysis;
- (e) the identity of the individual and laboratory who performed the analysis;
- (f) the technique or method of analysis; and
- (g) the results of the analysis or measurement and quality assurance/quality control records.
- 3. The permittee shall ensure that properly trained and authorized personnel monitor and sample the soil or wastewater related to any permitted activity.
- K. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly shall be reported to the Executive Director as promptly as possible.
- L. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC §305.97 (relating to Action on Application for Transfer).
- M. PPPs, reports, and other information requested or required by the Executive Director shall be signed in accordance with the requirements of 30 TAC §305.128 (relating to Signatories to Reports).
- N. A permit may be amended, suspended and re-issued, or revoked for cause. The filing of a request by the permittee for a permit amendment, suspension and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- O. A permit does not convey any property rights of any sort or any exclusive privilege.
- P. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than fourteen (14) days following each schedule date.
- Q. If the permittee becomes aware that he/she failed to submit any relevant facts in a permit application, or submitted incorrect information in an application, or in any report to the Executive Director, the permittee shall promptly submit such facts or information.
- R. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code, §§26.136, 26.212, and 26.213, for violations including but not limited to the following:
 - 1. negligently or knowingly violating Clean Water Act (CWA) §§301, 302, 306, 307, 308, 318, or 405 or any condition or limitation implementing any sections in a permit issued under CWA §402, or any requirement imposed in a pretreatment program approved under CWA §402(a)(3) or §402(b)(8);
 - 2. falsifying, tampering with, or knowingly rendering inaccurate any monitoring device or method required to be maintained under a permit; or
 - 3. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance.
- S. The permittee shall comply with all applicable rules and regulations of the commission, including 30 TAC 321, Subchapter B.
- T. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

- 1. Violation of any terms or conditions of this permit;
- 2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- 3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- U. Acceptance of the permit by the person to whom it is issued constitutes acknowledgement and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- V. In accordance with the Texas Water Code §26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- W. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- X. Notice of Bankruptcy.
 - 1. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
 - (a) the permittee;
 - (b) an entity (as that term is defined in 11 USC, §101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
 - (c) an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.
 - 2. This notification must indicate:
 - (a) the name of the permittee;
 - (b) the permit number(s);
 - (c) the bankruptcy court in which the petition for bankruptcy was filed; and
 - (d) the date of filing of the petition.

X. Special Provisions

A. RCS Volumes. The permittee shall maintain the wastewater volumes in the RCS in accordance with Table 6.

RCS Name	Design Rainfall Event	Process Generated Wastewater	Minimum Treatment Volume	Sludge Accumulation	Water Balance	Required Capacity Without	Actual Capacity Without
	Runoff					Freeboard	Freeboard
RCS #1	18.32	2.07	2.21	0.52	5.85	28.97	30.94

Table 6: Volume Allocations for RCS (Acre-Feet)

Former RCS #2 has been converted into a Settling Pond

B. Future Revisions to Bosque River Total Maximum Daily Load (TMDL). The permittee is hereby placed on notice that this permit may be amended by the TCEQ in order to make the terms and conditions of this permit consistent with any revisions to the Bosque River TMDL, associated Implementation Plan, and any revisions to federal regulations.

- C. The permittee shall submit the following record to the appropriate Regional Office and the Enforcement Division (MC 224) by March 31 of each year for the 12-month reporting period of January 1 to December 31 of the previous year.
 - 1. date of compost, manure, sludge, slurry and wastewater application to each LMU;
 - 2. location of the specific LMU and the volume applied during each application event;
 - 3. acreage of each individual crop on which compost, manure, sludge, slurry and wastewater is applied;
 - 4. basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU, including sources of nutrients other than compost, manure, sludge, slurry and wastewater on a dry basis;
 - 5. weather conditions, such as temperature, precipitation, and cloud cover, during the land application and twenty-four (24) hours before and after the land application;
 - 6. annual nutrient analysis for at least one (1) representative sample of manure, sludge (if applicable), slurry, and wastewater for total nitrogen, total phosphorus, and total potassium; and
 - 7. any measurements of sludge accumulations as required in each RCS.
- D. Table 7 describes the buffers that the permittee is required to install and maintain according to the NRCS practice standards in the referenced code. The map in Attachment B includes the location and distance requirements for all buffers.

LMU Name	Vegetative Buffer Setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip Flow Length (feet)
LMU #1	Not Applicable	
LMU #2	100	36
LMU #3	Not Applicable	
LMU #4	100	36

Table 7: Buffer Distances

- E. The sludge volume in each RCS will be measured and recorded in the PPP as necessary, but at least annually.
- F. There will be no grazing of livestock on the LMUs for this CAFO unless the NMP reflects grazing and the grazing practices mentioned in the NRCS Conservation Practice Code 393, Filter Strip, are implemented to protect buffers.
- G. Settling Ponds Solids.
 - 1. For the purpose of this permit, settling pond solids shall be defined as manure.
 - 2. If settling pond solids are land applied, an annual sample must be collected and analyzed in accordance with Section VII.A.9(a), in addition to other manure and wastewater.
 - 3. Settling pond solids shall be cleaned out regularly to maintain the percent settling basin design efficiency.
- H. All runoff from silage, commodity, and hay storage outside the RCS drainage area will be contained. Appropriate provisions for that containment will be stated in the PPP upon issuance of the permit. This permit does not authorize any discharge from the silage, commodity, or hay storage areas located outside the drainage area of the RCSs.
- I. Slurry from freestall barn.

- 1. For the purpose of this permit, slurry from freestall barns shall be defined as manure.
- 2. If slurry from freestall barns is land applied, an annual sample must be collected and analyzed in accordance with Section VII.A.9(a), in addition to other manure and wastewater.
- 3. Slurry removed from freestall barns must be stored within the drainage area of an RCS, and the storage area must be large enough to prevent overflow into settling basins and/or RCSs. Any overflow of these storage basins shall be recorded in the PPP and notification shall be provided to the Regional Office within thirty (30) days. Based on review of the information this permit may be formally amended to require additional controls or other requirements.
- J. Cut-off points for center pivot in LMU #1 mut be clearly identified on the surface of the LMU.
- K. Upon issuance of the permit, prior to land application of manure or wastewater, a current NMP must be in place and it shall thereafter be updated annually with the most recent soil, manure, and wastewater analyses. For LMUs that have a phosphorus level in the soil of more than 200 ppm, a NUP must be developed or updated in accordance with Section VII.A.8(c).
- L. During the annual site inspection, the permittee will inspect Well #1, Well #3, and Well #4. Special attention should be given to ensure that the concrete slabs, well heads, and the best management practices listed in Table 3 are in place and functional. Integrity compromises, such as the concrete slab cracking, sanitary seal deterioration, cracks in the well casing, or well house deterioration will be repaired within 30 days of the discovery. Permittee shall ensure no runoff or wastes encroach upon the wells. Fertilizers and pesticides will not be stored on or in any structure that houses the water wellhead. Maintenance records for the wells shall be maintained onsite.
- M. Sludge must be analyzed for nutrient content prior to routing offsite for any land application. The analysis for each haul off shall be maintained in the PPP.
- N. Flushing of the freestall barns is prohibited. Manure removal may be accomplished by dry scrape or vacuum only.
- O. Manure and settled solids accumulations in the settling ponds #1 and #2 must be removed on a regular and consistent basis so as to assure attainment of the 60% and 40% respectively, designed removal efficiency.
- P. A LMU map showing historical LMUs shall be maintained in the PPP.
- Q. There shall be no rainfall runoff entering the RCS from the decommissioned open lots at any time, all rainfall runoff shall be guttered away from the RCSs. The culvert located between the freestall barn and the Settling Pond #2 shall be maintained to ensure runoff can adequately drain from the decommissioned open lots and outside the drainage area of the retention control structures. The permittee shall obtain a major amendment to include the decommissioned open lots into the RCS drainage area.

ATTACHMENT A - SITE MAP



ATTACHMENT B - LAND MANAGEMENT UNITS



ATTACHMENT C - VICINITY MAP





ATTACHMENT D - WELL LOCATION AREAS

ATTACHMENT E

METHODOLOGY FOR CALCULATING MAXIMUM APPLICATION RATES AND ANNUAL RECALCULATION OF APPLICATION RATES

1. Identify the Soil Test Phosphorus (P) Level (Extremely Low, Very Low- Low, Medium, High, Very High) on the soil test analysis.

Soil Test P Rating	Soil Test P Levels (ppm*)
Extremely Low	Less than 5
Very Low - Low	5 to less than 20
Medium	20 to less than 50
High	50 to less than 100
Very High	Greater than or equal to 100
*******	inclant to ma /lea of colida

*ppm is equivalent to mg/kg of solids

- 2. Update Table 1 to Attachment E:
 - (a) Populate the Sub Total column with the point value that corresponds to the Site Characteristic for each.
 - (b) Calculate the Total Index Points
 - (c) Select the P Runoff Potential from the total sum of the Index Points of the Site Characteristics using the Phosphorus Index Classification Table.
- 3. Determine which of the tables (Table 2A or Table 2B) of Table 2 to Attachment E on the following page is appropriate to use. Each table describes the criteria for its use.
- 4. Determine which application rate column is appropriate using the following criteria:
 - (a) Use the Maximum TMDL Annual P Rate if this LMU is located in a segment with an approved TMDL.
 - (b) Use Maximum Annual P Application if this LMU is <u>not</u> located in a segment with an approved TMDL and you wish to apply annually.
 - (c) Use Maximum Biennial Application Rate if this LMU is <u>not</u> located in a segment with an approved TMDL and you wish to apply biennially.
- 5. Determine the Maximum Application Rate using the table identified in Step 3, the column identified in Step 4, and the P Runoff Potential identified in Step 2.(c).
- 6. Using one of the approved crops and yield goals identified on Attachment F for this LMU, determine the maximum application rate (in lbs/ac) for that crop and yield goal and the Maximum Application Rate identified in Step 5 from the S-Crop Table.
 - (a) Example 1: If the Maximum Application Rate in Step 5 is "1.5 Times Annual Crop P Requirement", find the number identified on the S-Crop Table under the column "Crop P_2O_5 requirement" for your crop/yield goal, then multiply that number by 1.5 to determine your maximum application rate (in lbs/ac P_2O_5).
 - (b) Example 2: If the Maximum Application Rate in Step 5 is "0.5 Times Annual Crop P Removal", find the number identified on the S-Crop Table under the column "Crop P_2O_5 Removal Rate" for your crop/yield goal, then multiply that number by 0.5 to determine your maximum application rate (in lbs/ac P_2O_5).

