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States' Nutrient Management Plans Statutes & Regulations:

Texas

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States' Nutrient Management Plans Statutes & Regulations: Texas

TX Water Code § 26.001(10), (13), (14), (21)
TX Water Code § 26.011
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30 TX Admin Code § 321.32(2), (7), (14), (37)
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The statutes and Constitution are current through the 2018 regular and special legislative sessions. The statutes are subject to changes by the Texas Legislative Council.

TX Water Code § 26.001. Definitions.

As used in this chapter:

(1) "Board" means the Texas Water Development Board.

(2) "Commission" means the Texas Natural Resource Conservation Commission.

(3) "Executive administrator" means the executive administrator of the Texas Water Development Board.

(4) "Executive director" means the executive director of the Texas Natural Resource Conservation Commission.

(5) "Water" or "water in the state" means groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface

water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.

(6) "Waste" means sewage, industrial waste, municipal waste, recreational waste, agricultural waste, or other waste, as defined in this section.

(7) "Sewage" means waterborne human waste and waste from domestic activities, such as washing, bathing, and food preparation.

(8) "Municipal waste" means waterborne liquid, gaseous, or solid substances that result from any discharge from a publicly owned sewer system, treatment facility, or disposal system.

(9) "Recreational waste" means waterborne liquid, gaseous, or solid substances that emanate from any public or private park, beach, or recreational area.

(10) "Agricultural waste" means waterborne liquid, gaseous, or solid substances that arise from the agricultural industry and agricultural activities, including without limitation agricultural animal feeding pens and lots, structures for housing and feeding agricultural animals, and processing facilities for agricultural products. The term:

(A) includes:

(i) tail water or runoff water from irrigation associated with an animal feeding operation or concentrated animal feeding operation that is located in a major sole source impairment zone, as defined by Section 26.502; or

(ii) rainwater runoff from the confinement area of an animal feeding operation or concentrated animal feeding operation that is located in a major sole source impairment zone, as defined by Section 26.502; and

(B) does not include tail water or runoff water from irrigation or rainwater runoff from other cultivated or uncultivated range land, pasture land, and farmland or rainwater runoff from an area of land located in a major sole source impairment zone, as defined by Section 26.502, that is not owned or controlled by an operator of an animal feeding operation or concentrated animal feeding operation on which agricultural waste is applied.

(11) "Industrial waste" means waterborne liquid, gaseous, or solid substances that result from any process of industry, manufacturing, trade, or business.

(12) "Other waste" means garbage, refuse, decayed wood, sawdust, shavings, bark, sand, lime, cinders, ashes, offal, oil, tar, dyestuffs, acids, chemicals, salt water, or any other substance, other than sewage, industrial waste, municipal waste, recreational waste, or agricultural waste.

(13) "Pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any water in the state. The term:

(A) includes:

(i) tail water or runoff water from irrigation associated with an animal feeding operation or concentrated animal feeding operation that is located in a major sole source impairment zone as defined by Section 26.502; or

(ii) rainwater runoff from the confinement area of an animal feeding operation or concentrated animal feeding operation that is located in a major sole source impairment zone, as defined by Section 26.502; and

(B) does not include tail water or runoff water from irrigation or rainwater runoff from other cultivated or uncultivated rangeland, pastureland, and farmland or rainwater runoff from an area of land located in a major sole source impairment zone, as defined by Section 26.502, that is not owned or controlled by an operator of an animal feeding operation or concentrated animal feeding operation on which agricultural waste is applied.

(14) "Pollution" means the alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

(15) "Sewer system" means pipelines, conduits, storm sewers, canals, pumping stations, force mains, and all other constructions, devices, and appurtenant appliances used to transport waste.

(16) "Treatment facility" means any plant, disposal field, lagoon, incinerator, area devoted to sanitary landfills, or other facility installed for the purpose of treating, neutralizing, or stabilizing waste.

(17) "Disposal system" means any system for disposing of waste, including sewer systems and treatment facilities.

(18) "Local government" means an incorporated city, a county, a river authority, or a water district or authority acting under Article III, Section 52, or Article XVI, Section 59 of the Texas Constitution.

(19) "Permit" means an order issued by the commission in accordance with the procedures prescribed in this chapter establishing the treatment which shall be given to wastes being discharged into or adjacent to any water in the state to preserve and enhance the quality of the water and specifying the conditions under which the discharge may be made.

(20) "To discharge" includes to deposit, conduct, drain, emit, throw, run, allow to seep, or otherwise release or dispose of, or to allow, permit, or suffer any of these acts or omissions.

(21) "Point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants or wastes are or may be discharged into or adjacent to any water in the state.

(22) "Identified state supplement to an NPDES permit" means any part of a permit on which the commission has entered a written designation to indicate that the commission has adopted that part solely in order to carry out the commission's duties under state statutes and not in pursuance of administration undertaken to carry out a permit program under approval by the Administrator of the United States Environmental Protection Agency.

(23) "NPDES" means the National Pollutant Discharge Elimination System under which the Administrator of the United States Environmental Protection Agency can delegate permitting authority to the State of Texas in accordance with Section 402(b) of the Federal Water Pollution Control Act.

(24) "Treatment works" means any devices and systems used in the storage, treatment, recycling, and reclamation of waste to implement this chapter or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including:

> (A) intercepting sewers, outfall sewers, pumping, power, and other equipment and their appurtenances;
>
> (B) extensions, improvements, remodeling, additions, and alterations of the items in Paragraph (A) of this subdivision;

(C) elements essential to provide a reliable recycled supply such as standby treatment units and clear-well facilities;

(D) any works, including sites and acquisition of the land that will be a part of or used in connection with the treatment process or is used for ultimate disposal of residues resulting from such treatment;

(E) any plant, disposal field, lagoon, canal, incinerator, area devoted to sanitary landfills, or other facilities installed for the purpose of treating, neutralizing, or stabilizing waste; and

(F) facilities to provide for the collection, control, and disposal of waste heat.

(25) "Person" means an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof.

(26) "Affected county" is a county to which Subchapter B, Chapter 232, Local Government Code, applies.

TX Water Code § 26.011. In General.

Except as otherwise specifically provided, the commission shall administer the provisions of this chapter and shall establish the level of quality to be maintained in, and shall control the quality of, the water in this state as provided by this chapter. Waste discharges or impending waste discharges covered by the provisions of this chapter are subject to reasonable rules or orders adopted or issued by the commission in the public interest. The commission has the powers and duties specifically prescribed by this chapter and all other powers necessary or convenient to carry out its responsibilities. This chapter does not apply to discharges of oil covered under Chapter 40, Natural Resources Code.

TX Water Code § 26.0136. Water Quality Management.

(a) The commission is the agency with primary responsibility for implementation of water quality management functions, including enforcement actions, within the state. Water quality management functions shall be oriented on a watershed basis in consideration of the priorities identified by river authorities and basin steering committees. The commission by rule shall coordinate the water quality responsibilities of river authorities within each watershed and shall, where appropriate, delegate water quality functions to local governments under Section 26.175 of this code. The State Soil and Water Conservation Board shall coordinate and administer all programs for abating agricultural or silvicultural nonpoint source pollution, as provided by Section 201.026, Agriculture Code.

(b) Nothing in this section is intended to enlarge, diminish, or supersede the water quality powers, including enforcement authority, authorized by law for river authorities, the State Soil and Water Conservation Board, and local governments. Nothing in this section is intended to enlarge, diminish, or supersede the responsibilities of the Texas Agricultural Extension Service and the Texas Agricultural Experiment Station to conduct educational programs and research regarding nonpoint source pollution and related water resource and water quality matters.

(c) The commission shall establish rules to make the optimum use of state and federal funding and grant programs related to water quality programs of the commission.

(d) In this section, "river authority" has the meaning assigned by Section 26.0135(i) of this code.

TX Water Code § 26.027. Commission May Issue Permits.

(a) The commission may issue permits and amendments to permits for the discharge of waste or pollutants into or adjacent to water in the state. No permit shall be issued authorizing the discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste. The commission may refuse to issue a permit when the commission finds that issuance of the permit would violate the provisions of any state or federal law or rule or regulation promulgated thereunder, or when the commission finds that issuance of the permit would interfere with the purpose of this chapter.

(b) A person desiring to obtain a permit or to amend a permit shall submit an application to the commission containing all information reasonably required by the commission. The commission shall, at minimum, require an applicant who is an individual to provide:

(1) the individual's full legal name and date of birth;

(2) the street address of the individual's place of residence;

(3) the identifying number from the individual's driver's license or personal identification certificate issued by the state or country in which the individual resides;

(4) the individual's sex; and

(5) any assumed business or professional name of the individual filed under Chapter 71, Business & Commerce Code.

(c) A person may not commence construction of a treatment facility until the commission has issued a permit to authorize the discharge of waste from the facility, except with the approval of the commission.

(d) The commission may not require under this chapter any permit for the placing of dredged or fill materials into or adjacent to water in the state for the purpose of constructing, modifying, or maintaining facilities or structures, but this does not change or limit any authority the commission may have with respect to the control of water quality. The commission may adopt rules and regulations to govern and control the discharge of dredged or fill materials consistent with the purpose of this chapter.

30 TX Admin Code § 321.31. Manure, Litter, and Wastewater Discharge and Air Emission Limitations.

(a) There shall be no discharge or disposal of manure, litter, or wastewater from an animal feeding operation (AFO) into or adjacent to waters in the state, except in accordance with an individual water quality permit issued by the commission, or a concentrated animal feeding operation (CAFO) general permit or other authorization issued or adopted by the commission. Manure, litter, and wastewater generated by an AFO under this subchapter shall be retained and utilized in an appropriate and beneficial manner as provided by commission rules, orders, authorizations, CAFO general permits, or individual water quality permits.

(b) AFOs shall be operated in such a manner as to prevent the creation of a nuisance or a condition of air pollution as mandated by Texas Health and Safety Code, Chapter 341 and Chapter 382.

30 TX Admin Code § 321.32. Definitions.

All definitions in Texas Water Code (TWC), Chapter 26 and Chapter 3 and Chapter 305 of this title (relating to Definitions and Consolidated Permits) shall apply to this subchapter and are incorporated by reference. The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Agronomic rates--The land application of animal manure, sludge, or wastewater at rates of application in accordance with a plan for nutrient management which will enhance soil productivity and provide the crop or forage growth with needed nutrients for optimum health and growth based upon a realistic yield goal.

(2) Animal feeding operation (AFO)--A lot or facility (other than an aquatic animal production facility) where animals have been, are, or will

be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and the animal confinement areas do not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season over any portion of the lot or facility. Two or more AFOs under common ownership are a single AFO if they adjoin each other, or if they use a common area or system for the beneficial use of manure, sludge, or wastewater. A land management unit is not part of an AFO.