ATTACHMENT E

TABLE 1: PHOSPHORUS INDEX WORKSHEET FOR EAST TEXAS FROM NRCS PRACTICE STANDARD 590

Client Name:			Field(s):		Date:	
Planner:	Location:			Crop:		
Impaired Watershed						
(Y or N):		% Slope:				
Site Characteristic	[Weighting Factor Times the Column Factor]				Sub	
(Weighting Factor)	0	1	2	4	8	Total
Soil Test P Rating	N/A	Very Low – Low	Moderate	High	Very High	
(1.00)	[0]	[1.0]	[2.0]	[4.0]	[8.0]	
Fertilizer Phosphorus	None Applied	1-40 lbs/ac	41-90 lbs/ac	91-150 lbs/ac	>150 lbs/ac	
(P ₂ O ₅) Application Rate		P ₂ O ₅	P ₂ O ₅	P ₂ O ₅	P ₂ O ₅	
(0.75)	[0]	[0.75]	[1.5]	[3.0]	[6.0]	
Organic Phosphorus (P ₂ O ₅) Application Rate	None Applied	1-40 lbs/ac P ₂ O ₅	41-90 lbs/ac P ₂ O ₅	91-150 lbs/ac P ₂ O ₅	>150 lbs/ac P ₂ O ₅	
(0.75)	[0]	[0.75]	[1.5]	[3.0]	[6.0]	
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed deeper than 2 in. or broadcast and incorporated within 48 hours	Surface applied 12/1-2/15	Surface applied 2/16-4/15 or 6/16- 11/30	Surface Applied 4/16-6/15	
(0.50)	[0]	[0.50]	[1.0]	[2.0]	[4.0]	
Organic Phosphorus source Application Method and Timing	None Applied	Placed deeper than 2 in. or broadcast and incorporated within 48 hours	Surface applied 12/1-2/15	Surface applied 2/16-4/15 or 6/16- 11/30	Surface Applied 4/16-6/15	
(0.50)	[0]	[0.50]	[1.0]	[2.0]	[4.0]	
Proximity of nearest field edge to named stream or lake	> 2000 feet	1000 – 1999 feet	500 – 999 feet	100 – 499 feet	< 100 feet	
(1.25)	[0]	[1.25]	[2.5]	[5.0]	[10.0]	
Runoff Class (Runoff Class Table 3)	Negligible	Low	Moderate	High	Very High	
(1.00)	[0]	[1.0]	[2.0]	[4.0]	[8.0]	
Soil Erosion (all sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
(1.50)	[0]	[1.5]	[3.0]	[6.0]	[12.0]	
				Т	otal Index Points:	

ATTACHMENT E

TABLE 2: APPLICATION RATES FROM NRCS PRACTICE STANDARD 590

Commercial fertilizers must be applied in accordance with SWFTL* recommendations. Application of all organic soil amendments must not exceed the values in Table 2A or 2B.

Table 2A. A Nutrient Management Plan $(NMP)^1$ is required where any organic soil amendments are applied where Soil Test P Level is less than 200 ppm statewide or, less than 350 ppm in arid areas² with distance to a named stream greater than one mile.

P – Index	Maximum TMDL Annual	Maximum Annual P	Maximum Biennial Application
Rating	P Application Rate	Application Rate	
Very Low,	Annual Crop Nitrogen	1.0 Times Annual	2.0 Times Annual Crop N
Low	(N) Requirement	Crop N Requirement	Requirement
Medium	2.0 Times Annual Crop P	2.0 Times Annual	2.0 Times Annual Crop N
	Requirement ³	Crop P Requirement ³	Requirement
High	1.5 Times Annual Crop P Requirement ³	1.5 Times Annual Crop P Requirement	Double the Maximum Annual P Application Not to Exceed 2 Times the Annual Crop N Requirement
Very High	1.0 Times Annual Crop P Requirement ³	1.0 Times Annual Crop P Requirement ³	Double the Maximum Annual P Application Not to Exceed 2 Times the Annual Crop N Requirement

Table 2B. A Nutrient Utilization Plan (NUP)¹ is required where Soil Test P Level is: equal to or greater than 200 ppm in nonarid areas², or equal to or greater than 350 ppm in arid areas² with distance to a named stream greater than one mile and erosion control is adequate to keep erosion at the soil loss tolerance (T) or less, or equal to or greater than 200 ppm in arid areas² with distance to a named stream less than one mile.

P – Index	Maximum TMDL Annual	Maximum Annual	Maximum Biennial Application Rate
Rating	P Application Rate	P Application Rate	
Very Low,	1.0 Times Annual Crop P	Annual Crop N	2.0 Times Crop N Removal
Low	Removal ⁴	Removal	
Medium	1.0 Times Annual Crop P	1.5 Times Annual	Double the Maximum Annual P
	Removal ⁴	Crop P Removal ⁴	Application Not to Exceed 2 Times
			the Annual Crop N Removal
High	1.0 Times Annual Crop P	1.0 Times Annual	Double the Maximum Annual P
	Removal ⁴	Crop P Removal ⁴	Application Not to Exceed 2 Times
			the Annual Crop N Removal
Very High	0.5 Times Annual Crop P	0.5 Times Annual	Double the Maximum Annual P
	Removal ⁴	Crop P Removal ⁴	Application Not to Exceed 2 Times
		_	the Annual Crop N Removal

Footnotes Applicable to both Tables

¹NMP and NUP designations are consistent with 30 TAC §321.40.

²All counties must use the 200 ppm P level limit to determine whether to use Table 2A or Table 2B. However, in counties receiving less than 25 inches of annual rainfall, the 350 ppm P level limit applies if the field application area is greater than 1 mile from a named stream or lake. See map in current Texas Agronomy Technical Note 15, Phosphorus Assessment Tool for Texas for county rainfall designations.

³Not to exceed the annual nitrogen requirement rate.

⁴Not to exceed the annual nitrogen removal rate.

SWFTL* Texas A&M AgriLife Extension Soil, Water and Forage Testing Laboratory

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ATTACHMENT F

SITE SPECIFIC INFORMATION FOR LAND MANAGEMENT UNITS FROM NUTRIENT MANAGEMENT PLAN

Table 1: Alternative Crops and Yield Goals

Applicable to All Land Management Units: -171 Acres

	Nitrogen		P20)5
Crop and Yield Goal	Requirement	Removal	Requirement	Removal
Alfalfa Hay 10 Tons	530	532	180	101
Alfalfa Hay 12 Tons	640	638	180	121
Alfalfa Hay 2 Tons	120	106	35	20
Alfalfa Hay 4 Tons	210	213	80	40
Alfalfa Hay 6 Tons	300	319	130	60
Alfalfa Hay 8 Tons	420	426	180	81
Bahia 2 Cut Hay 7000 #	140	89	70	21
Bahia 3 Cut Hay 8000 #	210	102	80	24
Bahia 4 Cut Hay 9000 #	280	114	115	27
Bahia Grazing + 1 Hay	110	83	70	19
Bahia Grazing 1 AU/1 ac	260	114	70	27
Bahia Grazing 1 AU/2 ac	220	108	45	25
Bahia Grazing 1 AU/3 ac	180	102	45	24
Bahia Grazing 1 AU/4 ac	140	95	45	22
Bahia Grazing 1 AU/5 ac	100	79	45	18
Bahia Grazing 1 AU/6 ac	60	65	45	15
Cantaloupes 15-20 tons	120	88	105	.82
Coastal 2 Cut + Graze	260	198	125	62
Coastal 2 Cut Hay	200	169	125	39
Coastal 3 Cut + Graze	360	257	125	80
Coastal 3 Cut Hay	300	238	125	74
Coastal 4 Cut Hay	400	257	170	80
Coastal 5-6 Cut Hay	500	297	170	93
Coastal Grazing + 1 Hay	160	145	70	34
Coastal Grazing 1 AU/0.5 ac	300	218	70	68
Coastal Grazing 1 AU/1 ac	240	198	70	62
Coastal Grazing 1 AU/2 ac	200	169	70	39
Coastal Grazing 1 AU/3 ac	160	145	70	34
Coastal Grazing 1 AU/4 ac	120	120	70	28
Coastal Grazing 1 AU/5 ac	90	103	70	24
Coastal Grazing 1 AU/6 ac	60	86	70	20
Coastal GC (30%DM) 21-23 Ton	400	345	170	95
Coastal GC (30%DM) 18-20 Ton	350	300	170	82
Coastal GC (30%DM) 15-17 Ton	300	255	125	70
Coastal GC (30%DM) 9-11 Ton	200	170	125	47
Common 2 Cut Hay 6000 #	140	113	80	26
Common 3 Cut Hay 7400 #	210	141	80	46
Common 4 Cut Hay 8000 #	280	152	80	49
Common 5-6 Cut Hay 9000 #	350	171	80	56
Common Grazing + 1 Hay	110	100	70	23
Common Grazing + 2 Hav	180	132	80	30
Common Grazing + 3 Hay	250	148	80	48
Common Grazing 1 AU/Lac	260	152	70	49
Common Grazing 1 AU/2 ac	220	143	45	46
Common Grazing 1 AU/3 ac	180	132	45	30
Common Grazing 1 AU/4 sc	140	113	45	26
Common Grazing 1 AU/5 ac	100	94	45	22
Common Grazing 1 AU/6 ac	60	79	45	18