(3) Annual(ly)--Once per calendar year with required events not more than 18 months apart, unless approved in writing by the executive director on a case-by-case basis.

(4) Aquifer--A saturated permeable geologic unit that can transmit, store, and yield to a well, the quality and quantities of groundwater sufficient to provide for a beneficial use. An aquifer can be composed of unconsolidated sands and gravels, permeable sedimentary rocks such as sandstones and limestones, and/or heavily fractured volcanic and crystalline rocks. Groundwater within an aquifer can be confined, unconfined, or perched.

(5) Area land use map--A map that identifies property lines, permanent odor sources, and distances and direction to any occupied residence or business structure, school (including associated recreational areas), permanent structure containing a place of worship, or public park within a one-mile radius of the permanent odor sources at the animal feeding operation. The map shall include the north arrow, scale of map, buffer distances, and date that the map was generated and the date that the distances were verified.

(6) Beneficial use--Application of manure, sludge, or wastewater to land in a manner that does not exceed the agronomic need or rate for a harvested or cover crop. Application of manure, sludge, or wastewater on the land at a rate below or equal to the optimal agronomic rate is considered a beneficial use.

(7) Best management practices (BMPs)--The schedule of activities, prohibitions of practices, maintenance procedures, and other management and conservation practices to prevent or reduce the pollution of water in the state. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge, land application, or drainage from raw material storage.

(8) Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

(9) Catastrophic conditions--Conditions that cause structural or mechanical damage to the animal feeding operation from natural events including

high winds, tornadoes, hurricanes, earthquakes, or other natural disasters, other than rainfall events.

(10) Certified nutrient management specialist--An organization in Texas or an individual who is currently certified as a nutrient management specialist through a United States Department of Agriculture-Natural Resources Conservation Service, Texas Certified Crop Advisor's Board or Texas AgriLife Extension Service recognized certification program.

(11) Chronic or catastrophic rainfall event--A series of rainfall events that do not provide opportunity for dewatering a retention control structure and that are equivalent to or greater than the design rainfall event or any single rainfall event that is equivalent to or greater than the design rainfall event.

(12) Certified water quality management plan--A site-specific plan for agricultural or silvicultural lands that includes appropriate land treatment practices, production practices, management measures, technologies, or combinations thereof that when implemented, will achieve a level of pollution prevention or abatement determined by the Texas State Soil and Water Conservation Board, in consultation with the local Soil and Water Conservation District, to be consistent with state water quality standards.

(13) Comprehensive Nutrient Management Plan (CNMP)--A resource management plan containing a grouping of conservation practices and management activities that, when implemented in a conservation system, will help ensure that both agricultural production goals are achieved, and natural resource concerns dealing with nutrient and organic by-products and their adverse impacts on water quality are minimized.

(14) Concentrated animal feeding operation (CAFO)--Any animal feeding operation (AFO) defined as follows:

(A) Large CAFO--Any AFO that stables or confines and feeds or maintains for a total of 45 days or more in any 12-month period equal to or more than the numbers of animals specified in any of the following categories:

(i) 1,000 cattle other than mature dairy cattle or veal calves. Cattle includes, but is not limited to, heifers, steers, bulls, and cow/calf pairs;

(ii) 1,000 veal calves;

(iii) 700 mature dairy cattle (whether milkers or dry cows);

(iv) 2,500 swine, each weighing 55 pounds or more; 10,000 swine, each weighing less than 55 pounds;

(v) 500 horses;

(vi) 10,000 sheep or lambs;

(vii) 55,000 turkeys;

(viii) 125,000 chickens (other than laying hens, if the operation does not use a liquid manure handling system);

(ix) 30,000 laying hens or broilers (if the operation uses a liquid manure handling system), or 82,000 laying hens (if the operation does not use a liquid manure handling system); or

(x) 5,000 ducks (if the operation uses a liquid manure handling system), or 30,000 ducks (if the operation does not use a liquid manure handling system).

(B) Medium CAFO--Any AFO that discharges pollutants into water in the state either through a man-made ditch, flushing system, or other similar man-made device, or directly into water in the state with the following number of animals:

(i) 300 to 999 cattle other than mature dairy cattle or veal calves. Cattle includes, but is not limited to, heifers, steers, bulls, and cow/calf pairs;

(ii) 200 to 699 mature dairy cattle (whether milking or dry cows);

(iii) 300 to 999 veal calves;

(iv) 750 to 2,499 swine each weighing 55 pounds or more, or 3,000 to 9,999 swine each weighing less than 55 pounds;

(v) 150 to 499 horses;

(vi) 3,000 to 9,999 sheep or lambs;

(vii) 16,500 to 54,999 turkeys;

(viii) 37,500 to 124,999 chickens (other than laying hens if the operation does not use a liquid manure handling system);

(ix) 9,000 to 29,999 laying hens or broilers (if the operation uses a liquid manure handling system), or 25,000 to 81,999 laying hens (if the operation does not use a liquid manure handling system); or

(x) 1,500 to 4,999 ducks (if the operation uses a liquid manure handling system), or 10,000 to 29,999 ducks (if the operation does not use a liquid manure handling system).

(C) Small CAFO--Any AFO that is designated by the executive director as a CAFO because it is a significant contributor of pollutants into or adjacent to water in the state and is not a large or medium CAFO.

(D) State-only CAFO--An AFO that falls within the range of animals in subparagraph (B) of this paragraph and that is located in the dairy outreach program areas or an AFO designated by the executive director as a CAFO because it is a significant contributor of pollutants into or adjacent to water in the state. A state-only CAFO is authorized under state law.

(15) Control facility--Any system used for the collection and retention of manure, sludge, or wastewater at the permitted facility until their ultimate use or disposal. This includes all collection ditches, conduits, and swales for the collection of manure, sludge, or wastewater, and all retention control structures.

(16) Cooling Pond--A shallow man-made structure filled with water for the specific purpose to keep animals cool and promote animal comfort.

(17) Crop removal--The amount of nutrients contained in and removed by harvest of the adopted crop.

(18) Crop requirement--The amount of nutrients that must be present in the soil in order to ensure that the crop nutrient needs are met, while accounting for nutrients that may become unavailable to the crop due to adsorption to soil particles or other natural causes.

(19) Dairy outreach program areas--The area including all of the following counties: Bosque, Comanche, Erath, Hamilton, Hopkins, Johnson, Rains, and Wood.

(20) Design rainfall event--A design parameter corresponding to precipitation frequency values for a given rainfall duration and return period based on United States Department of Commerce, Weather Bureau, Technical Paper 40 or 49, May 1961.

(21) Dry litter poultry operation--A poultry animal feeding operation that does not use a liquid manure handling system.

(22) Edwards Aquifer--As defined in § 213.3 of this title (relating to Definitions).

(23) Edwards Aquifer recharge zone--As defined in § 213.3 of this title (relating to Definitions).

(24) Groundwater--Subsurface water that occurs below the water table in soils and geologic formations that are saturated other than underflow of a stream or an underground stream.

(25) Historical waste application field--An area of land located in a major sole-source impairment zone that at any time since January 1, 1995, has been owned or controlled by an operator of a concentrated animal feeding operation (CAFO), and on which agricultural manure or wastewater from a CAFO has been applied.

(26) Hydrologic connection--The connection and exchange between surface water and groundwater.

(27) Lagoon--A retention control structure used for the biological treatment of liquid organic manure. Lagoons can be aerobic, anaerobic, or facultative depending on their design and can be used in a series to produce a higher quality effluent. Treatment volume must be included in the lagoon design.

(28) Land application--The act of applying manure, sludge, or wastewater associated with the animal feeding operation including distribution to, or incorporation into, the soil mantle primarily for beneficial use purposes.

(29) Land management unit (LMU)--An area of land owned, operated, controlled, rented, or leased by an animal feeding operation (AFO) owner or operator where manure, sludge, or wastewater from the AFO is or may be applied. This includes land associated with a single center pivot system or a tract of land where similar soil characteristics exist and similar management practices are being used. LMUs include historical waste application fields. The term "land management unit" does not apply to any lands not owned, operated, controlled, rented, or leased by the AFO operator for the purpose of off-site land application of manure, where the manure is given or sold to others for land application.

(30) Letter of consent--A document signed by the owner or the authorized legal representative of the owner(s) of an occupied residence or business structure, school (including associated recreational areas), permanent structure containing a place of worship, or public park, or a document signed by the governmental entity or the authorized legal representative of the entity responsible for the operation of a school or public park. The document specifically consents to location and operation of permanent odor sources of an animal feeding operation within the minimum buffer distance required

under § 321.43 of this title (relating to Air Standard Permit for Animal Feeding Operations (AFO)).

(31) Liner--Any barrier in the form of a layer; membrane; or blanket; naturally existing, constructed, or installed, to prevent a significant hydrologic connection between wastewater contained in retention control structures and water in the state.

(32) Liquid manure handling system--A system in which freshwater or wastewater is used for transporting and land applying manure.

(33) Major sole-source impairment zone--A watershed that contains a reservoir:

> (A) that is used by a municipality as a sole source of drinking water supply for a population, inside and outside of its municipal boundaries, of more than 140,000; and
>
> (B) at least half of the water flowing into is from a source that, on September 1, 2001, is on the list of impaired state waters adopted by the commission as required by 33 United States Code, §1313(d), as amended:
>
> > (i) at least in part because of concerns regarding pathogens and phosphorus; and
> >
> > (ii) where the commission has developed and adopted a total maximum daily load.

(34) Manure--Feces and/or urine excreted by livestock and poultry. Manure includes litter, bedding, compost, feed, and other raw materials commingled with feces and/or urine.

(35) New source--As defined in § 305.2 of this title (relating to Definitions). The criteria for new source determination are located in § 305.534(b) of this title (relating to New Sources and New Dischargers).

(36) Nuisance--Any discharge of air contaminant(s), including but not limited to odors of sufficient concentration and duration that are or may tend to be injurious to or that adversely affects human health or welfare, animal life, vegetation, or property, or that interferes with the normal use and enjoyment of animal life, vegetation, or property.

(37) Nutrient management plan (NMP)--A plan based on the Natural Resources Conservation Service Practice Standard Code 590, for Texas, to address the amount, rate, source, placement, method of application, and timing of the application of plant nutrients, and soil amendments.

(38) Nutrient utilization plan (NUP)--A nutrient management plan to evaluate and address site-specific characteristics of a land management unit to ensure that the beneficial use of manure, sludge, or wastewater is conducted in a manner to prevent adverse impacts on water quality.

(39) One-hundred-year flood plain--Any land area that is subject to a 1.0% or greater chance of flooding in any given year from any source.

(40) Open lot--Pens or similar confinement areas with dirt, concrete, or other paved or hard surfaces wherein livestock or poultry are substantially or entirely exposed to the outside environment except for small portions of the total confinement area affording protection by windbreaks or small shed-type shade areas and that do not sustain crops, vegetation, forage growth, or postharvest residues in the normal growing season. For the purposes of this subchapter, the term "open lot" is synonymous with the terms "dirt lot" or "dry lot," for livestock or poultry, as these terms are commonly used in the agricultural industry.

(41) Operational--The facility is constructed such that animals may be stabled, confined, fed, and maintained in accordance with the permit or authorization. The facility does not have to be operating at the maximum number of animals allowed in the permit or authorization.

(42) Operator--The owner or person responsible for the overall operation of a facility or part of a facility, subject to the provisions of this subchapter.

(43) Permanent odor sources--Those odor sources that may emit odors 24 hours per day. For the purposes of this subchapter, permanent odor sources include, but are not limited to, pens, confinement buildings, lagoons, retention control structures, manure stockpile areas, and solid separators. For the purposes of this subchapter, permanent odor sources shall not include any feed handling facilities, land application equipment, or land management units.

(44) Permittee--Any person issued an individual permit or order or authorized under a general permit.

(45) Pesticide--A substance or mixture of substances intended to prevent, destroy, repel, or mitigate any pest, or any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant. Pesticide includes insecticides, nematicides, rodenticides, fungicides, and herbicides.

(46) Playa--A flat-floored, clayey bottom of an undrained basin that is located in an arid or semi-arid part of the state, is naturally dry most of the year, and collects runoff from rain, but is subject to rapid evaporation.

(47) Process-generated wastewater--Any water directly or indirectly used in the operation of an animal feeding operation (such as spillage or overflow from animal or poultry watering systems that comes in contact with manure washing, cleaning, or flushing pens, barns, manure pits; direct contact swimming, washing, or spray cooling of animals; and dust control) including water used in or resulting from the production of animals or poultry or direct products (e.g., milk, meat, or eggs).

(48) Production area--That part of an animal feeding operation that includes, but is not limited to, the animal confinement area, the manure storage area, the raw materials storage area, and the control facilities.

(49) Protection zone--The area within the watershed of a sole-source surface drinking water supply that is:

(A) within two miles of the normal pool elevation, as shown on a United States Geological Survey (USGS) 7 1/2-minute quadrangle topographic map, of a sole-source drinking water supply reservoir;

(B) within two miles of that part of a perennial stream that is:

(i) a tributary of a sole-source drinking water supply; and

(ii) within three linear miles upstream of the normal pool elevation, as shown on a USGS 7 1/2-minute quadrangle topographic map, of a sole-source drinking water supply reservoir; or

(C) within two miles of a sole-source surface drinking water supply river, extending three linear miles upstream from the sole-source water supply intake point.

(50) Recharge feature--Those natural or artificial features either on or beneath the ground surface at the site under evaluation that provide or create a significant hydrologic connection between the ground surface and the underlying groundwater within an aquifer. Significant artificial features include, but are not limited to, wells and excavation or material pits. Significant natural hydrologic connections include, but are not limited to: faults, fractures, sinkholes, or other macro pores that allow direct surface infiltration; a permeable or shallow soil material that overlies an aquifer; exposed geologic formations that are identified as an aquifer; or a water course bisecting an aquifer.

(51) Retention control structure (RCS)--Any basin, pond, pit, tank, conveyance, or lagoon used to hold, store, or treat manure, wastewater, and sludge. The term RCS does not include conveyance systems such as irrigation

piping or ditches that are designed and maintained to convey but not store any manure, or wastewater, nor does it include cooling ponds located in the production area.

(52) Significant expansion of concentrated animal feeding operation (CAFO)--Any change to a CAFO that increases the manure production at the CAFO by more than 50%, above the maximum operating capacity stated in the initial authorization for the facility under TXG920000.

(53) Sludge--Solid, semi-solid, or slurry manure generated during the treatment of or storage of any manure or wastewater. The term includes material resulting from treatment, coagulation, or sedimentation of manure in a retention control structure. Chapter 312 of this title (relating to Sludge Use, Disposal, and Transportation) rules covering sludge do not apply to this subchapter.

(54) Soil Plant Air and Water (SPAW) Field Pond Hydrology--SPAW is a Natural Resources Conservation Service (NRCS) water budgeting tool for farm fields, ponds, and inundated wetlands. The SPAW model may be used to perform daily hydrologic water budgeting using the NRCS Runoff Curve Number method.

(55) Sole-source surface drinking water supply--A body of surface water that is identified as a public water supply in § 307.10 of this title (relating to Appendices A - E) and is the sole source of supply of a public water supply system, exclusive of emergency water connections.

(56) Substantial change--The following changes to the terms of the Nutrient Management Plan are considered substantial; other changes are considered non-substantial:

(A) changing animal type or authorized head count;

(B) adding Land Management Units or increasing application acreage; and

(C) using a crop or yield goal to determine maximum application rates for manure, sludge or wastewater that is not authorized by the permit or authorization.

(57) Technical service provider--An individual, entity, or public agency certified and placed on an approved list by the Natural Resources Conservation Service (NRCS) to provide technical services to program participants or the NRCS.

(58) Twenty-five-year, ten-day rainfall event--The maximum rainfall event with a probable recurrence interval of once in 25 years, with a

duration of ten days, as defined by the National Weather Service in Technical Paper Number 49 United States Weather Bureau and United States Department of Agriculture, Two-to-Ten Day Precipitation for Return Periods of 2 to 100 Years in the Contiguous United States (1964); or equivalent regional or state rainfall information.

(59) Twenty-five-year, 24-hour rainfall event--The maximum rainfall event with a probable recurrence interval of once in 25 years, with a duration of 24 hours, as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States," May 1961; or equivalent regional or state rainfall information.

(60) United States Department of Agriculture (USDA)--Natural Resources Conservation Service (NRCS)--An agency of the United States Department of Agriculture that provides assistance to agricultural producers for planning and installation of conservation practices through conservation and technical programs.

(61) Upset--An exceptional incident where there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(62) Wastewater--Any water, including process-generated wastewater and precipitation, which comes into contact with any manure, sludge, bedding, or any raw material or intermediate or final material or product used in or resulting from the production of livestock or poultry or direct products (e.g., milk, meat, or eggs).

(63) Water in the state--Groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.

(64) Well--Any artificial excavation into or below the surface of the earth whether in use, unused, abandoned, capped, or plugged that may be further described as one or more of the following:

(A) an excavation designed to explore for, produce, capture, recharge, or recover water, any mineral, compound, gas, or oil from beneath the land surface;

(B) an excavation designed for the purpose of monitoring any of the physical or chemical properties of water, minerals, geology, or geothermal properties that exist or may exist below the land surface;

(C) an excavation designed to inject or place any liquid, solid, gas, vapor, or any combination of liquid, solid, gas, or vapor into any soil or geologic formation below the land surface; or

(D) an excavation designed to lower a water or liquid surface below the land surface either temporarily or permanently for any reason.

30 TX Admin Code § 321.36. Texas Pollutant Discharge Elimination System General Requirements for Concentrated Animal Feeding Operations (CAFOs).

(a) Applicability. These requirements apply to a concentrated animal feeding operation (CAFO) subject to the requirements of the Texas Pollutant Discharge Elimination System, unless otherwise noted.

(b) Permits. A CAFO shall comply with § 305.125 of this title (relating to Standard Permit Conditions) and all applicable permit conditions contained in commission rules. Requirements to provide for and ensure compliance with standards set by the rules of the commission and the laws of Texas shall be determined and included in an individual water quality permit on a case-by-case basis to reflect the best method for attaining such compliance. Each permit shall contain terms and conditions as the commission determines necessary to protect human health and safety, and the environment.

(c) Nutrient management plan (NMP).

(1) The operator of a large CAFO shall develop and implement an NMP certified by a person or entity identified in § 321.32(10) of this title (relating to Definitions) to be in accordance with the Texas Natural Resources Conservation Service NRCS Practice Standard Code 590. The plan shall include site-specific nutrient management practices that ensure appropriate agricultural utilization of nutrients in the manure, sludge, or wastewater. The NMP shall be updated annually. The operator shall determine the amount, in tons/acre or acre-inches/acre, of manure, sludge, and wastewater for each land management unit (LMU) using the following methodology:

(A) determine the phosphorus index rating using the Agronomy Technical Note No. 15 Phosphorus Assessment Tool of Texas;

(B) determine the maximum annual application rate using Appendix 5 of the NRCS Practice Standard Code 590 for Texas;

(C) determine the crop requirement or the crop removal rate, as appropriate, from the S Crops Table as contained in the Texas NRCS 590-Software Tool, site-specific historic CAFO yield data, or other sources as approved by the executive director; and

(D) account for:

(i) the results of soil tests required by § 321.40(m)(1)(B) of this title (relating to Concentrated Animal Feeding Operation (CAFO) Land Application Requirements);

(ii) credits for all nitrogen in the soil that will be available for plant use;

(iii) the amount of nitrogen and phosphorus in the manure and wastewater to be applied;

(iv) consideration of multi-year phosphorus application (for any LMU where nutrients are applied at a rate based on crop phosphorus requirement, the methodology must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement); and

(v) all other additions of plant available nitrogen and phosphorus to the LMU (i.e., from sources other than manure or wastewater or credits for residual nitrogen).

(2) Terms of the NMP include the following:

(A) animal type and authorized head count;

(B) LMU and application acreage for each LMU;

(C) crops (including alternative crops) identified in the NMP with their yield goals for each LMU;

(D) the maximum application rates for nitrogen and phosphorus for each crop in each LMU;

(E) the methodology in paragraph (1) of this subsection (including formulas, sources of data, protocols for making

determinations, etc.) and actual data used to calculate application rates; and

(F) any other factors necessary to determine the amounts of nitrogen and phosphorus to be applied.

(3) Changes to a NMP. Any changes, except changes resulting from annual recalculation, must be submitted to the executive director. The NMP will be reviewed by the executive director to determine if changes require revisions to the terms of the NMP. Revisions to terms of the NMP can be substantial or non-substantial.

(4) Substantial and non-substantial changes. Those changes that constitute a substantial change are defined in § 321.32(56) of this title. Non-substantial changes include, but are not limited to, changes to the site-specific LMU information in the Phosphorus index Worksheet, changes to the maximum application rate of nitrogen or phosphorus to be land applied or changes in the phosphorus index rating.

(5) If changes to the terms of the NMP are determined to be substantial, the changes must be incorporated into the permit in accordance with § 321.33(g) of this title (relating to Applicability and Required Authorizations).

(6) If changes to the terms of the NMP are determined to be non-substantial, the executive director will notify the permittee and include the revised permit in the permit record.