ATTACHMENT F

SITE SPECIFIC INFORMATION FOR LAND MANAGEMENT UNITS FROM NUTRIENT MANAGEMENT PLAN

Table 1: Alternative Crops and Yield Goals

Applicable to All Land Management Units: - 171 Acres

Concerned March 2011	Nitro	gen	P205		
Crop and Yield Goal	Requirement	Removal	Requirement	Removal	
Com 111 - 130 bu	144	117	105	47	
Corn 131 - 150 bu	164	135	105	54	
Com 151 - 170 bu	180	153	130	61	
Com 171 - 190 bu	210	171	130	68	
Corn 191 - 210 bu	250	189	130	75	
Corn 211 - 230 bu	280	207	130	83	
Com 231 - 250 bu	300	225	130	90	
Com 250 - 275 bu	325	243	130	97	
Com 276 - 300 bu	350	261	130	104	
Com 301 - 350 bu	375	279	130	111	
Com 50 - 70 bu	70	63	80	25	
Com 71 - 90 bu	90	81	80	32	
Corn 91 - 110 bu	120	99	105	39	
Cotton 0.5 Bale	25	18	30	9	
Cotton 1.0 Bale	50	36	35	18	
Cotton 2.0 Bale	100	71	105	35	
Cotton 3.0 Bale	150	107	105	53	
Cotton 3.5 Bale	175	125	105	62	
Cotton 4.0 Bale	200	142	105	71	
Cotton 4.5 Bale	225	160	105	80	
Cotton 5.0 Bale	250	178	105	89	
Eastern gamagrass- 3000 #	80	57	40	21	
Eastern gamagrass- 6000 #	120	114	60	41	
Fescue, Tall Hay/Graze 7000#	150	140	80	42	
Grain Sorg. 1000 #	20	17	30	8	
Grain Sorg, 10000 #	200	167	130	82	
Grain Sorg, 1500 #	30	25	30	12	
Grain Sorg. 2000 #	40	33	30	16	
Grain Sorg, 3000 #	60	50	55	25	
Grain Sorg, 4000 #	80	67	55	33	
Grain Sorg. 5000 #	100	84	80	41	
Grain Sorg. 6000 #	120	100	80	49	
Grain Sorg. 7000 #	140	117	130	58	
Grain Socg. 8000 #	160	134	130	66	
Grain Sorg, 9000 #	180	150	130	74	
Guar 3500 lbs	25	22	80	76	
Johnsongrass Hay 6000 #	140	101	80	32	
Klein 3 Cut Hay 7200 #	150	83	55	16	
Klein 4 Cut Hay 7800 #	150	90	55	18	
Klein Grazing + 1 Hav	80	69	55	14	
Klein Grazing 1 AU/1 5 ac	150	90	80	18	
Klein Grazing 1 AU/2.5 ac	80	69	55	14	
Klein Grazine 1 All/6 ac	40	58	55	11	
Legume Overseeded	80	60	105	15	
Legume w/ruegrass	160	94	160	38	
Midland Bermuda 4000 #	120	75	80	17	
Midland Bermuda 6000 #	150	113	105	26	
Midland Bermuda 8000 #	200	150	105	35	

ATTACHMENT F

SITE SPECIFIC INFORMATION FOR LAND MANAGEMENT UNITS FROM NUTRIENT MANAGEMENT PLAN

Table 1: Alternative Crops and Yield Goals

Applicable to All Land Management Units: - 171 Acres

	Nitrogen		P20	P2O5	
Crop and Yield Goal	Requirement	Removal	Requirement	Remova	
Native Grazing or Hay 4000#	80	44	70	34	
Native Grazing or Hay 3000#	40	33	55	25	
Native Grazing or Hay 1500#	20	17	27	13	
Native Grazing or Hay 750#	10	8	13	6	
Oat Light Grazing	120	107	55	40	
Oat Moderate Grazing	160	110	80	41	
Oats Hay 2-3 tons	120	100	55	37	
Oats Heavy Grazine plus Hay	200	117	80	43	
Old World Bluestem- 3000 #	40	33	55	25	
Old World Bluestem- 6000 #	80	66	55	51	
Peanut Hay Dryland 1 Ton	50	47	70	11	
Peanut Hay Dryland 2 Tons	100	93	70	22	
Peanut Hay Impated 3 Tons	150	140	95	33	
Peanuts Irrigated 4500 #	180	162	95	18	
Rice Early 7500 #	195	104	45	41	
Rice Late 7500 #	180	104	45	41	
Rice nlus Ration Farly 10000 #	295	139	60	55	
Rice plus Ratoon Late 10000 #	280	139	60	55	
Rya Forana \$000 f	140	84	55	31	
Rue Forage 7000 #	240	117	80	43	
Ruegrass Hay 6000	140	100	55	37	
Rycerses Heavy Grazing	200	117	80	43	
Repress Moderate Grazing	140	84	55	31	
SG Green Chon/25% DND 8 to 9 tons	260	203	90	73	
SG Green Chon(25% DM) 6 to 7 tons	200	158	80	57	
SG Green Chop(25% DM) 4 to 5 tons	135	113	60	41	
SG Green Chap(25% DM) 2 to 3 tons	75	68	40	24	
SG Siland 35% DM) 12 to 14 tons	160	128	90	67	
SG Silage(35% DM) 10 to 11 tons	120	101	70	53	
SG Silape(35% DM) 8 to 9 tons	95	83	40	43	
SG Silase(35% DM) 5 to 7 tons	70	64	30	34	
Silare - Com(35% DM) 11 - 15 Ton	140	119	80	58	
Silage - Com(35% DM) 16 - 20 100	240	183	100	77	
Silage - Com(35% DM) 21 - 25 Ton	350	263	105	96	
Silaer - Com(35% DM) 26 - 30 Ton	420	315	135	115	
Silage - Com(35% DM) 7 - 10 Ton	85	79	60	38	
Silser - Sorg(35% DND 11 - 15 Ton	200	179	75	55	
Susar + Sore 35% Dhill 16 - 20 Ton	280	238	95	74	
Silage - Sorg/35% D(4) 21 - 25 Ton	360	298	115	92	
Silage - Sonal 35% Dath 26 - 30 Ton	380	315	130	111	
Silage - Sorg(35% DM) 31 - 40 Ton	450	364	155	135	
Silage - Sorgi 35% DMD 41 - 50 Ton	580	455	190	168	
Silens - Sorg 35% DMI 51 - 60 Ton	200	550	220	202	
Silses - Sore/35% DMD 7 - 10 Ton	125	119	60	37	
Small Grain Heavy Grazing	240	112	105	41	
Small Grain Light Grazine	60	75	80	28	
Small Grain Moderate Grazing	160	97	105	36	
Sore - Sudan Hay/Graze 11000 #	240	219	105	83	

ATTACHMENT F

SITE SPECIFIC INFORMATION FOR LAND MANAGEMENT UNITS FROM NUTRIENT MANAGEMENT PLAN

Table 1: Alternative Crops and Yield Goals

Applicable to All Land Management Units: - 171 Acres

0	Nitrogen		P2O5	
Crop and Yield Goal	Requirement	Removal	Requirement	Removal
Sorg Sudan Hay/Graze 7500 #	160	149	55	57
Sorg Forage Hay/Graze 11000 #	240	219	105	83
Sorg Forage Hay/Graze 7500 #	160	151	55	57
Soybean 30 bu	110	119	60	24
Soybean 50 bu	180	180	80	40
Sunflower 2000#	100	71	56	30
Sunflower 3000#	175	107	65	45
Triticale Graze or Hay 7000 #	160	117	105	43
Triticale Graze or Hay 9000 #	240	150	105	56
Watermelons 12 tons	80	53	55	49
Weeping Lovegrass 3500 #	70	39	55	30
Wheat Forage 2000 #	60	33	80	12
Wheat Forage 4000 #	160	67	105	25
Wheat Forage 6000 #	240	100	105	37
Wheat Grain 20 - 30 bu + Grazing	60	58	55	40
Wheat Grain 20 - 30 bu	45	37	55	26
Wheat Grain 31 - 40 bu + Grazing	80	71	75	48
Wheat Grain 31 - 40 bu	60	50	75	34
Wheat Grain 41 - 50 hu + Grazing	100	83	75	57
Wheat Grain 41 - 50 bu	75	62	75	43
Wheat Grain 51 - 60 bu + Grazing	120	96	90	65
Wheat Grain 51 - 60 bu	90	75	90	51
Wheat Grain 61 - 70 bu + Grazing	140	108	90	74
Wheat Grain 61 - 70 bu	105	87	90	60
Wheat Grain 71 - 80 bu + Grazing	160	121	95	82
Wheat Grain 71 - 80 bu	120	100	95	68
Wheat Grain 81 - 90 bu + Grazing	180	133	95	91
Wheat Grain 81 - 90 bu	135	112	95	
Wheat Grain 91 - 100 bu + Grazing	200	146	95	99
Wheat Grain 91 - 100 bu	150	125	95	85
Wheat Heavy Grazing	240	114	105	42
Wheat Light Grazing	60	75	80	28
Wheat Moderate Grazing	160	97	105	36
Millet GC (25% DM) 18 - 24 Ton	180	140	60	46
Millet Hav/Graze 11000 #	150	95	45	40
Silage - Millet(35% DM) 15 - 18 Ton	190	139	60	46
Popcorn Shelled 3000 - 4000 #	80	74	80	27
Popcom Shelled 4000 - 5000 #	100	92	-80	33
Popcorn Shelled 5000 - 6000 #	120	110	80	40
Vetch Hay 1 Ton	70	60	105	14
Vetch Hay 2 Tons	140	120	105	28
Vetch Green chop(25%DM) 4 Tons	70	56	105	7
Vetch Green chop(25%DM) 8 Tons	140	112	105	14
Winter Pea Hay 5000#	140	137	105	35
Winter Pea Green chop(25%DM)8-9 Tons	140	123	105	32
Cowpea Hay 2 Tons	140	120	105	26
Course Course (Trans/260/DM/) Tame	140	120	105	26

ATTACHMENT F

SITE SPECIFIC INFORMATION FOR LAND MANAGEMENT UNITS (LMUs) FROM NUTRIENT MANAGEMENT PLAN

LMU Name	Acreage	Crops and Yield Goals	*Nitrogen Recommendation (lbs/ac)(*1)	*Phosphorus as P ₂ O ₅ Recommend ation (lbs/ac)(*1)	Nitrogen Maximum Application Rates (lbs/ac)* (*1)	Phosphorus as P ₂ O ₅ Maximum Application Rates (lbs/ac)* (*1)
LMU #1	47	Coastal Green Chop: 9 - 11 Tons Small Grain Green Chop: 6 - 7 Tons	146	104	146	104
LMU #2	36	No Land Application	0**	0**	0**	0**
LMU #3**	37	No Land Application	0**	0**	0**	0**
LMU #4**	51	No Land Application	0**	0**	0**	0**

Table 2: Current Site Specific Information from NMP

NOTE

*Nutrients Applied When Application is At Maximum Rates from NMP 590-633 Plan V 5.0 with the Print Date 11/16/2020. Any future revision to the NMP will be based on the current version of the 590-633 CNMP Component (NMP/NUP) Worksheet. Maximum rates are based on manure and wastewater analyses dated 08/06/2020 and soil analysis report dated 10/24/2019 by the Soil, Water and Forage Testing Laboratory, AgriLife Extension, College Station, Texas. The Maximum Rates (lb/ac) for nitrogen (N) and phosphorus (P2O5) will be updated based on most recent annual analyses of soil and waste.