(7) The CAFO operator shall create, maintain for five years, and make available to the executive director, upon request, a copy of the site-specific NMP and records of manure and wastewater application.

(d) Compliance with the requirements of this section and applicable requirements of this subchapter constitute compliance with the provisions of 40 Code of Federal Regulations (CFR) § 122.42(e)(1)(i) - (ix).

(e) Buffers for LMUs. A sinkhole shall be protected with a 100-foot buffer from manure, sludge, and wastewater application. Alternatively, the CAFO may substitute a 35-foot wide vegetative buffer around a sinkhole where alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent to or better than the reductions that would be achieved by the 100-foot buffer.

(f) Soil sampling and testing procedures for dairy CAFOs, both state-only and Texas Pollutant Discharge Elimination System, located in a major sole-source impairment zone.

(1) Initial sampling. Before commencing land application of manure, sludge, or wastewater on an LMU, the operator shall collect and analyze at least one representative soil sample from each of the LMUs according to the following procedures. The CAFO operator is not required to collect soil samples or report on LMUs where manure, litter, or wastewater has not been applied during the preceding year. The CAFO operator must comply with the initial sampling requirement before resuming land application to such LMUs.

(2) Annual sampling. The TCEQ or its designee shall annually collect soil samples, according to the following procedures, for each LMU owned, operated, controlled, rented or leased by the CAFO operator where manure, litter, or wastewater was applied during the preceding year. The results of these analyses shall be used in determining the application rates for manure, sludge and wastewater.

(3) Sampling procedures. Soil sampling procedures shall employ sampling procedures using accepted techniques of soil science for obtaining representative samples and analytical results.

(A) Samples shall be collected using approved procedures described in this section and the agency's publication, RG-408 entitled "Soil Sampling for Concentrated Animal Feeding Operations."

(B) Samples shall be collected by the Texas Commission on Environmental Quality or its designee and analyzed by a soil testing laboratory within the same 45-day time frame each year (from 45 days prior to until 45 days after the date of the previous year's sampling date), except when crop rotations or inclement weather require a change in the sampling time frame.

(C) One composite sample shall be obtained for each soil depth zone per uniform soil type (soils with the same characteristics and texture) within each LMU.

(D) Composite samples shall be comprised of 10 - 15 randomly sampled cores obtained from each of the following soil depth zones:

(i) Zone 1: zero to six inches (for an LMU where the manure is incorporated directly into the soil) or zero to two inches (for an LMU where the manure is not incorporated into the soil). Wastewater is considered to be incorporated. If a zero to two-inch sample is required under this

subsection, then an additional sample from the two to six-inch soil depth zone shall be obtained in accordance with the provisions of this section; and

(ii) Zone 2: six to 24 inches.

(4) Laboratory analysis. Laboratory analysis of the soil samples shall be performed for physical and chemical parameters to include: nitrate as nitrogen in parts per million (ppm), extractable phosphorus (ppm, using Mehlich III with Inductively Coupled Plasma (ICP)), potassium (extractable, ppm); sodium (extractable, ppm); magnesium (extractable, ppm); calcium (extractable, ppm); soluble salts (ppm) or electrical conductivity (deciSiemens/meter (dS/m) or millimhos/cm (mmhos/cm) - determined from extract of 2:1 volume to volume (v/v) water/soil mixture); and soil water pH.

(g) Annual report required. An annual report shall be submitted to the executive director's Office of Compliance and Enforcement, Enforcement Division, by March 31 of each year (for the reporting period of January 1 to December 31 of the previous year, or the actual 12-month reporting period used by the CAFO) from each CAFO authorized under a CAFO general permit or through an individual water quality permit in accordance with this subchapter. The report shall be submitted on forms prescribed by the executive director and shall include, but is not limited to, the following information:

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

(2) estimated total manure, sludge, and wastewater generated during the reporting period;

(3) total manure, sludge, and wastewater land applied during the reporting period;

(4) total manure, sludge, and wastewater transferred to other persons during the reporting period;

(5) total number of acres for land application under the control of the CAFO operator, including both the acres included in the NMP for the CAFO and the total number of acres used during the reporting period for land application;

(6) summary of discharges of manure, sludge, or wastewater from the production area that occurred during the reporting period including dates, times, and approximate volume;

(7) a statement indicating that the NMP under which the CAFO is operating was developed or revised and approved by a certified nutrient management specialist;

(8) a copy of the initial soil analysis for each LMU, regardless of whether manure, sludge, or wastewater has been applied;

(9) soil monitoring reports of all soil samples collected in accordance with the requirements of this subchapter;

(10) groundwater monitoring reports if applicable;

(11) the actual crop(s) planted and yield(s) for each LMU;

(12) the actual nitrogen and phosphorus content of the manure, sludge, and process wastewater that was land applied;

(13) the data used in calculations and the results of calculations conducted in accordance with subsection (c) of this section;

(14) the amount of manure, sludge, and wastewater applied to each LMU during the reporting period;

(15) any supplemental fertilizer applied during the reporting period; and

(16) any other information requested by the executive director.

TX Water Code § 26.301. Definitions.

In this subchapter:

(1) "Poultry" means chickens or ducks being raised or kept on any premises in the state for profit.

(2) "Poultry carcass" means the carcass, or part of a carcass, of poultry that died as a result of a cause other than intentional slaughter for use for human consumption.

(3) "Poultry facility" means a facility that:

(A) is used to raise, grow, feed, or otherwise produce poultry for commercial purposes; or

(B) is a commercial poultry hatchery that is used to produce chicks or ducklings.

(4) "Poultry litter" includes poultry excrement, bedding, and feed waste.

(5) "Liquid waste handling system" has the meaning assigned by Section 26.0286.

TX Water Code § 26.302. Regulation of Poultry Facilities.

(a) A person who owns or operates a poultry facility shall ensure that the facility has adequate means or is adequately equipped to handle and dispose of poultry carcasses, poultry litter, and other poultry waste regardless of whether the person owns the poultry.

(b) A person who owns or operates a poultry facility shall implement and maintain a water quality management plan for the facility that is certified by the State Soil and Water Conservation Board under Section 201.026, Agriculture Code.

(b-1) The State Soil and Water Conservation Board may certify a water quality management plan for a poultry facility that:

(1) does not use a liquid waste handling system; and

(2) is required to obtain a permit or other authorization from the commission.

(b-2) The State Soil and Water Conservation Board in consultation with the Texas Commission on Environmental Quality by rule shall establish criteria to determine the geographic, seasonal, and agronomic factors that the board will consider to determine whether a persistent nuisance odor condition is likely to occur when assessing the siting and construction of new poultry facilities.

(b-3) The State Soil and Water Conservation Board may not certify a water quality management plan for a poultry facility located less than one-half of one mile from a business, off-site permanently inhabited residence, or place of worship if the presence of the facility is likely to create a persistent odor nuisance for such neighbors, unless the poultry facility provides an odor control plan the executive director determines is sufficient to control odors. This subsection does not apply to:

(1) a revision of a previously certified and existing water quality management plan unless the revision is necessary because of an increase in poultry production of greater than 50 percent than the amount included in the existing certified water quality management plan for the facility; or

(2) any poultry facility located more than one-half of one mile from a surrounding business, permanently inhabited off-site residence, or place of worship established before the date of construction of the poultry facility.

(c) The commission may bring a cause of action to remedy or prevent a violation of this section.

(d) This section does not affect the authority of the commission to investigate or take enforcement action against an unauthorized discharge under Section 26.121.

30 TX Admin Code § 321.32. Definitions.

All definitions in Texas Water Code (TWC), Chapter 26 and Chapter 3 and Chapter 305 of this title (relating to Definitions and Consolidated Permits) shall apply to this subchapter and are incorporated by reference. The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Agronomic rates--The land application of animal manure, sludge, or wastewater at rates of application in accordance with a plan for nutrient management which will enhance soil productivity and provide the crop or forage growth with needed nutrients for optimum health and growth based upon a realistic yield goal.

(2) Animal feeding operation (AFO)--A lot or facility (other than an aquatic animal production facility) where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and the animal confinement areas do not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season over any portion of the lot or facility. Two or more AFOs under common ownership are a single AFO if they adjoin each other, or if they use a common area or system for the beneficial use of manure, sludge, or wastewater. A land management unit is not part of an AFO.

(3) Annual(ly)--Once per calendar year with required events not more than 18 months apart, unless approved in writing by the executive director on a case-by-case basis.

(4) Aquifer--A saturated permeable geologic unit that can transmit, store, and yield to a well, the quality and quantities of groundwater sufficient to provide for a beneficial use. An aquifer can be composed of unconsolidated sands and gravels, permeable sedimentary rocks such as sandstones and limestones, and/or heavily fractured volcanic and crystalline rocks. Groundwater within an aquifer can be confined, unconfined, or perched.

(5) Area land use map--A map that identifies property lines, permanent odor sources, and distances and direction to any occupied residence or business structure, school (including associated recreational areas),

permanent structure containing a place of worship, or public park within a one-mile radius of the permanent odor sources at the animal feeding operation. The map shall include the north arrow, scale of map, buffer distances, and date that the map was generated and the date that the distances were verified.

(6) Beneficial use--Application of manure, sludge, or wastewater to land in a manner that does not exceed the agronomic need or rate for a harvested or cover crop. Application of manure, sludge, or wastewater on the land at a rate below or equal to the optimal agronomic rate is considered a beneficial use.

(7) Best management practices (BMPs)--The schedule of activities, prohibitions of practices, maintenance procedures, and other management and conservation practices to prevent or reduce the pollution of water in the state. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge, land application, or drainage from raw material storage.

(8) Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

(9) Catastrophic conditions--Conditions that cause structural or mechanical damage to the animal feeding operation from natural events including high winds, tornadoes, hurricanes, earthquakes, or other natural disasters, other than rainfall events.

(10) Certified nutrient management specialist--An organization in Texas or an individual who is currently certified as a nutrient management specialist through a United States Department of Agriculture-Natural Resources Conservation Service, Texas Certified Crop Advisor's Board or Texas AgriLife Extension Service recognized certification program.

(11) Chronic or catastrophic rainfall event--A series of rainfall events that do not provide opportunity for dewatering a retention control structure and that are equivalent to or greater than the design rainfall event or any single rainfall event that is equivalent to or greater than the design rainfall event.

(12) Certified water quality management plan--A site-specific plan for agricultural or silvicultural lands that includes appropriate land treatment practices, production practices, management measures, technologies, or combinations thereof that when implemented, will achieve a level of pollution prevention or abatement determined by the Texas State Soil and Water Conservation Board, in consultation with the local Soil and Water Conservation District, to be consistent with state water quality standards.

(13) Comprehensive Nutrient Management Plan (CNMP)--A resource management plan containing a grouping of conservation practices and management activities that, when implemented in a conservation system, will help ensure that both agricultural production goals are achieved, and natural resource concerns dealing with nutrient and organic by-products and their adverse impacts on water quality are minimized.

(14) Concentrated animal feeding operation (CAFO)--Any animal feeding operation (AFO) defined as follows:

(A) Large CAFO--Any AFO that stables or confines and feeds or maintains for a total of 45 days or more in any 12-month period equal to or more than the numbers of animals specified in any of the following categories:

(i) 1,000 cattle other than mature dairy cattle or veal calves. Cattle includes, but is not limited to, heifers, steers, bulls, and cow/calf pairs;

(ii) 1,000 veal calves;

(iii) 700 mature dairy cattle (whether milkers or dry cows);

(iv) 2,500 swine, each weighing 55 pounds or more; 10,000 swine, each weighing less than 55 pounds;

(v) 500 horses;

(vi) 10,000 sheep or lambs;

(vii) 55,000 turkeys;

(viii) 125,000 chickens (other than laying hens, if the operation does not use a liquid manure handling system);

(ix) 30,000 laying hens or broilers (if the operation uses a liquid manure handling system), or 82,000 laying hens (if the operation does not use a liquid manure handling system); or

(x) 5,000 ducks (if the operation uses a liquid manure handling system), or 30,000 ducks (if the operation does not use a liquid manure handling system).

(B) Medium CAFO--Any AFO that discharges pollutants into water in the state either through a man-made ditch, flushing system, or other similar man-made device, or directly into water in the state with the following number of animals:

(i) 300 to 999 cattle other than mature dairy cattle or veal calves. Cattle includes, but is not limited to, heifers, steers, bulls, and cow/calf pairs;

(ii) 200 to 699 mature dairy cattle (whether milking or dry cows);

(iii) 300 to 999 veal calves;

(iv) 750 to 2,499 swine each weighing 55 pounds or more, or 3,000 to 9,999 swine each weighing less than 55 pounds;

(v) 150 to 499 horses;

(vi) 3,000 to 9,999 sheep or lambs;

(vii) 16,500 to 54,999 turkeys;

(viii) 37,500 to 124,999 chickens (other than laying hens if the operation does not use a liquid manure handling system);

(ix) 9,000 to 29,999 laying hens or broilers (if the operation uses a liquid manure handling system), or 25,000 to 81,999 laying hens (if the operation does not use a liquid manure handling system); or

(x) 1,500 to 4,999 ducks (if the operation uses a liquid manure handling system), or 10,000 to 29,999 ducks (if the operation does not use a liquid manure handling system).

(C) Small CAFO--Any AFO that is designated by the executive director as a CAFO because it is a significant contributor of pollutants into or adjacent to water in the state and is not a large or medium CAFO.

(D) State-only CAFO--An AFO that falls within the range of animals in subparagraph (B) of this paragraph and that is located in the dairy outreach program areas or an AFO designated by the executive director as a CAFO because it is a significant contributor of pollutants into or adjacent to water in the state. A state-only CAFO is authorized under state law.

(15) Control facility--Any system used for the collection and retention of manure, sludge, or wastewater at the permitted facility until their ultimate use or disposal. This includes all collection ditches, conduits, and swales for the collection of manure, sludge, or wastewater, and all retention control structures.

(16) Cooling Pond--A shallow man-made structure filled with water for the specific purpose to keep animals cool and promote animal comfort.

(17) Crop removal--The amount of nutrients contained in and removed by harvest of the adopted crop.

(18) Crop requirement--The amount of nutrients that must be present in the soil in order to ensure that the crop nutrient needs are met, while accounting for nutrients that may become unavailable to the crop due to adsorption to soil particles or other natural causes.

(19) Dairy outreach program areas--The area including all of the following counties: Bosque, Comanche, Erath, Hamilton, Hopkins, Johnson, Rains, and Wood.

(20) Design rainfall event--A design parameter corresponding to precipitation frequency values for a given rainfall duration and return period based on United States Department of Commerce, Weather Bureau, Technical Paper 40 or 49, May 1961.

(21) Dry litter poultry operation--A poultry animal feeding operation that does not use a liquid manure handling system.

(22) Edwards Aquifer--As defined in § 213.3 of this title (relating to Definitions).

(23) Edwards Aquifer recharge zone--As defined in § 213.3 of this title (relating to Definitions).

(24) Groundwater--Subsurface water that occurs below the water table in soils and geologic formations that are saturated other than underflow of a stream or an underground stream.

(25) Historical waste application field--An area of land located in a major sole-source impairment zone that at any time since January 1, 1995, has been owned or controlled by an operator of a concentrated animal feeding operation (CAFO), and on which agricultural manure or wastewater from a CAFO has been applied.

(26) Hydrologic connection--The connection and exchange between surface water and groundwater.

(27) Lagoon--A retention control structure used for the biological treatment of liquid organic manure. Lagoons can be aerobic, anaerobic, or facultative depending on their design and can be used in a series to produce a higher quality effluent. Treatment volume must be included in the lagoon design.

(28) Land application--The act of applying manure, sludge, or wastewater associated with the animal feeding operation including distribution to, or incorporation into, the soil mantle primarily for beneficial use purposes.

(29) Land management unit (LMU)--An area of land owned, operated, controlled, rented, or leased by an animal feeding operation (AFO) owner or operator where manure, sludge, or wastewater from the AFO is or may be applied. This includes land associated with a single center pivot system or a tract of land where similar soil characteristics exist and similar management practices are being used. LMUs include historical waste application fields. The term "land management unit" does not apply to any lands not owned, operated, controlled, rented, or leased by the AFO operator for the purpose of off-site land application of manure, where the manure is given or sold to others for land application.

(30) Letter of consent--A document signed by the owner or the authorized legal representative of the owner(s) of an occupied residence or business structure, school (including associated recreational areas), permanent structure containing a place of worship, or public park, or a document signed by the governmental entity or the authorized legal representative of the entity responsible for the operation of a school or public park. The document specifically consents to location and operation of permanent odor sources of an animal feeding operation within the minimum buffer distance required under § 321.43 of this title (relating to Air Standard Permit for Animal Feeding Operations (AFO)).

(31) Liner--Any barrier in the form of a layer; membrane; or blanket; naturally existing, constructed, or installed, to prevent a significant hydrologic connection between wastewater contained in retention control structures and water in the state.

(32) Liquid manure handling system--A system in which freshwater or wastewater is used for transporting and land applying manure.

(33) Major sole-source impairment zone--A watershed that contains a reservoir:

> (A) that is used by a municipality as a sole source of drinking water supply for a population, inside and outside of its municipal boundaries, of more than 140,000; and
>
> (B) at least half of the water flowing into is from a source that, on September 1, 2001, is on the list of impaired state waters adopted by the commission as required by 33 United States Code, §1313(d), as amended:
>
> > (i) at least in part because of concerns regarding pathogens and phosphorus; and

(ii) where the commission has developed and adopted a total maximum daily load.

(34) Manure--Feces and/or urine excreted by livestock and poultry. Manure includes litter, bedding, compost, feed, and other raw materials commingled with feces and/or urine.

(35) New source--As defined in § 305.2 of this title (relating to Definitions). The criteria for new source determination are located in § 305.534(b) of this title (relating to New Sources and New Dischargers).

(36) Nuisance--Any discharge of air contaminant(s), including but not limited to odors of sufficient concentration and duration that are or may tend to be injurious to or that adversely affects human health or welfare, animal life, vegetation, or property, or that interferes with the normal use and enjoyment of animal life, vegetation, or property.

(37) Nutrient management plan (NMP)--A plan based on the Natural Resources Conservation Service Practice Standard Code 590, for Texas, to address the amount, rate, source, placement, method of application, and timing of the application of plant nutrients, and soil amendments.

(38) Nutrient utilization plan (NUP)--A nutrient management plan to evaluate and address site-specific characteristics of a land management unit to ensure that the beneficial use of manure, sludge, or wastewater is conducted in a manner to prevent adverse impacts on water quality.

(39) One-hundred-year flood plain--Any land area that is subject to a 1.0% or greater chance of flooding in any given year from any source.

(40) Open lot--Pens or similar confinement areas with dirt, concrete, or other paved or hard surfaces wherein livestock or poultry are substantially or entirely exposed to the outside environment except for small portions of the total confinement area affording protection by windbreaks or small shed-type shade areas and that do not sustain crops, vegetation, forage growth, or postharvest residues in the normal growing season. For the purposes of this subchapter, the term "open lot" is synonymous with the terms "dirt lot" or "dry lot," for livestock or poultry, as these terms are commonly used in the agricultural industry.

(41) Operational--The facility is constructed such that animals may be stabled, confined, fed, and maintained in accordance with the permit or authorization. The facility does not have to be operating at the maximum number of animals allowed in the permit or authorization.

(42) Operator--The owner or person responsible for the overall operation of a facility or part of a facility, subject to the provisions of this subchapter.

(43) Permanent odor sources--Those odor sources that may emit odors 24 hours per day. For the purposes of this subchapter, permanent odor sources include, but are not limited to, pens, confinement buildings, lagoons, retention control structures, manure stockpile areas, and solid separators. For the purposes of this subchapter, permanent odor sources shall not include any feed handling facilities, land application equipment, or land management units.

(44) Permittee--Any person issued an individual permit or order or authorized under a general permit.

(45) Pesticide--A substance or mixture of substances intended to prevent, destroy, repel, or mitigate any pest, or any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant. Pesticide includes insecticides, nematicides, rodenticides, fungicides, and herbicides.

(46) Playa--A flat-floored, clayey bottom of an undrained basin that is located in an arid or semi-arid part of the state, is naturally dry most of the year, and collects runoff from rain, but is subject to rapid evaporation.

(47) Process-generated wastewater--Any water directly or indirectly used in the operation of an animal feeding operation (such as spillage or overflow from animal or poultry watering systems that comes in contact with manure washing, cleaning, or flushing pens, barns, manure pits; direct contact swimming, washing, or spray cooling of animals; and dust control) including water used in or resulting from the production of animals or poultry or direct products (e.g., milk, meat, or eggs).

(48) Production area--That part of an animal feeding operation that includes, but is not limited to, the animal confinement area, the manure storage area, the raw materials storage area, and the control facilities.

(49) Protection zone--The area within the watershed of a sole-source surface drinking water supply that is:

(A) within two miles of the normal pool elevation, as shown on a United States Geological Survey (USGS) 7 1/2-minute quadrangle topographic map, of a sole-source drinking water supply reservoir;

(B) within two miles of that part of a perennial stream that is:

(i) a tributary of a sole-source drinking water supply; and

(ii) within three linear miles upstream of the normal pool elevation, as shown on a USGS 7 1/2-minute quadrangle

topographic map, of a sole-source drinking water supply reservoir; or

(C) within two miles of a sole-source surface drinking water supply river, extending three linear miles upstream from the sole-source water supply intake point.