(*1) Nutrient recommendations and maximum amount of nutrients derived from all sources have been established for both nitrogen and phosphorus based on the NMP submitted with the application. The permittee is required to recalculate these values annually in accordance with the requirements of this permit. These annual recalculations do not constitute a substantial change and therefore do not require an amendment of this permit.

**No land application of manure or wastewater is proposed. The Executive Director has reviewed and approved the data elements for Phosphorus Index Rating for LMUs #3 and #4. In the event that the Applicant decides to land apply manure or wastewater to the permitted fields, a NMP must be developed in accordance with Attachment E prior to land application.

Fact Sheet and Executive Director's Preliminary Decision

I. Description of Application

Applicant: Jonathan Carter Osinga and Laura Christine Osinga

Permit No.: WQ0002959000

Regulated Activity: Concentrated Animal Feeding Operation; Dairy Cattle

Permit Action: Major Amendment

Authorization: Air & Water Quality Authorization

II. Executive Director's Recommendation

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The proposed permit shall be issued for a 5 year term in accordance with 30 TAC Chapter 305.

III. Reason for Proposed Project

The applicants have applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment of Texas Pollutant Discharge Elimination System Permit No. WQ0002959000 to authorize the permittee to modify an existing dairy cattle Concentrated Animal Feeding Operation (CAFO) by increasing the total dairy cattle from 990 head to a maximum capacity of 2,500 head, of which 1,500 head will be milking cows; changing the property boundary to include new land that will be used as two new Land Management Units (LMUs): LMU #3 – 37 acres and LMU #4 – 51 acres; and combining and reconfiguring four existing LMUs (LMU #1 – 49 acres, LMU #2 – 12 acres, LMU #3 – 6 acres and LMU #4 – 11 acres) to form two LMUs: LMU #1 – 47 acres and LMU #2 – 36 acres. The total land application area will be increasing from 78 to 171 acres. The design calculations for the retention control structure (RCS) #1 was revised because the RCS drainage area is being reconfigured due to the removal of pens and the change to the settling basin design removal efficiency, which decreased the RCS required capacity from 30.17 to 28.97 ac-ft; and RCS#2 has been converted to Settling Pond #2. The applicants are also proposing to add composting onsite, add existing Well #5 with a 150-foot buffer, and report a "No evidence Well" in the new LMU #4 after due diligence.

The permit has been modified for ownership transfer from Frans Binnert Osinga and Margreet Osinga to Jonathan Carter Osinga and Laura Christine Osinga, and the site name has changed from Moo-Over Dairy to Overcrest Dairy.

IV. Facility Description and Location

Maximum Capacity: 2,500 total head, of which 1,500 head are milking

Land Management Units (LMUs) (acres): LMU#1 – 47, LMU#2 – 36, LMU#3 – 37, LMU#4 – 51

Location: The facility is located at 17298 South US Highway 281, Hico in Erath County, Texas. Latitude: 32° 06' 05"N and Longitude: 98° 07' 15"W.

Drainage Basin: The facility is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin.

The facility consists of one Retention Control Structure (RCS), one Slurry Basin and two Settling Ponds. The table below indicates the volume allocations for the RCS:

RCS Name	Design Rainfall Event Runoff	Process Generated Wastewater	Minimum Treatment Volume	Sludge	Water Balance	Required Capacity	Actual Capacity (if existing)
RCS #1	18.32	2.07	2.21	0.52	5.85	28.97	30.94

Table 1: Volume Allocations for RCS (Acre-Feet)

Former RCS #2 has been converted into a Settling Pond

The volume allocations are determined using Natural Resource Conservation Service standards, American Society of Agricultural and Biological Engineers standards, and/or site specific data submitted in the permit application.

The Design Rainfall Event is the volume of runoff from the 25 year, 10 day storm event. The RCS is required to include adequate capacity to contain this amount of runoff as a margin of safety to protect against discharges during rainfall events that may exceed the average monthly values used to design the RCS, but do not constitute chronic or catastrophic rainfall. This volume allocation accommodates runoff from open lot surfaces, all areas between the open lots and the RCS, runoff from roofed areas that contribute to the RCS and direct rainfall on the surface of the RCS. Runoff curve numbers used to calculate the runoff volume from the open lot surfaces are reflective of the characteristics of open lot surfaces and range between 90 and 95. Runoff curve numbers used to compute the runoff from areas between the open lots and the RCS are reflective of the land use and condition of the areas between the open lots and RCS. A curve number of 100 is used for the RCS surface and all roofed areas.

Process Generated Wastewater is the volume of wet manure and wastewater generated by the facility that is flushed or otherwise directed to the RCS. Wastewater includes all water used directly or indirectly by the facility that comes in contact with manure or other waste. The RCS must contain the process generated wastewater from a 21 day period or greater. RCS #1 is designed to contain 30 days of process generated wastewater for this permit.

Treatment volume is required to minimize odors for facilities requesting air authorization under the Air Standard Permit in 30 TAC Section 321.43. Treatment volume is based on the amount of volatile solids produced and the volatile solids loading rate. Volatile solids are solid material in waste that can be decomposed through biological, physical, and chemical activity. The rate of solids decomposition is based on temperature; therefore it varies by geographic location. The volatile solids loading rate for this facility is 5.3 pounds per day of volatile solids per 1000 ft³ of treatment volume.

Sludge accumulation volumes are required in the RCS that receives runoff from open lots, flushwater from freestall barns, and flushwater from the milking parlor. The sludge accumulation volume for flushwater entering the RCS is based on a rate of 0.0729 cubic feet of storage capacity per pound of total solids in the wet manure entering the RCS during the design sludge accumulation period. The sludge accumulation volume allocated for runoff from open lots is calculated using USDA Agricultural Field Waste Handbook, Kansas, Part 651.1083, which uses the following equation: (%SC) × (MAR) × (DA) × (SP), where %SC = percent solids content of runoff, MAR = mean annual runoff (in inches), DA = contributing drainage area (in acres), and SP = sediment storage period (in years). A minimum of one year of sludge storage is required in the RCS. Design sludge volumes in this permit reflect a one (1) year sludge accumulation period.

The RCS volume designated as Water Balance is the capacity needed in addition to the Process Generated Wastewater volume to provide adequate operating capacity so that the operating volume does not encroach into the design storm volume. The water balance is an analysis of the inflow into the RCS, all outflows from the RCS and the consumptive use requirements of the crops on the land areas being irrigated. The water balance is developed on a monthly basis. It estimates all inflows into the RCS including process generated wastewater and runoff from open lots, areas between open lots and the RCS, roofed areas and direct rainfall onto the RCS surface. Consumptive use potential for the areas to be irrigated is developed based on the potential evapotranspiration of the crops and the effective average monthly rainfall on the area to be irrigated. Runoff curve numbers used for the water balance are adjusted from one (1) day to 30 day curve numbers to more accurately reflect monthly values. Evaporation from the RCS surface is computed on a monthly basis. Monthly withdrawals from the RCS are developed based on the total inflow to the RCS minus evaporation from the RCS surface and limited by the monthly crop consumptive use potential.

V. Summary of Changes from Existing Authorization

A. The permittee is requesting to increase the total dairy cattle from 990 head to a maximum capacity of 2,500 head, with 1,500 milking; change the property boundary to include new land that will be used as two new Land Management Units (LMUs): LMU #3 – 37 acres and LMU #4 – 51 acres; and combine and reconfigure existing four LMUs (LMU #1 – 49 acres, LMU #2 – 12 acres, LMU #3 – 6 acres and LMU #4 – 11 acres) to form two LMUs: LMU #1 – 47 acres and LMU #2 – 36 acres. The total land application area is increasing from 78 to 171 acres. The design calculations for the retention control structure (RCS) #1 was revised because the RCS drainage area is being reconfigured due to the removal of pens and the change to the settling basin design removal efficiency, which decreased the RCS required capacity from 30.17 to 28.97 ac-ft; and RCS#2 has been converted to Settling Pond #2. The applicants are also proposing to add composting onsite, add existing Well #5 with a 150-foot buffer, and report a "No evidence Well" in the new LMU #4 after due diligence.

The permit has been modified for ownership transfer from Frans Binnert Osinga and Margreet Osinga to Jonathan Carter Osinga and Laura Christine Osinga, and the site name has changed from Moo-Over Dairy to Overcrest Dairy.

- 1. Page 1 of the permit shows the name of the new owner and site name.
- 2. Page 1 was amended to show the proposed headcount, revised required RCS capacity, new LMUs and the reconfigured LMUs and acreage.
- 3. The technical packet was revised to show the revised RCS required volumes. Section VI.C.1. that relates to Air Quality Authorization was amended to show the required treatment volume of RCS #1; and a new Section VII.D that relates to Air Standard Permit was added to the permit.
- 4. Table 2 in Section VII.A.3.(a) that relates to current liner and capacity certifications was updated to note the conversion of RCS #2 to Settling Pond #2, and Table 6 in Section X.A that relates to the RCS volume allocations shows the revised volumes.
- 5. The nutrient management plan was revised to include the new and reconfigured LMUs. Attachment B and Table 1 to Attachment F of the permit show the updated acreage for LMUs #1, #2, and the new LMUs #3 and #4.

- 6. Table 7 of the permit that relates to buffer distances was updated to include the new and reconfigured LMUs and buffers.
- 7. Section VII.A.6.(e) that relates to composting and Table 5 of the permit that relates to Pollutant Sources and BMPs were amended to permit composting onsite. Attachment A to the permit shows the proposed location.
- B. Table 3 (Well status and BMPs) and Attachment D (Well location map) to the permit were revised to include Well #5.
- C. Table 4 of the permit that relates to soil limitations and BMPs was revised to include soil series from the new LMUs, limitations and BMPs.
- D. The following changes were made to Section X that relates to the Special Provisions, and the Section was renumbered after Section X.K:
 - 1. Section X.G.3 has been added, it states: Settling pond solids shall be cleaned out regularly to maintain the percent settling basin design efficiency.
 - 2. Section X.K that prohibited land application of sludge was removed from the permit because the permittee requested to land apply sludge to the onsite LMUs.
 - 3. Section X.L (now Section X.K) was revised.

<u>Current permit language</u>: Upon issuance of the permit, no application of manure, wastewater, or sludge is allowed on LMU #1, #2, and #3, until an updated NUP based on the most recent soil, manure, and wastewater analysis has been approved in writing by TCEQ.

<u>Revised permit language</u>: Upon issuance of the permit, prior to land application of manure or wastewater, a current NMP must be in place and it shall thereafter be updated annually with the most recent soil, manure, and wastewater analyses. For LMUs that have a phosphorus level in the soil of more than 200 ppm, a NUP must be developed or updated in accordance with Section VII.A.8(c).

E. Section X.M (now Section X.L.) was revised.

<u>Current permit language</u>: During the annual site inspection, the permittee will inspect the integrity of the concrete slab and well head of Wells #1, #3, and #4. Integrity compromises, such as the cement slab cracking, sanitary seal deterioration, cracks in the well casing, or well house deterioration will be repaired within 30 days of the discovery. Permittee shall ensure no runoff or wastes encroach upon the wells. Fertilizers and pesticides will not be stored on or in any structure that houses the water wellhead. Maintenance records for the wells shall be maintained onsite.

<u>Revised permit language</u>: During the annual site inspection, the permittee will inspect Well #1, Well #3, and Well #4. Special attention should be given to ensure that the concrete slabs, well heads, and the best management practices listed in Table 3 are in place and functional. Integrity compromises, such as the concrete slab cracking, sanitary seal deterioration, cracks in the well casing, or well house deterioration will be repaired within 30 days of the discovery. Permittee shall ensure no runoff or wastes encroach upon the wells. Fertilizers and pesticides will not be stored on or in any structure that houses the water wellhead. Maintenance records for the wells shall be maintained onsite.

F. The following new provision has been added to Section X.

- 1. Q. There shall be no rainfall runoff entering the RCS from the decommissioned open lots at any time, all rainfall runoff shall be guttered away from the RCSs. The culvert located between the freestall barn and the Settling Pond #2 shall be maintained to ensure runoff can adequately drain from the decommisioned open lots and outside the drainage area of the retention control structures. The permittee shall obtain a major amendment to include the decommissioned open lots into the RCS drainage area.
- G. Special provision X.P.(now X.O) was revised to show the new designed removal efficiency rate of 60% and 40% for Settling Ponds #1 and #2, respectively.
- H. Section VIII.B.7 of the permit that relates to Reporting and Notifications was amended to remove the following requirement because the permittee submitted a waiver request with the application:

"Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver."

VI. Proposed Permit Conditions and Monitoring Requirements

A. Effluent Limitations

Compost, manure, sludge, slurry and wastewater may only be discharged from a LMU or a properly designed, constructed, operated and maintained RCS into water in the state from this CAFO if any of the following conditions are met:

- discharge resulting from a catastrophic condition other than a rainfall event that the permittee cannot reasonably prevent or control;
- a discharge resulting from a catastrophic rainfall event from a RCS;
- a discharge resulting from a chronic rainfall event from a RCS; or
- a discharge resulting from a chronic rainfall event from a LMU that occurs because the permittee takes measures to de-water the RCS in accordance with the individual permit, relating to imminent overflow.

40 CFR §122.44 specifies that any requirements, in addition to or more stringent than promulgated effluent limitation guidelines, must be applied when they are necessary to achieve state water quality standards. Water quality based effluent limitations must be established when the TCEQ determines there is a reasonable potential to cause or to contribute to an in-stream excursion above the allowable ambient concentration of a state numeric criterion. For CAFO discharges the TCEQ must consider:

- 1. existing controls on point and non-point sources of pollution;
- 2. variability of the pollutant in the effluent; and
- 3. dilution of the effluent in the receiving water.

In proposing this permit, the TCEQ addresses considerations 2 and 3 since continuous discharges are prohibited and effluent discharges are authorized only during catastrophic conditions or a chronic or catastrophic rainfall event from a RCS properly designed, constructed, operated and maintained. The effluent pollutant levels are variable and effluent is usually not discharged. Additionally, during these climatic events, water bodies receiving a contribution of CAFO wastewater should be significantly diluted by other rainfall runoff.

Consideration 1 requires permit controls on CAFO discharges which will result in the numeric criteria of the water quality standards being met, thus ensuring that applicable uses of water in the state are attained. The principal pollutants of concern include organic matter causing biochemical oxygen demand, the discharge of ammonia-nitrogen, phosphorus and *Escherichia coli*. This permit requires discharges to be monitored for the pollutants of concern. Existing technology does not allow for practicable or economically achievable numeric effluent limitations at this time. The Environmental Protection Agency (EPA) has not promulgated effluent guidelines or numeric effluent limitations that would allow regular discharges of CAFO process wastewater or process-generated wastewater. The proposed permit addresses potential pollutant impacts through requirements including numerous narrative (non-numeric) controls on CAFO process wastewater and non-point sources of pollutant discharges associated with CAFOs. Setting specific water quality-based effluent limitations in this permit is not feasible (see 40 CFR §122.44 (k)(3)).

The general and site specific provisions which are expected to result in compliance with water quality criteria and protection of attainable water quality are discussed in the following sections of this fact sheet: RCS Design and Operational Requirements; Requirements for Beneficial Use of Manure, Sludge, and Wastewater; Additional Water Quality Requirements; and Monitoring and Reporting Requirements.

B. RCS Design and Operational Requirements

The draft permit includes the following requirements related to proper RCS design, construction, operation and maintenance:

- 1. The RCS(s) must be designed and constructed to meet or exceed the margin of safety, equivalent to the volume of runoff and direct precipitation from the 25 year/10 day rainfall event. The design rainfall event, at which time the CAFO is authorized to discharge, is 12.1 inches. The application includes design calculations and certification by a Professional Engineer, which determine the design criteria for the RCS(s).
- 2. A RCS management plan is required to be implemented. This plan must establish expected end of the month water storage volumes for each RCS. These maximum levels are based on the design assumptions used to determine the required size of the RCS. This plan assures the permittee will maintain wastewater volumes within the designed operating capacity of the structures, except during chronic or catastrophic rainfall events. The permittee must document and provide an explanation for all occasions where the water level exceeds the expected end of the month storage volumes. By maintaining the wastewater level at or below the expected monthly volume, the RCS will be less likely to encroach into the volume reserved for the design rainfall event and/or discharge during smaller rainfall events.
- 3. The pond marker must have one foot increments. This requirement identifies the level of wastewater storage to assist the permittee in the implementation of the RCS management plan. It also acts as an enforcement tool for TCEQ to determine compliance with the RCS management plan.
- 4. The wastewater level in the RCS(s) must be recorded daily. This requirement will assist the permittee in the implementation of the RCS management plan and will provide a visual indication of compliance.
- 5. The amount of sludge in the RCS(s) must be maintained at or below the designed sludge volume. Proper sludge management will reduce overflows associated with insufficient

wastewater storage capacity. This permit requires that sludge accumulations in the RCS(s) be measured at least annually.

6. The RCS(s) must be adequately lined and certified by a Texas Professional Engineer; alternatively, certification must document that in situ material meets the requirements of constructed and installed liners. Groundwater has the potential to resurface as surface water. Therefore, preventing impacts to groundwater also provides protection to surface water. A liner certification, certified by a Professional Engineer, for the existing RCSs was submitted with the application.

RCS Name	Liner Certification Date
RCS #1	November 10, 2008
Settling Pond #1	July 7, 1989
Settling Pond #2 (Formerly RCS #2)	November 10, 2008

Table 2: Existing RCS Liner Certifications

- 7. The RCS(s) must maintain two vertical feet of material equivalent to construction materials between the top of the embankment and the structure's spillway to protect from overtopping the structure. RCS(s) without spillways must have a minimum of two vertical feet between the top of the embankment and the required storage capacity.
- 8. The entry of uncontaminated stormwater runoff into RCS(s) must be minimized. The site includes diversion structures to direct contaminated runoff into the RCS(s) and to prevent uncontaminated stormwater runoff from entering the RCS(s).

C. Requirements for Beneficial Use of Manure, Sludge, and Wastewater

Nutrient pollutants of concern have narrative criteria and are discharged in CAFO wastewater. Nutrient pollutants have been addressed through imposition of BMPs. No water quality impacts are expected to occur from land application based upon properly prepared and implemented nutrient management practices. The proposed permit contains requirements related to the collection, handling, storage and beneficial use of manure, wastewater, and sludge. These requirements were established based on TCEQ rules, EPA guidance, NRCS Field Operations Technical Guidance and the Animal Waste Management Field Handbook, recommendations from the TCEQ's Water Quality Assessment Team, and best professional judgment.

The elements of a NMP as listed in 40 CFR §122.42(e)(1) have been incorporated into this permit. This permit requires a NMP developed by a certified nutrient management specialist, based on United States Department of Agriculture/Natural Resource Conservation Service (NRCS) Practice Standard 590 and each of the required elements to be implemented upon issuance of this permit. In relation to these items, the proposed permit meets federal requirements.

1. For LMUs with a soil phosphorus concentration of less than 200 ppm in Zone 1 depth (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated), land application of commercial fertilizer, compost, manure, sludge, slurry and wastewater must be in accordance with a certified NMP. This plan is based on the NRCS Practice Standard Code 590. This plan involves a site specific evaluation of the LMU to include soils, crops, nutrient need and includes the phosphorus index tool. The phosphorus index is a site specific evaluation of

the risk potential for phosphorus movement into watercourses. The risk potential is determined by site characteristics such as soil phosphorus level, proposed phosphorus application rate, application method and timing, proximity of the nearest field edge to a named stream or lake, runoff class, and soil erosion potential. The application rates are adjusted according to the risk potential. The higher the risk potential, the lower the application rate; thus there is minimal potential to have excess nutrients available to leave the site and affect water quality.

- 2. For LMUs with a soil phosphorus concentration of 200-500 ppm in Zone 1 depth (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated), land application of commercial fertilizer, compost, manure, sludge, slurry and wastewater must be in accordance with a nutrient utilization plan (NUP). The NUP is a revised NMP based on crop removal. A crop removal application rate is the amount of nutrients contained in and removed by the proposed crop. At the discretion of the certified nutrient management specialist, the NUP may also include a phosphorus reduction component. This NUP must be submitted to the TCEQ for review and approval.
- 3. For LMUs with a soil phosphorus concentration of greater than 500 ppm in Zone 1 depth (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated), land application of commercial fertilizer, compost, manure, sludge, slurry and wastewater must be in accordance with a NUP based on crop removal which also includes a phosphorus reduction component. A phosphorus reduction component is a management practice, incorporated into the NUP, which is designed to further reduce the soil phosphorus concentration by means such as phosphorus mining, moldboard plowing, or other practices utilized by the permittee. This revised NUP must also be submitted to the TCEQ for review and approval. Permittees required to operate under a NUP with a phosphorus reduction component must show a reduction in the soil phosphorus concentration within twelve (12) months or may be subject to enforcement actions.
- 4. Table 3 below identifies the maximum application rate, as shown in the NMP submitted in the permit application. NMPs are routinely updated and the values shown below are subject to change.