(50) Recharge feature--Those natural or artificial features either on or beneath the ground surface at the site under evaluation that provide or create a significant hydrologic connection between the ground surface and the underlying groundwater within an aquifer. Significant artificial features include, but are not limited to, wells and excavation or material pits. Significant natural hydrologic connections include, but are not limited to: faults, fractures, sinkholes, or other macro pores that allow direct surface infiltration; a permeable or shallow soil material that overlies an aquifer; exposed geologic formations that are identified as an aquifer; or a water course bisecting an aquifer.

(51) Retention control structure (RCS)--Any basin, pond, pit, tank, conveyance, or lagoon used to hold, store, or treat manure, wastewater, and sludge. The term RCS does not include conveyance systems such as irrigation piping or ditches that are designed and maintained to convey but not store any manure, or wastewater, nor does it include cooling ponds located in the production area.

(52) Significant expansion of concentrated animal feeding operation (CAFO)--Any change to a CAFO that increases the manure production at the CAFO by more than 50%, above the maximum operating capacity stated in the initial authorization for the facility under TXG920000.

(53) Sludge--Solid, semi-solid, or slurry manure generated during the treatment of or storage of any manure or wastewater. The term includes material resulting from treatment, coagulation, or sedimentation of manure in a retention control structure. Chapter 312 of this title (relating to Sludge Use, Disposal, and Transportation) rules covering sludge do not apply to this subchapter.

(54) Soil Plant Air and Water (SPAW) Field Pond Hydrology--SPAW is a Natural Resources Conservation Service (NRCS) water budgeting tool for farm fields, ponds, and inundated wetlands. The SPAW model may be used to perform daily hydrologic water budgeting using the NRCS Runoff Curve Number method.

(55) Sole-source surface drinking water supply--A body of surface water that is identified as a public water supply in § 307.10 of this title (relating to Appendices A - E) and is the sole source of supply of a public water supply system, exclusive of emergency water connections.

(56) Substantial change--The following changes to the terms of the Nutrient Management Plan are considered substantial; other changes are considered non-substantial:

(A) changing animal type or authorized head count;

(B) adding Land Management Units or increasing application acreage; and

(C) using a crop or yield goal to determine maximum application rates for manure, sludge or wastewater that is not authorized by the permit or authorization.

(57) Technical service provider--An individual, entity, or public agency certified and placed on an approved list by the Natural Resources Conservation Service (NRCS) to provide technical services to program participants or the NRCS.

(58) Twenty-five-year, ten-day rainfall event--The maximum rainfall event with a probable recurrence interval of once in 25 years, with a duration of ten days, as defined by the National Weather Service in Technical Paper Number 49 United States Weather Bureau and United States Department of Agriculture, Two-to-Ten Day Precipitation for Return Periods of 2 to 100 Years in the Contiguous United States (1964); or equivalent regional or state rainfall information.

(59) Twenty-five-year, 24-hour rainfall event--The maximum rainfall event with a probable recurrence interval of once in 25 years, with a duration of 24 hours, as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States," May 1961; or equivalent regional or state rainfall information.

(60) United States Department of Agriculture (USDA)--Natural Resources Conservation Service (NRCS)--An agency of the United States Department of Agriculture that provides assistance to agricultural producers for planning and installation of conservation practices through conservation and technical programs.

(61) Upset--An exceptional incident where there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(62) Wastewater--Any water, including process-generated wastewater and precipitation, which comes into contact with any manure, sludge, bedding, or any raw material or intermediate or final material or product used in or resulting from the production of livestock or poultry or direct products (e.g., milk, meat, or eggs).

(63) Water in the state--Groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.

(64) Well--Any artificial excavation into or below the surface of the earth whether in use, unused, abandoned, capped, or plugged that may be further described as one or more of the following:

(A) an excavation designed to explore for, produce, capture, recharge, or recover water, any mineral, compound, gas, or oil from beneath the land surface;

(B) an excavation designed for the purpose of monitoring any of the physical or chemical properties of water, minerals, geology, or geothermal properties that exist or may exist below the land surface;

(C) an excavation designed to inject or place any liquid, solid, gas, vapor, or any combination of liquid, solid, gas, or vapor into any soil or geologic formation below the land surface; or

(D) an excavation designed to lower a water or liquid surface below the land surface either temporarily or permanently for any reason.

30 TX Admin Code § 321.33. Applicability and Required Authorizations.

(a) Permit required. All concentrated animal feeding operations (CAFOs) are point sources that require owners and operators to seek and obtain authorization under a water quality general permit or individual permit, except as provided in subsection (f) of this section. CAFO owners and operators have a duty to seek coverage as described in this section.

(b) Individual permit required. A discharge from the following CAFOs may be authorized only under an individual water quality permit in accordance with § 321.34 of this title (relating to Permit Applications). Except as provided by subsection (f) of this section, any operator who is required to obtain an individual water quality permit under this subsection may not commence

physical construction and/or operation of any new control facilities until an individual water quality permit is issued for that CAFO, or unless otherwise authorized by the commission in accordance with Texas Water Code (TWC), §26.027(c).

(1) Any CAFO located within one mile of coastal natural resource areas as defined by Texas Natural Resources Code, § 33.203, unless the CAFO was authorized by the commission prior to January 10, 1997.

(2) Any dairy CAFO located in a major sole-source impairment zone.

(3) Any CAFO where, on the date the executive director determines that the application is administratively complete, any part of the production area of the CAFO is located or adopted to be located within the protection zone of a sole-source surface drinking water supply, in accordance with TWC, §26.0286. This paragraph does not apply to a poultry operation that does not use a liquid manure handling system, which is commonly referred to as a dry litter poultry operation.

(4) Any CAFO where any part of the production area or land management units is located in a watershed of a segment listed on the current United States Environmental Protection Agency-approved §303(d) list of impaired water bodies, as required by 33 United States Code (USC), §1313(d), and where a total maximum daily load implementation plan has been adopted by the commission that established additional water quality protection measures for CAFOs that are not required by the CAFO general permit.

(5) Any animal feeding operation (AFO) that the executive director designates and requires to be authorized by an individual water quality permit to achieve the policies and purposes enumerated in TWC, §5.120 and §26.003; Texas Health and Safety Code, Chapters 341, 361, or 382; or § 321.31 of this title (relating to Manure, Litter, and Wastewater Discharge and Air Emission Limitations). Cases where the executive director may require an AFO to obtain an individual water quality permit include, but are not limited to, the following:

(A) the operation is located near surface or groundwater resources;

(B) compliance with standards in addition to those listed in this subchapter is necessary in order to protect water in the state from pollution;

(C) the operation is not or has not been in substantial compliance with the standards of this subchapter;

(D) the operation is under a formal commission enforcement order or has been referred to the commission for enforcement action by the Texas State Soil and Water Conservation Board;

(E) the operation does not qualify for a CAFO general permit under § 205.4 of this title (relating to Authorizations and Notices of Intent);

(F) the production area or land management unit of any new CAFO is located in a watershed of a segment listed on the current §303(d) list of impaired water bodies for bacteria, nutrients, and/or pathogens as required by 33 USC, §1313(d); or

(G) the executive director determines that an individual water quality permit is appropriate considering other pertinent factors.

(c) Individual permit or general permit required. A discharge from any other CAFO shall be authorized either by an individual water quality permit or an applicable CAFO general permit. Except as provided by subsection (f) of this section, any operator required to obtain an individual water quality permit or authorization under a CAFO general permit according to this subsection may not begin physical construction or operation of any new control facility until the CAFO operator receives an individual water quality permit or authorization under a CAFO general permit, unless otherwise authorized by the commission under TWC, §26.027(c).

(d) New or expanding AFO. No person may commence construction or operation of a new CAFO or alter any existing AFO such that it becomes defined as a CAFO without prior authorization through an individual water quality permit or a CAFO general permit, unless otherwise authorized by the commission under TWC, §26.027(c). This subsection does not apply to dry litter poultry operations specified in subsection (f) of this section.

(e) Newly defined CAFO. An existing AFO that becomes classified as a CAFO may not begin physical construction or operation of any new control facility until the CAFO operator receives authorization through an individual water quality permit or a CAFO general permit, unless otherwise authorized by the commission under TWC, §26.027(c).

(f) Dry litter poultry operations. A dry litter poultry CAFO shall only be required to obtain authorization by an individual water quality permit or a CAFO general permit in accordance with subsection (a), (b), or (c) of this

section if it proposes to discharge or the executive director determines that a permit is necessary due to an unauthorized discharge; the operation's failure to comply with, or timely obtain, a certified water quality management plan approved by the Texas State Soil and Water Conservation Board; or other pertinent factors. Any dry litter poultry CAFO is authorized to be constructed and operated if the operation has a certified water quality management plan approved by the Texas State Soil and Water Conservation Board or is otherwise in compliance with the plan implementation schedule set forth in the notes following codified TWC, §26.302.

(g) Expansion or modification requirements. A CAFO operator authorized under an individual water quality permit shall comply with § 305.62 of this title (relating to Amendments). Before the permittee begins physical construction or operation of any new control facility, the operator must obtain commission authorization. Changes for which an individual permit amendment is required include, but are not limited to:

(1) increasing the maximum number of animals authorized for confinement;

(2) increasing the wastewater storage volume;

(3) adding land management units or increasing application acreage; and

(4) using a crop or yield goal to determine maximum application rates for manure, sludge, or wastewater that is not authorized by the permit or authorization.

(h) AFOs that are not defined or designated as CAFOs. Discharges of manure, sludge, or wastewater from an AFO that is not a CAFO as defined in this subchapter are authorized under this subchapter. Requirements applicable to these AFOs are described in § 321.47 of this title (relating to Requirements for Animal Feeding Operations (AFOs) Not Defined or Designated As Concentrated Animal Feeding Operations (CAFOs)).

(i) Edwards Aquifer. New CAFOs are prohibited within the Edwards Aquifer recharge zone.

(j) Permit term. Individual and general permits issued under this subchapter shall be effective for a term not to exceed five years from the date the permit is issued.

(k) Dual authorization. No person may concurrently hold both an individual water quality permit and authorization under a CAFO general permit for the same CAFO.

(l) Additional requirements. Authorization under this subchapter, a general permit, or an individual permit does not release the operator from any responsibilities or requirements under other federal, state, or local statutes or regulations.

(m) State-only authorizations. Any AFO that is a state-only CAFO shall be authorized in accordance with subsection (a), (b), or (c) of this section.

30 TX Admin Code § 321.47. Requirements for Animal Feeding Operations (AFOs) Not Defined or Designated as Concentrated Animal Feeding Operations (CAFOs).