LMU Name	Soil Test P (ppm)	Max Annual P ₂ O ₅ (lbs/ac)
LMU #1	292	104
LMU #2	529	0
LMU #3	To Be Determined*	0
LMU #4	To Be Determined*	0

Table 3: LMU Maximum Application Rates andSoil Phosphorus Levels

The LMUs will be cleared of trees, soil sampled and processed; and the NMP will be updated based on most recent analyses of soil and waste prior to land application.

5. All generated manure, sludge or wastewater in excess of the amount allowed to be land applied by the NMP or NUP must be delivered to a composting facility authorized by the Executive Director, delivered to a permitted landfill, beneficially used by land application on land located outside of the major sole source impairment zone, or provided to operators of third-party fields for beneficial use subject to specified land application requirements

and testing. By requiring specific outlets for excess manure, sludge and wastewater, the permit limits unregulated use of manure, sludge and wastewater within the watershed.

- 6. The permittee must continue to operate under a Comprehensive NMP (CNMP) certified by the Texas State Soil and Water Conservation Board (TSSWCB). The CNMP must be developed by a qualified individual(s) in accordance with TSSWCB regulations. The CNMP is a whole farm plan that addresses nutrient management from the origin in the feed rations to final disposition. The CNMP considers all nutrient inputs, onsite use and treatment, outputs, and losses. Inputs include animal feed, purchased animals, and commercial fertilizer. Outputs include animals sold, harvested crops removed from the facility, and manure removed from the facility. Losses include volatilization, stormwater runoff, and leaching.
- 7. The permittee must implement additional conservation practices on LMUs adjacent to water in the state. These conservation practices include a 100 foot vegetative buffer, filter strips, vegetative barrier, and/or contour buffer strips. Site specific conditions and NRCS practice standards specify which conservation practices, in addition to the required 100 foot vegetative buffer, must be implemented. The conservation practices reduce erosion, suspended solids and nutrients in runoff from LMUs. This will improve the quality of stormwater runoff prior to entering water in the state.
- 8. In Table 4 below, the Additional Buffer Setback distance was determined by using the NRCS Conservation Practice Code 393, Filter Strip. The practice code uses a combination of hydrologic soil groups and field slope percentages to calculate an appropriate filter strip length.

LMU Name	Vegetative Buffer Setback (feet)	Additional Buffer Setback NRCS Code 393 Filter Strip flow length (feet)		
LMU #1	Not Applicable			
LMU #2	100 36			
LMU #3	Not Applicable			
LMU #4	100	36		

Table 4: Buffer Distances for Each LMU

- 9. Land application is prohibited between the hours of 12 a.m. and 4 a.m. This provision reduces the potential of irrigation related discharges associated with equipment malfunctions.
- 10. Discharge of wastewater from irrigation is prohibited, except a discharge resulting from irrigation events associated with imminent overflow conditions. Precipitation-related runoff from LMUs is allowed by the permit, when land application practices are consistent with a NMP or NUP.
- 11. Terms of the NMP and Changes to the Terms of the NMP

Nutrient recommendations and maximum amount of nutrients derived from all sources have been established for both nitrogen (N) and phosphorus (P) based on the NMP submitted with the application. The permittee is required to recalculate these values annually based on the most recent analyses of wastewater, manure, and soil.

Attachment E of the draft permit describes the methodology for calculating maximum application rates and annual recalculation of application rates and Attachment F of the draft permit shows the list of the proposed alternative crops, their yield goals, and the N and P requirements and removal rates for each crop and yield goal. To the extent that the alternative crops were identified in the application, annual recalculations do not constitute a substantial change to the terms of the NMP, and therefore will not require a permit amendment.

The maximum amounts of N and P from all sources of nutrients and the amounts of manure and process wastewater to be applied on alternative crops will be determined in accordance with the methodology described in Attachment E of the draft permit when such crops are being used.

Section VII.A.8(a)(2) of the permit lists changes to the terms of the NMP that will require a major amendment to the permit. Changes that would result in a major amendment are:

- Increase in animal headcount;
- Increase in LMU acreage or a change in LMU location; or
- Change in crop and yield goal (not listed in Attachment F of the proposed permit).

Any changes (substantial or non-substantial) to the NMP, other than the annual recalculation of application rates outlined in Attachment E, must be submitted to the ED for review. If the ED determines that the changes to the NMP are not substantial, the revised NMP will be made publicly available and included in the permit record. If the ED determines that the changes to the NMP are substantial, the information provided by the permittee will be subject to a major amendment process.

The proposed permit authorizes the use of third-party fields, i.e. land not owned, operated, 12. controlled, rented, or leased by the CAFO owner or operator that have been identified in the Pollution Prevention Plan (PPP). The permittee must have a contract with the operator of the third-party fields. The written contract must require all transferred manure, wastewater, and sludge to be beneficially applied to third-party fields in accordance with the applicable requirements in 30 Texas Administrative Code §321.36 and §321.40 at an agronomic rate based on soil test phosphorus in Zone 1 depth (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated). A certified nutrient management specialist must annually collect soil samples from each third-party field used and have the samples analyzed in accordance with the requirements for permitted LMUs. The permittee is prohibited from delivering manure, wastewater, and sludge to an operator of a third-party field once the soil test phosphorus analysis shows a level equal to or greater than 200 ppm in Zone 1 depth (0-6 inches if incorporated, 0-2 or 2-6 inch if not incorporated) or after becoming aware that the third-party operator is not following the specified requirements and the contract. The permittee will be subject to enforcement action for violations of the land application requirements on any third-party field. The third-party fields must be identified in the PPP. The permittee must submit a quarterly report with the name, locations, and amounts of manure, wastewater, and sludge transferred to operators of third-party fields.

VII. Additional Water Quality Requirements

The approved recharge feature certification submitted in the permit application must be updated and maintained in the onsite PPP. The recharge feature certification identifies any

natural or artificial features on the CAFO site, either on or beneath the ground surface, which could provide or create significant pathways for wastewater or manure to enter the underlying aquifer, and describes measures to prevent adverse impacts to groundwater. Groundwater has the potential to resurface as surface water. Therefore, preventing impacts to groundwater also provides protection to surface water.

Table 5 below shows potential soil limitations identified in the recharge feature evaluation and the proposed management practices to address those limitations.

Soil Series and Map ID	Potential Limitations	BMPs*
Maloterre: Ma	Depth to Bedrock Droughty	Irrigation events will be managed to assist in maintaining soil moisture levels within the mage of the envilople water helding
Nimrod-Arenosa- Patilo: NpB, NpD	Filtering Capacity Seepage Depth to Saturated Zone	capacity of that Land Management Unit. Land Application will be based upon the
Nimrod: NdC	Filtering Capacity, Seepage	Available Water Capacity (refer to the nutrient management plan (NMP)) of the soil and will not exceed agronomic rates for
Selden: SdC	Depth to Saturated Zone	nutrients.
Windthorst: WnC Purves: PcB	Filtering Capacity Droughty Depth to Bedrock Slow Water Movement Percolates Slowly	No land application to inundated soils. Irrigation events will be managed to assist in maintaining soil moisture levels within the range of the available water holding capacity of that Land Management Unit.
		Land Application will be based upon the AWC (refer to the NMP) of the soil and will not exceed agronomic rates for nutrients.
		No land application to inundated soils.
		Land application not to exceed agronomic rates for nutrients and soil hydraulic rates (refer to NMP).

Table 5: Soil Limitations

Table 6 below lists all wells on the facility, their status, and what BMP will be implemented to protect groundwater. A Well Buffer Exception request for Wells #1, #3, and #4 was submitted to and approved by the TCEQ Water Quality Assessment Team.

Well	Status	BMPs
Number		
1	Producing	Well head is equipped with a concrete surface slab sealed to the steel casing, located outside the RCS drainage area and upgradient of the production area
2	Producing	Maintain 150 ft buffer

Table 6: Water Well Protection

Well	Status	BMPs
Number		
3	Producing	Well head is equipped with a concrete surface slab sealed to
		the steel casing, located outside the RCS drainage and
		upgradient of the production area
4	Producing	Well head is equipped with a concrete surface slab sealed to
		the steel casing, located outside the RCS drainage and
		upgradient of the production area
5	Producing	Maintain 150 ft buffer

VIII. Monitoring and Reporting Requirements

- A. The permittee is required to report all discharges to TCEQ. Discharges resulting from a chronic or catastrophic rainfall event or catastrophic conditions must be reported orally within one hour of the discovery of the discharge and in writing within fourteen (14) working days. For any discharges, grab samples must be collected and analyzed for Biochemical Oxygen Demand, *Escherichia coli*, Total Dissolved Solids, Total Suspended Solids, Nitrate, Total Phosphorus, Ammonia Nitrogen and pesticides (if suspected).
- B. The permittee must provide a report to the TCEQ to substantiate a chronic rainfall discharge. After review of the report, if required by the Executive Director, the permittee must have an engineering evaluation by a licensed Texas Professional Engineer developed and submitted to the Executive Director. The report and engineering evaluation may be used to verify that the facility was maintained and operated according to the permit conditions. Information reviewed may include rainfall records at the CAFO, RCS wastewater levels preceding the discharge, irrigation records, and the current sludge volume. This requirement allows for closer scrutiny by TCEQ for discharges resulting from chronic conditions and provides documentation for enforcement of unauthorized discharges.
- C. Soil samples must be taken annually from LMUs and analyzed for Nitrate, Phosphorus, Potassium, Sodium, Magnesium, Calcium, Soluble salts/electrical conductivity, and pH. The results are used in the NMP to determine land application rates. Annual soil samples must be collected by one of the following persons: the NRCS; a certified nutrient management specialist; the Texas State Soil and Water Conservation Board; the Texas AgriLife Extension; or an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas. The TCEQ Regional Office must be notified ten (10) days prior to annual soil sample collection activities. The permittee is required to submit soil analyses to TCEQ.
- D. The permittee is required to annually collect and analyze at least one (1) representative sample of wastewater, sludge (if applicable), or manure for total nitrogen, total phosphorus, and total potassium. The results are used in the NMP to determine land application rates.
- E. Some of the land application records maintained by the permittee must be submitted to the TCEQ annually. These records include: date of compost, manure, sludge, slurry and wastewater application to each LMU; location of the specific LMU and the volume applied during each application event; acreage of each individual crop on which compost, manure, sludge, slurry and wastewater is applied; basis for and the total amount of nitrogen and

phosphorus applied per acre to each LMU, including sources of nutrients and amount of nutrients on a dry weight basis other than compost, manure, sludge, slurry and wastewater and; weather conditions, such as temperature, precipitation, and cloud cover, during the land application and twenty-four (24) hours before and after the land application.

F. Other recordkeeping requirements include: daily records of RCS wastewater levels and measurable rainfall; weekly records of manure, wastewater, and sludge removed from the facility, inspections of control facilities and land application equipment; and monthly records of compost, manure, sludge, slurry and wastewater land applied.

IX. 303(D) Listing and Total Maximum Daily Load (TMDL)

The facility for this permit action is located within the watershed of the North Bosque River in Segment No. 1226 of the Brazos River River Basin. The designated uses and dissolved oxygen criterion as stated in Appendix A of the Texas Surface Water Quality Standards (30 TAC §307.10) for Segment No. 1226 are primary contact recreation, public water supply, high aquatic life use, and 5.0 mg/L dissolved oxygen.

Segment 1226 is not listed on the 2020 Clean Water Act Section 303 (d) list. The facility is located in the watershed of an unnamed tributary and is not listed on the 2020 Clean Water Act Section 303 (d) list for any bacteria impairments. However, some tributaries within the watershed of Segment 1226 are listed on the State's inventory of impaired and threatened waters (the 2020 Clean Water Act Section 303(d) list) for dissolved oxygen and elevated bacteria. Green Creek in Segment No. 1226B is listed for depressed dissolved oxygen, Spring Creek in Segment No. 1226G and Little Duffau Creek in Segment No. 1226K are listed for bacteria.

The North Bosque River (Segments 1226 and 1255) was included in the 1998 Texas Clean Water Act 303(d) List and deemed impaired under narrative water quality standards related to nutrients and aquatic plant growth. Segment No. 1226 is included in the Agency's document Two Total Maximum Daily Loads for Phosphorus in the North Bosque River, adopted by the Commission on February 9, 2001 and approved by EPA on December 13, 2001. An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque River Watershed (I-Plan) was approved by the Commission on December 13, 2002 and approved by the Texas State Soil and Water Conservation Board on January 16, 2003. According to the TMDL I-Plan, management measures for control of phosphorus loading will also have some corollary effect on reducing bacteria loading, since the nonpoint source nutrient and bacteria loads largely originate from the same sites and materials and are transported via the same processes and pathways.

The TMDL for the North Bosque River, Segments 1226 and 1255, identified the amount of phosphorus introduced into these segments, i.e. the load. Phosphorus load from two categories of sources was modeled to calculate the expected reductions in phosphorus load to meet instream water quality standards. Point sources included wastewater treatment plants; non-point sources included all other sources, such as CAFOs. The TMDL called for an average 50% reduction in the average concentration of soluble reactive phosphorus loadings from both point sources and non-point sources. The TMDL was developed assuming implementation of specific best management practices. This set of best management practices represents one way to achieve the water quality targets in stream and the overall reduction goal of the TMDL.

The TMDL was approved with the understanding that an adaptive management approach was an appropriate means to manage phosphorus load to the stream. The I-Plan emphasized this

approach to achieve the phosphorus reductions targeted in the TMDL. Adaptive management envisions adjustment of management practices over time as necessary to reach this target. The TMDL anticipated that, to control loading to the stream, dairy CAFO permittees would implement those best management practices which best addressed site-specific conditions. Accordingly, the TMDL is not directly tied to the number of animal units permitted in the watershed; it is instead tied to the amount of nutrients that may be land applied consistent with management practices that ensure appropriate agricultural utilization of nutrients.

Primary management strategies for dairies, both voluntary and regulatory, were identified in the I-Plan which included: phosphorus-based application rates in LMUs, voluntarily measures to reduce the amount of phosphorus in dairy cow diets, voluntarily removing 50% of dairy-generated manure from the watershed, more stringent RCS design requirements to reduce the potential for overflows from RCSs, evaluation of chronic rainfall and incidences of RCS overflows, additional tailwater requirements, additional protective measures to prevent runoff caused by excessive irrigation, CNMPs, educational requirements for dairy operators and employees.

The proposed permit includes the following requirements to address the recommendations in the I-Plan:

- RCS(s) designed and constructed for 25 year, 10 day rainfall event
- RCS management plan
- pond marker with one foot increments
- daily recordkeeping of wastewater levels
- chronic rainfall discharge notification, including records that substantiate that the overflow was a result of cumulative rainfall that exceeded the design rainfall event without the opportunity for dewatering
- NMP and NUP based on phosphorus risk index
- CNMP
- specific outlets for excess manure, sludge and wastewater
- additional record-keeping for exported manure, sludge and wastewater to track each permittee's contribution toward the 50% voluntary removal goal in the Bosque River Total Maximum Daily Load (TMDL)
- prohibition of discharges from LMUs, except as related to imminent overflow
- minimize ponding and puddling of wastewater and prevent tailwater discharges
- additional conservation practices between land application areas and water in the state
- prohibition of land application between 12 a.m. and 4 a.m.
- automatic shutdown or alarm system may be required if unauthorized discharge occurs from irrigation system
- employee and operator required training related to land application of manure, sludge, and wastewater, proper operation and maintenance of the facility, good housekeeping,

material management practices, recordkeeping requirements, and spill response and clean up

The voluntary phosphorus diet reductions may be implemented through consultations between a nutritionist and the permittee. Any such dietary phosphorus reductions will result in reduced phosphorus concentrations in manure. These strategies are facets of CNMPs.

The RCS storage capacity requirements, nutrient management practices, increased TCEQ oversight of operational activities, and requirements of the I-Plan, which are incorporated into the draft permit, are designed to reduce the potential for this CAFO to contribute to further impairment from bacteria, oxygen-demanding constituents and nutrients such as total phosphorus. Furthermore, it is anticipated the implementation of the primary management strategies and permit provisions identified above will result in phosphorus load reduction in the watershed and achieve the reductions targeted in the TMDL. The draft permit provisions are consistent with the approved TMDL and I-Plan that establish measures for reductions in loading of phosphorus (and consequently other potential pollutants) to the North Bosque River Watershed. Therefore, the draft permit is consistent with the requirements of the antidegradation implementation procedures in 30 Texas Administrative Code Section 307.5 (c)(2)(G) of the Texas Surface Water Quality Standards.

X. Threatened or Endangered Species

The discharge from this permit action is not expected to have an effect on any federal endangered or threatened aquatic or aquatic dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) Biological Opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System (TPDES) dated September 14, 1998 and the October 21, 1998 update. To make this determination for TPDES permits, TCEQ and Environmental Protection Agency only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS Biological Opinion. This determination is subject to reevaluation due to subsequent updates or amendments to the Biological Opinion. The permit does not require Environmental Protection Agency review with respect to the presence of endangered or threatened species.

XI. Procedures for Final Decision

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant instructing the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Fact Sheet and Executive Director's Preliminary Decision, to the Office of the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the individuals identified on the Office of the Chief Clerk mailing list and published in the newspaper. This notice sets a deadline for making public

comments. The applicant must place a copy of the Executive Director's Preliminary Decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all timely, relevant and material, or significant public comments significant on the application or the draft permit raised during the public comment period. The Office of the Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to individuals who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that a person may request a contested case hearing or file a request for reconsideration of the Executive Director's decision within thirty (30) days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within thirty (30) days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ's Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application, contact Kayla Robichaux at (512) 239-4742.

XII. Administrative Record

The following items were considered in developing the proposed draft permit:

- TCEQ Permit No. WQ0002959000 issued January 5, 2017.
- The application received on December 3, 2020 and subsequent revisions.
- Interoffice Memorandum for groundwater review from the Water Quality Assessment Team, Water Quality Assessment Section, Water Quality Division, dated January 7, 2021.
- Interoffice Memorandum for NMP review from the Water Quality Assessment Team, Water Quality Assessment Section, Water Quality Division, dated January 6. 2021.
- Interoffice Memorandum from the Standards Implementation Team, Water Quality Assessment Section, Water Quality Division, dated February 9, 2021.
- Bosque River TMDL Implementation Plan.
- Federal Clean Water Act Section 402; Section 382.051 of the Texas Clean Air Act; Texas Water Code §26.027; 30 TAC §39, §305, §321 Subchapter B; Commission Policies; and EPA Guidelines.
- Texas 2020 Clean Water Act Section 303(d) List, Texas Commission on Environmental Quality, March 25, 2020; approved by EPA on May 12, 2020.

- NRCS Animal Waste Management Field Handbook and Field Office Technical Guidance for Texas.
- NRCS, ASABE and ASTM Standards.



Compliance History Report

Compliance History Report for CN605832658, RN100797141, Rating Year 2021 which includes Compliance History (CH) components from September 1, 2016, through August 31, 2021.