(a) Purpose. This section provides an animal feeding operation (AFO) that is not defined or designated as a concentrated animal feeding operation (CAFO) authorization to operate, and identifies the operational requirements necessary to achieve the purposes of this subchapter.

(b) Applicability.

(1) Except as identified in paragraph (2) of this subsection, the owner or operator of an AFO not defined or designated as a CAFO who uses a control facility to manage manure, sludge, or wastewater generated on site shall comply with all the requirements of this section.

(2) The owner or operator of an AFO not defined or designated as a CAFO who qualifies for, obtains, and is operating under a certified water quality management plan from the Texas State Soil and Water Conservation Board (TSSWCB) and subsection (c)(1) - (4) of this section are considered to meet all technical requirements of this section.

(3) The owner of an AFO not defined or designated as a CAFO who uses an alternative treatment practice, such as filter strips (Natural Resources Conservation Service (NRCS) Code 393), constructed wetlands (NRCS Code 656), or vegetated treatment areas (NRCS Code 635), instead of a control facility to manage manure, sludge, or wastewater generated on site shall comply with all the requirements of this section except the requirements mentioned in subsection (d) and (e) of this section.

(c) General requirements.

(1) An AFO operator must locate, construct, and manage the control facility, alternative treatment practice, and land management unit (LMU) in a manner that will protect surface and groundwater quality.

(2) An AFO operator must prevent nuisance conditions and minimize odor conditions in accordance with the requirements of

§ 321.31(b) of this title (relating to Manure, Litter, and Wastewater Discharge and Air Emission Limitations).

(3) Proper pen drainage shall be maintained at all times. Earthen pen areas shall be maintained to ensure good drainage by scraping uncompacted manure and shaping pen surfaces as necessary to minimize odors and ponding.

(4) An AFO shall not expand operations, either in size or numbers of animals, before amending or enlarging the manure handling procedures and structures to accommodate all additional manure that will be generated by the expanded operations.

(5) As applicable to the operation, the production area of a new or expanding AFO must comply with the requirements of § 321.41 of this title (relating to Special Requirements for Discharges to a Playa).

(6) All control facilities, alternative treatment practices, holding pens, and retention control structures (RCSs) must be located outside of the 100-year flood plain unless the structures are protected from inundation and damage that may occur during the 100-year flood event.

(7) Where applicable, equivalent measures contained in a site-specific plan which meet the requirements of this subchapter may be substituted for applicable best management practices and/or portions of the technical requirements in this subchapter. Equivalent measures may be contained in:

(A) United States Department of Agriculture (USDA) - NRCS Field Office Technical Guide for Texas; or

(B) TSSWCB rules; or

(C) a certified water quality management plan certified by the TSSWCB; or

(D) a comprehensive nutrient management plan (CNMP) certified by the TSSWCB, the USDA - NRCS, or their designee.

(8) The AFO operator shall adhere to the well buffer requirements in § 321.38(b) of this title (relating to Control Facility Design Requirements Applicable to Concentrated Animal Feeding Operations (CAFOs)) and § 321.40(g) of this title (relating to Concentrated Animal Feeding Operation (CAFO) Land Application Requirements).

(d) Control facilities.

(1) The AFO operator shall minimize entry of uncontaminated runoff into RCSs. Such measures may include the construction of berms, embankments, or similar structures.

(2) The AFO may discharge from the production area if the discharge is the result of a chronic or catastrophic rainfall event, or catastrophic condition that exceeds the design capacity of an RCS that has been properly designed, constructed, operated, and maintained. RCSs shall be designed in accordance with § 321.38 of this title.

(3) The AFO operator constructing a new or modifying an existing RCS shall ensure that all construction and design is certified by a licensed Texas professional engineer. The certification shall be signed and sealed in accordance with the requirements of the Texas Board of Professional Engineers. All RCS design and construction shall, at a minimum, be in accordance with the technical standards developed by the NRCS, American Society of Agricultural and Biological Engineers, American Society of Civil Engineers, American Society of Testing Materials, or other technical standards approved by the executive director, that are in effect at the time of construction. Where site-specific variations are warranted, the operator must ensure a licensed Texas professional engineer documents these variations and their appropriateness to the plan.

(4) Existing RCSs that have been properly maintained without any modifications and have no apparent structural problems or leakage will be considered to be properly designed and constructed with respect to the RCS sizing, embankment design and construction, and liner requirements of this subchapter, 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 section. Structures built in accordance with site-specific NRCS plans and specifications will be considered to be in compliance with the design and capacity requirements of this subchapter if the site-specific conditions are the same as those used by the NRCS to develop the plan (numbers of animals, runoff area, manure generated, etc.) and the RCS is operated and maintained in accordance with NRCS requirements.

(5) RCS embankments and liners shall be designed and constructed in accordance with the requirements of § 321.38 of this title.

(6) The AFO operator must maintain copies of documentation of the sources of information, assumptions, and calculations used in determining the appropriate volume capacity of the RCSs.

(7) An irrigation system or other liquid manure removal system used by an AFO must be designed to ensure that the system is capable of dewatering the RCSs on a regular schedule. RCSs shall be equipped with irrigation, or wastewater removal systems capable of dewatering the RCSs whenever needed to restore the operating capacity. Dewatering equipment shall be maintained in proper working order.

(8) Sludge shall be removed from RCSs to prevent the accumulation of sludge from encroaching on other required storage volumes.

(e) Operation and maintenance.

(1) Sufficient volume shall be maintained at all times within the RCS to accommodate sludge, wastewaters, and contaminated stormwater (rainwater runoff and direct precipitation) from the AFO facility.

(2) The operator shall restore such capacity after each rainfall event or accumulation of manure, sludge, or process-generated wastewater that reduces such capacity, when conditions are favorable for irrigation. Favorable conditions shall be when the soil moisture level decreases so that irrigation will not cause runoff.

(3) The normal operating wastewater level in the RCS shall be maintained within the design of the RCS. If the water level in the RCS encroaches into the storage volume reserved for the design rainfall event the operator must document the conditions that resulted in this occurrence. As soon as irrigation is not prohibited, the AFO operator shall irrigate until the water level is at or below the design rainfall level.

(4) Adequate equipment shall be available and maintained in good working order to remove such manure, sludge, and wastewater from the RCS as required to maintain the required volume in compliance with this subchapter.

(5) A rain gauge capable of measuring the design rainfall event shall be installed on site and properly maintained.

(6) The AFO operator shall install and maintain a permanent pond marker in the RCS, visible from the top of the embankment that identifies, either physically or by onsite documentation, the volume required for the design rainfall event.

(7) The AFO operator shall ensure that liners are 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 30 days following discovery of the damage.

(8) The AFO operator shall maintain ponds, pipes, ditches, pumps, and diversion and irrigation equipment to ensure ability to fully comply with the terms of this subchapter.

(9) An AFO operator using a liquid manure handling system shall scrape or flush accumulated manure at least once per week or in accordance with proper design and maintenance of the facility.

(10) If an RCS is in danger of imminent overflow from chronic or catastrophic rainfall or catastrophic conditions, the AFO operator shall take reasonable steps to irrigate wastewater to LMUs only to the extent necessary to prevent overflow from the RCS.

(f) Land application.

(1) The runoff of manure, sludge, or wastewater to water in the state as the result of the application of manure, sludge, or wastewater from an AFO is authorized provided the land application activity is implemented in accordance with a plan for nutrient management detailed in this section.

(2) The AFO operator shall apply manure, sludge, and wastewater uniformly to suitable land at appropriate times and at agronomic rates. Timing and rate of applications shall be in response to crop needs, assuming usual nutrient losses, expected precipitation, and soil conditions.

(3) The AFO operator shall develop and utilize the information in this paragraph for land application unless a nutrient management plan (NMP) is developed and implemented. At that time, the NMP must be followed for land application. The AFO operator must adhere to the following:

(A) a site map showing the location of all LMUs;

(B) the location, description, and limitations of the major soil types within the identified LMUs, and a plan to address the soil limitations;

(C) crop types and rotations to be implemented on an annual basis;

(D) predicted yield goals based on the major soil types within the identified LMUs;

(E) procedures for calculating nutrient budgets to be used to determine application rates;

(F) a detailed description of the type of equipment and method of application to be used in applying the manure, sludge or wastewater; and

(G) projected rates and timing of application of the manure, sludge, and wastewater as well as other sources of nutrients that will be applied to the LMUs.

(4) Discharge of manure, sludge, or wastewater from the LMU is prohibited and shall not cause or contribute to a violation of surface water quality standards, contaminate groundwater, or create a nuisance condition.

(5) Application rates of manure, sludge, and wastewater shall not exceed the crop requirement of the crop or planned crop planting. Land application rates of manure sludge, and wastewater shall be based on the available nutrient content of the manure, sludge, and wastewater.

(6) Land application shall not occur when the ground is frozen or saturated or during rainfall events, unless in accordance with § 321.39(b)(3) of this title (relating to Operational Requirements Applicable to Concentrated Animal Feeding Operations (CAFOs)).

(7) Irrigation practices shall be managed so as to minimize ponding or puddling of wastewater on the site, prevent discharge of tailwater to waters in the state, prevent pollution of waters in the state, and prevent the occurrence of nuisance conditions.

(8) The land application of manure, sludge, and wastewater at agronomic rates shall not be considered surface disposal and is not prohibited.

(9) Manure, sludge, or wastewater may be applied to the areas in the 100-year flood plain at agronomic rates not to exceed the hydrologic needs of the crop.

(10) The AFO operator shall develop and maintain the calculations and assumptions used for determining land application rates and all nutrient analysis data.

(11) The AFO operator shall annually analyze at least one representative sample of irrigation wastewater and sludge, if applicable, and one representative sample of manure for total nitrogen, total phosphorus, and total potassium.

(12) Vegetative buffer strips shall be no less than 100 feet of vegetation to be maintained between manure, sludge, or wastewater application areas and surface water and watercourses. The AFO operator shall maintain the buffer strips in accordance with NRCS guidelines. A buffer is not required for wastewater irrigation when applied by low-pressure, low-profile center pivot irrigation systems in areas of the state where the annual average rainfall is less than 25 inches per year. Land application of manure, sludge, and wastewater into surface water in the state is an unauthorized discharge and is prohibited.

(13) Manure and sludge storage capacity requirements based upon manure and sludge production, land availability, and NRCS or equivalent standards shall be provided. Manure or sludge stored for more than 30 days must be stored within the drainage area of an RCS, or stored in a manner (i.e. storage shed, bermed area, tarp covered area, etc.) that otherwise prevents contaminated stormwater runoff from the storage area. Storage for more than 30 days is prohibited in the 100-year flood plain.

(14) Temporary storage of manure and sludge shall not exceed 30 days and is allowed only in LMUs or an RCS drainage area. Temporary storage of manure or sludge in the 100-year flood plain, near water courses or recharge features is prohibited unless protected from inundation and damage that may occur during the 100-year flood event. Contaminated runoff from manure and sludge storage piles must be retained on site.

(15) Any dairy AFO that is located in the major sole-source impairment zone, as defined under § 321.32 of this title (relating to Definitions), at a minimum must provide for management and disposal of manure in accordance with § 321.42(i) of this title (relating to Requirements Applicable to the Major Sole-Source Impairment Zone).

(16) Nighttime application of liquid or solid manure shall be allowed only in areas with no occupied residence(s) within 1/4 mile from the outer boundary of the LMU receiving manure, sludge, or

wastewater application. In areas with an occupied residence within 1/4 mile from the outer boundary of the LMU, application shall only be allowed from one hour after sunrise until one hour before sunset, unless the current occupants of such residences have, in writing, agreed to such nighttime applications.

(17) AFOs introducing wastewater or chemicals to water wellheads for the purpose of irrigation shall install backflow prevention devices in accordance with requirements contained in 16 TAC Chapter 76 (relating to Water Well Drillers and Water Well Pump Installers).

(18) Composting on site at an AFO shall be performed in accordance with Chapter 332 of this title (relating to Composting). AFOs may compost manure generated on site, including manure, sludge, bedding, feed, and dead animals. In accordance with Chapter 332 of this title, an AFO operator 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 shall be located within the drainage of the RCS. The runoff volume from compost areas shall be accounted for in the design of the RCS.

(19) Maintenance of animals.

(A) Animals confined at the AFO shall be restricted from coming into direct contact with surface water in the state through the use of fences or other controls.

(B) An AFO that maintains animals in pastures must maintain crops, vegetation, forage growth, or postharvest residues in the normal growing season, excluding the feed and water trough areas and designated open lots.

(g) Sampling and testing.

(1) Initial sampling. Before commencing application of manure, sludge, or wastewater on LMUs and before resuming land application on LMUs. Where manure, sludge, or wastewater was not applied during the preceding year, the operator shall:

(A) collect and analyze at least one representative sample of manure, sludge (if applicable) and wastewater for total nitrogen, total phosphorus, and total potassium;

(B) collect and analyze at least one representative soil sample from each LMU according to the procedures in paragraphs (4) and (5) of this subsection; and

(C) Utilize the results of these analyses in determining application rates for manure, sludge, and wastewater.

(2) Annual sampling. The operator shall:

(A) collect and analyze at least one representative sample of manure, sludge (if applicable), and wastewater, for total nitrogen, total phosphorus, and total potassium;

(B) collect and analyze at least one representative soil sample from each LMU where manure, sludge, or wastewater was applied during the preceding year according to the procedures in paragraphs (4) and (5) of this subsection; and

(C) utilize the results of these analyses in determining application rates for manure, sludge, and wastewater.

(3) The operator shall make the most recent nutrient analysis available to any recipient of manure, sludge, or wastewater.

(4) Sampling procedures. The operator shall employ sampling procedures using accepted techniques of soil science for obtaining representative samples and analytical results.

(A) Samples shall be collected using approved methods described in the agency's guidance RG-408 entitled "Soil Sampling for Concentrated Animal Feeding Operations."

(B) Samples shall be collected by the operator or its designee and analyzed by a soil testing laboratory annually.

(C) Obtain one composite sample for each LMU and per uniform soil type (soils with the same characteristics and texture) within the LMU.

(D) Composite samples shall be comprised of ten to 15 randomly sampled cores at a depth of zero to six inches.

(5) Laboratory analysis. The operator shall have a laboratory analysis of the soil samples performed for physical and chemical parameters to include: nitrate reported as nitrogen in parts per million (ppm); phosphorus (extractable, ppm, using Mehlich III extractant with Inductively Coupled Plasma (ICP) analysis); potassium

(extractable, ppm); sodium (extractable, ppm); magnesium (extractable, ppm); calcium (extractable, ppm); soluble salts (ppm) or electrical conductivity (deciSiemens/meter (dS/m) or millimhos/cm (mmhos/cm) determined from extract of 2:1 volume to volume (v/v) water/soil mixture); and soil water pH (soil:water, 1:2 ratio).

(6) Soil samples shall be submitted to a soil testing laboratory along with a previous crop history of the site, intended crop use, and yield goal. Soil test reports shall include nutrient recommendations for the crop yield goal.

(h) Nutrient utilization plans (NUPs).

(1) Manure, sludge, or wastewater shall not be land applied to a LMU, unless the land application is implemented in accordance with a detailed NUP when results of the annual soil analysis for extractable phosphorus indicate:

(A) a level greater than 200 ppm; or

(B) a level greater than 350 ppm for an LMU where the average annual rainfall is 25 inches or less, erosion control is adequate to keep erosion at the soil loss tolerance (T) or less, and the closest edge of the field is more than one mile from a named stream; or

(C) if ordered by the commission to do so in order to protect water in the state.

(2) An NMP, based on crop removal, certified in accordance with NRCS Practice Standard Code 590 complies with the requirements of a complete and effective NUP.

(3) A NUP, based on crop removal, shall be developed by an employee of the NRCS, a nutrient management specialist certified by the NRCS, the TSSWCB, Texas AgriLife Extension Service, an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas, or a professional agronomist or soil scientist certified by the American Registry of Certified Professionals in Agronomy, Crops and Soils, 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. No land application under an approved NUP shall cause or contribute to a violation of water quality standards or create a nuisance.

(4) Land application under the terms of the NUP may begin as soon as the plan is developed in accordance with this subsection.

After a NUP has been implemented, the operator shall land apply in accordance with the NUP until soil phosphorus is reduced below 200 ppm. Thereafter, the AFO operator shall apply manure, litter, or wastewater at agronomic rates according to the requirements of this section.

(i) Recordkeeping requirements.

(1) Records required under this subsection must be kept on site for a minimum of five years from the date the record was created. Any AFO operator that does not use an RCS is not subject to subparagraphs (B) - (D) and (F). Unless otherwise specified, records shall include:

(A) a list of any significant spills of pollutants with the potential to reach water in the state;

(B) a schedule for liquid manure removal;

(C) a date log indicating weekly inspection of wastewater level in the RCS;

(D) a log of all measurable rainfall events;

(E) a copy of the results of initial and annual soils, manure, sludge, and wastewater analyses;

(F) records of dates of inspection of the RCS, and a log of the findings of such inspections;

(G) the groundwater monitoring plan associated with the use of a playa;

(H) site-specific documentation that no significant hydrologic connection exists between the wastewater in the RCS and water in the state;

(I) any written agreement with a landowner which documents the allowance of nighttime application of manure, sludge, or wastewater; and

(J) a copy of the NUP, if required.

(2) For facilities where manure, sludge, or wastewater is applied on LMUs, such records shall include the following information:

(A) the date of manure, sludge, or wastewater application to each field;

(B) the location of the specific LMU and volume or amount applied during each application event;

(C) the acreage of each individual crop on which manure, sludge, or wastewater is applied;

(D) the assumptions for calculating the total amount of nitrogen and phosphorus applied per acre to each field, including sources of nutrients other than manure, sludge, and wastewater on a dry basis;

(E) the percentage of moisture content of the manure and sludge; and

(F) the actual annual yield of each harvested crop.

(3) Where manure, sludge, or wastewater, if applicable, is sold or given to other persons for off-site land application or disposal, the operator must maintain a log of: the date of removal from the AFO; the name and address of the recipient; and the amount, in wet tons, dry tons, or cubic yards, of manure or gallons of wastewater removed from the AFO. (A single pickup load need not be recorded.)

(j) Documentation of liner maintenance. The operator shall have an NRCS engineer, licensed Texas professional engineer, or licensed Texas professional geoscientist review the documentation and conduct a site evaluation every five years.

(k) Groundwater monitoring. In the event that groundwater monitoring is required by § 321.41 of this title or required by the executive director, the operator shall annually collect a groundwater sample from each well that provides water for the facility. Each sample shall be analyzed for nitrate as nitrogen and chloride where groundwater monitoring is required by § 321.41 of this title and analyzed for nitrate as nitrogen, chloride, and total dissolved solids where groundwater monitoring is required by the executive director. The operator shall use the methods outlined in the groundwater monitoring plan, and compare the analytical results to the baseline data. Data from any required monitoring wells must be submitted to the executive director and kept on site for five years. The first year's sampling shall be considered the baseline data and must be retained on site for the life of the facility, unless otherwise provided by the executive director. If a 10% deviation in concentration of any of the sampled constituents is found, the operator must notify the executive director within 30 days of receiving the analytical results.

(l) Inspections. The AFO operator must conduct the following inspections to assure the facility maintains its efficiency. Records of inspections shall be maintained for a period of five years.

(1) Preventative maintenance program. The operator shall conduct weekly inspections of the control facility and land application equipment to determine preventative maintenance or repair needs. Operators that do not use an RCS are required to conduct inspections for applicable portions of their operation as required by this section. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system or the creation of a nuisance. Inspections shall include visual inspections and equipment testing to uncover conditions that could cause breakdowns or failures resulting in discharge of pollutants to water in the state or the creation of a nuisance condition.

(2) Site inspection. A complete inspection of the control facility and LMUs shall be done and a report documenting the findings of the inspection made at least once a year. The inspection shall be conducted by the operator to verify that the description of potential pollutant sources is accurate, and the controls necessary to reduce pollutants and avoid nuisance conditions are being implemented and are adequate. Records documenting significant observations made during the site inspection shall be retained.

(m) Notification. An existing or new AFO operator has the continuing obligation to provide the executive director notice of the number of animals in confinement in accordance with the following requirements.

(1) All new AFOs which confine a number of animals that fall within the range of the number of animals specified in any of the categories under § 321.32(13)(B) of this title shall notify the executive director of their legal entity name, physical location including a map or hand drawn sketch, mailing address, and number of head in confinement.

(2) Such notification shall be in writing and signed by the operator and shall be submitted not later than 180 days after commencement of operation.

(n) Closure required. The AFO operator shall properly close the AFO and RCS in accordance with a closure plan prepared by a licensed Texas professional engineer. The AFO and RCS must be closed within one year of permanently ceasing operations at the facility or an alternate schedule determined by a licensed Texas professional engineer. The closure plan for the RCS must

be developed using standards contained in the NRCS Practice Standard Code 360 (Closures of Waste Impoundments, as updated) and using the guidelines contained in the Texas AgriLife Extension Service/NRCS publication #B-6122 (Closure of Lagoons and Earthen Manure Storage Structures, as updated). The RCS or AFO is considered to be properly closed upon certification by a licensed Texas professional engineer that closure is complete according to the closure plan. AFOs shall maintain compliance with the requirements of this subchapter until the facility has been properly closed.