Customer, Res or Owner/Ope	pondent, rator:	CN605832658, OS CARTER	SINGA, JONATHAN	Classification: HIGH	Rating: 0.00
Regulated Enti	ty:	RN100797141, MOO-OVER DAIRY Classification: HIGH Ra			Rating: 0.00
Complexity Poi	ints:	3		Repeat Violator: NO	
CH Group:		12 - Agriculture, F	orestry, Fishing, and H		
Location:		2280 US HWY 281	DUBLIN, TX 76446,	ERATH COUNTY	
TCEQ Region:		REGION 04 - DFW	METROPLEX		
ID Number(s): AIR NEW SOURC WASTEWATER A	CE PERMITS	ACCOUNT NUMBE RE PERMIT WQ000	R EF0046I WA 2959000	STEWATER AGRICULTURE EPA ID) TX0121461
Compliance His	story Peri	od: September 01	, 2016 to August 31,	2021 Rating Year: 2021	Rating Date: 09/01/2021
Date Complian	ce History	Report Prepar	ed: March 11, 2022	2	
Agency Decisio	on Requiri	ng Compliance	History: Enforcem	nent	
Component Pe	riod Selec	ted: September	01, 2016 to August 3	1, 2021	
TCEQ Staff Mer	nber to Co	ontact for Addit	ional Information	Regarding This Compliance	History.
Name: Kay	la Robichau	ĸ		Phone: (512) 239-47	/42
Site and Own 1) Has the site been 2) Has there been 3) Who is the curre	er / Operation en in existen a (known) c ent owner/o	ator History: ce and/or operation change in ownershipperator?	n for the full five year p/operator of the site o OSINGA, JONATHAN OSINGA, LAURA CHR	compliance period? during the compliance period? CARTER OWNER since 11/17/2020 IISTINE OWNER since 11/17/2020	YES YES
4) Who was/were	the prior ow	ner(s)/operator(s)?	OSINGA, FR OSINGA, MA	ANS BINNERT, OWNER, 3/27/2003 ARGREET, OWNER, 3/27/2003 to 11	to 11/16/2020 /16/2020
<u>Components</u>	<u>(Multime</u>	<u>dia) for the S</u>	<u>ite Are Listed in</u>	<u>Sections A - J</u>	
A. Final Order	s, court jı	udgments, and	consent decrees:		
B. Criminal co N/A	nvictions				
C. Chronic exc N/A	cessive en	nissions events	:		
D. The approv Item 1 Item 2 Item 3 Item 4	al dates o January 26 August 14 May 23, 20 July 28, 20	f investigation 5, 2018 , 2018 019 020	s (CCEDS Inv. Trac (1459932) (1510923) (1569424) (1659255)	ck. No.):	

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

- F. Environmental audits:
- G. Type of environmental management systems (EMSs): N/A
- H. Voluntary on-site compliance assessment dates: $$N\!/\!A$$
- I. Participation in a voluntary pollution reduction program: \$N/A\$
- J. Early compliance: N/A

Sites Outside of Texas:



Compliance History Report

Compliance History Report for CN605832641, RN100797141, Rating Year 2021 which includes Compliance History (CH) components from September 1, 2016, through August 31, 2021.

Customer, Respondent, or Owner/Operator:		CN605832641, OSINGA, LAURA CHRISTINE		Classification: HIGH	Rating: 0.00	Rating: 0.00			
Regulated Entity:		RN100797141, MOO-OVER DAIRY		Classification: HIGH	Rating: 0.00				
Complexity Poin	nts:	3		Repeat Violator: NO					
CH Group:	iroup: 12 - Agriculture, Forestry, Fishing, and Hunting								
Location:	cion: 2280 US HWY 281 DUBLIN, TX 76446, ERATH COUNTY								
TCEQ Region:	CEQ Region: REGION 04 - DFW METROPLEX								
ID Number(s): AIR NEW SOURCE PERMITS ACCOUNT NUMBER EF0046I WASTEWATER AGRICULTURE EPA ID TX0121461 WASTEWATER AGRICULTURE PERMIT WQ0002959000									
Compliance Hist	tory Perio	d: September 0	1, 2016 to August 31	, 2021 Rating Year: 2021	Rating Date: <u>09/01/2021</u>	L			
Date Compliance	e History	Report Prepa	red: March 11, 202	22					
Agency Decision	n Requirir	ng Compliance	History: Enforce	ement					
Component Peri	od Select	ted: Septembe	er 01, 2016 to August	31, 2021					
TCEQ Staff Mem	ber to Co	ntact for Addi	tional Informatio	on Regarding This Complia	ance History.				
Name: Kayla	a Robichaux			Phone: (512) 2	39-4742				
Site and Owne	er/Opera	tor History:							
1) Has the site been	n in existend	ce and/or operation	on for the full five yea	r compliance period?	YES				
2) Has there been a	(known) cł	hange in ownersh	ip/operator of the site	e during the compliance period?	YES				
3) Who is the currer	nt owner/op	erator?	OSINGA, JONATHA	N CARTER OWNER since 11/17/	2020				
4) Who was/were the prior owner(s)/operator(s)? OSINGA, FRANS BINNERT, OWNER, 3/27/2003 to 11/16/2020 OSINGA, MARGREET, OWNER, 3/27/2003 to 11/16/2020									
Componente (1	Multimo	dia) far tha f	Site Are Listed i	n Sactions A 1					
<u>components (</u>	Multime	<u>ala) for the s</u>	oite Are Listed I	n Sections A - J					
A. Final Orders	 Final Orders, court judgments, and consent decrees: N/A 								
B. Criminal con N/A	victions:								
C. Chronic exce	N/A								
D. The approva Item 1 Item 2 Item 3 Item 4	l dates of January 26 August 14, May 23, 20 July 28, 20	f investigation , 2018 2018 19 20	s (CCEDS Inv. Tr (1459932) (1510923) (1569424) (1659255)	ack. No.):					

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

- F. Environmental audits:
- G. Type of environmental management systems (EMSs): N/A
- H. Voluntary on-site compliance assessment dates: $$N\!/\!A$$
- I. Participation in a voluntary pollution reduction program: \$N/A\$
- J. Early compliance: N/A

Sites Outside of Texas:



Compliance History Report

Compliance History Report for CN600794887, RN100797141, Rating Year 2019 which includes Compliance History (CH) components from September 1, 2014, through August 31, 2019.

_	_				_					
Cu: or	stomer, Respo Owner/Opera	ondent, CN600794887 ator:	, OSINGA, FRANS BINNE	RI Classific	ation: HIGH	Rating	: 0.00			
Regulated Entity:		RN100797141	, MOO-OVER DAIRY	Classific	cation: HIGH	Rating	0.00			
Со	mplexity Poin	ts: 3		Repeat V	iolator: NO					
СН	Group:	12 - Agricultur	12 - Agriculture, Forestry, Fishing, and Hunting							
Lo	cation:	2280 US HWY	2280 US HWY 281 DUBLIN, TX 76446, ERATH COUNTY							
тс	EQ Region:	Region: REGION 04 - DFW METROPLEX								
ID AII WA	ID Number(s): AIR NEW SOURCE PERMITS ACCOUNT NUMBER EF0046I WASTEWATER AGRICULTURE PERMIT WQ0002959000 WASTEWATER AGRICULTURE PERMIT WQ0002959000									
Со	mpliance Hist	ory Period: Septembe	r 01, 2014 to August 31,	2019 Rati	ng Year: 2019	Rating Date:	09/01/2019			
Da	te Compliance	e History Report Prej	Dared: March 10, 202	2		_				
Ag	ency Decision	Requiring Complian	ce History: Enforcer	ment						
Со	mponent Peri	od Selected: Septem	ber 01, 2016 to August	31, 2021						
тс	EQ Staff Mem	ber to Contact for Ad	lditional Informatio	n Regarding	This Compliance	e History.				
	Name: Kayla	Robichaux		Р	hone: (512) 239-4	742				
<u>Sit</u> 1) H	te and Owne Has the site been	r/Operator History	/: ation for the full five year	compliance pe	riod?	YES				
2) ł	Has there been a	(known) change in owner	ship/operator of the site	during the con	npliance period?	NO				
<u>co</u>	mponents (I	<u>Multimedia) for the</u>	e Site Are Listed in	Sections	<u>4 - J</u>					
Α.	A. Final Orders, court judgments, and consent decrees: N/A									
В.	3. Criminal convictions: N/A									
С.	Chronic exce N/A	essive emissions even	emissions events:							
D.	The approva Item 1 Item 2 Item 3 Item 4	I dates of investigati January 26, 2018 August 14, 2018 May 23, 2019 July 28, 2020	ons (CCEDS Inv. Tra (1459932) (1510923) (1569424) (1659255)	ck. No.):						
Е.	Written notices of violations (NOV) (CCEDS Inv. Track. No.): A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.									

N/A

F. Environmental audits:

G. Type of environmental management systems (EMSs):

N/A

- H. Voluntary on-site compliance assessment dates: N/A
- I. Participation in a voluntary pollution reduction program: N/A
- J. Early compliance: N/A

Sites Outside of Texas:



Compliance History Report

Compliance History Report for CN603195439, RN100797141, Rating Year 2019 which includes Compliance History (CH) components from September 1, 2014, through August 31, 2019.

Cu	stomer. Respon	dent. CN603195439.09	SINGA, MARGREET	Classification: HIGH	Rating	• 0 00				
or Owner/Operator:		r:	- , -		Nating	0.00				
Re	gulated Entity:	RN100797141, M0	RN100797141, MOO-OVER DAIRY Classification: HIGH		Rating: 0.00					
Со	mplexity Points:	3		Repeat Violator: NO						
СН	Group:	12 - Agriculture, F	12 - Agriculture, Forestry, Fishing, and Hunting							
Lo	cation:	2280 US HWY 281	2280 US HWY 281 DUBLIN, TX 76446, ERATH COUNTY							
тс	EQ Region:	egion: REGION 04 - DFW METROPLEX								
ID Number(s): AIR NEW SOURCE PERMITS ACCOUNT NUMBER EF0046I WASTEWATER AGRICULTURE PERMIT WQ0002959000										
Со	mpliance Histor	y Period: September 0	l, 2014 to August 31, 2	2019 Rating Year: 2019	Rating Date:	09/01/2019				
Da	te Compliance H	listory Report Prepar	ed: March 10, 2022	!						
Ag	ency Decision R	equiring Compliance	History: Enforcem	ient						
Со	mponent Period	Selected: September	- 01, 2016 to August 3	1, 2021						
тс	EQ Staff Membe	r to Contact for Addi	ional Information	Regarding This Compliance	e History.					
	Name: Kayla Ro	bichaux		Phone: (512) 239-4	1742					
Sit	e and Owner/	Operator History:								
1)	Has the site been in	existence and/or operatio	n for the full five year	compliance period?	YES					
2) I	Has there been a (ki	nown) change in ownershi	p/operator of the site o	during the compliance period?	NO					
Co	mponents (Mu	ultimedia) for the S	ite Are Listed in	Sections A - 1						
<u></u>		<u> </u>								
Α.	A. Final Orders, court judgments, and consent decrees: N/A									
в.	B. Criminal convictions: N/A									
C.	Chronic excess N/A	hronic excessive emissions events: N/A								
D.	The approval dItem 1JanItem 2AugItem 3MarItem 4July	ates of investigation Juary 26, 2018 gust 14, 2018 y 23, 2019 y 28, 2020	s (CCEDS Inv. Trad (1459932) (1510923) (1569424) (1659255)	ck. No.):						
Е.	 Written notices of violations (NOV) (CCEDS Inv. Track. No.): A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred. 									

N/A

F. Environmental audits:

G. Type of environmental management systems (EMSs):

N/A

- H. Voluntary on-site compliance assessment dates: N/A
- I. Participation in a voluntary pollution reduction program: N/A
- J. Early compliance: N/A

Sites Outside of Texas: