

**SUBCHAPTER A: ADMINISTRATIVE REQUIREMENTS**

**§§217.1 - 217.18**

**Effective December 4, 2015**

**§217.1. Applicability.**

(a) Applicability.

(1) This chapter applies to the design, operation, and maintenance of:

(A) domestic wastewater treatment facilities that are constructed with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter;

(B) treatment units that are altered, constructed, or re-rated with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter;

(C) collection systems that are constructed with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter;

(D) collection system units that are altered, constructed, or re-rated with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter;

(E) existing domestic wastewater treatment facilities that do not have a current Texas Pollutant Discharge Elimination System permit or a Texas Land Application Permit and are required to have an active wastewater permit;

(F) existing wastewater treatment facilities and collection systems that never received approval for plans and specifications from the executive director; and

(G) collection system rehabilitation projects covered in §217.56(c) and §217.69 of this title (relating to Trenchless Pipe Installation; and Maintenance, Inspection, and Rehabilitation of the Collection System).

(2) Domestic wastewater treatment facilities, treatment units, collection systems, and collection system units with plans and specifications approved by the executive director that were received on or after August 28, 2008 and before the effective date of this chapter must comply with the rules in this chapter, as they existed immediately before the effective date of the amendments to this chapter. The rules in

effect immediately before the effective date of the amendments to this chapter are continued in effect for that purpose.

(3) This chapter does not apply to:

(A) the design, installation, operation, or maintenance of domestic wastewater treatment facilities, treatment units, collection systems, or collection system units with plans and specifications that were approved by the executive director on or before August 27, 2008, which are governed by Chapter 317 of this title (relating to Design Criteria Prior to 2008) or design criteria that preceded Chapter 317 of this title; and

(B) systems regulated by Chapter 285 of this title (relating to On-Site Sewage Facilities); or collection systems or wastewater treatment facilities that collect, transport, treat, or dispose of wastewater that does not have the characteristics of domestic wastewater, although the wastewater may contain domestic wastewater.

(b) The executive director may grant variances from new requirements added by the amendments of this chapter to a person who proposes to construct, alter, or re-rate a collection system or wastewater treatment facility if the plans and specifications for the project are submitted within 180 days after the date the amendments to this chapter are effective, provided the plans and specifications comply with the rules in effect immediately prior to the amendment.

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### **§217.2. Definitions.**

The following words and terms, when used in this chapter, have the following meanings unless the context clearly indicates otherwise.

(1) Activated sludge--A collection of actively growing biological organisms that results from combining wastewater, organisms, and air in an aerated treatment process.

(2) Activated sludge process--A biological wastewater treatment process in which activated sludge is aerated. The activated sludge microorganisms are subsequently separated from the wastewater and wasted or returned to the process.

(3) Advanced nutrient removal--A process to remove phosphorus, nitrogen, or both, that is intended to produce higher quality effluent than is normally achieved by secondary treatment processes.

(4) Air gap--The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water to a tank, fixture, receptor, sink, or other assembly and the flood level rim of the receptacle. To qualify as an air gap under this chapter, the vertical, physical separation must be at least twice the diameter of the water supply outlet, but never less than 1.0 inch.

(5) Alter or alteration--

(A) To replace a treatment unit or a collection system unit.

(B) To modify a treatment unit, a collection system unit, or an associated appurtenance, in a way that changes any of the following for a treatment unit or collection system unit:

(i) the capacity;

(ii) the intended function;

(iii) the process;

(iv) the mode of operation;

(v) the configuration;

(vi) a design parameter;

(vii) a major design assumption; or

(viii) the function of any other treatment unit or collection system unit.

(6) Alternative collection system--A collection system that uses components such as grinder pumps, septic tanks, or vacuum valves, which are installed throughout the collection system, specifically including the types of collection systems identified in Subchapter D of this chapter (relating to Alternative Collection Systems). An alternative collection system is comprised of both on-site and off-site components.

(7) Annual average flow--The arithmetic average of all daily flow determinations taken within a period of 12 consecutive months.

(8) Appurtenance--An appliance or a component associated with a treatment unit or collection system unit that is not considered integral to the identity of the unit.

(9) Auxiliary pump--A secondary or supplementary pump that is available for use as needed.

(10) Biotower--A biological filtration system that involves biological film on a plastic media that reduces the biochemical oxygen demand of the effluent.

(11) Building lateral--A pipe that conveys raw wastewater and connects the plumbing of a structure to a collection system pipe. For an alternative collection system, a pipe that conveys raw wastewater and connects the plumbing of a structure to an on-site component (e.g., grinder pump, vacuum valve pit, septic tank effluent pump). A building lateral is not a part of a collection system.

(12) Bypass--The intentional diversion of a waste stream from any portion of a wastewater treatment facility or collection system.

(13) Collection system--Pipes, conduits, lift stations, force mains, and all other constructions, devices, and appurtenant appliances used to transport domestic wastewater to a wastewater treatment facility.

(14) Collection system unit--A part of a collection system that performs a basic step in the transport of wastewater to a wastewater treatment facility, provides access to the collection system, or is an integral safety feature of the collection system (e.g., pipeline, lift station, manhole, air release valve, etc.).

(15) Completely mixed aerated lagoon--A lagoon in which oxygen is supplied mainly through mechanical or diffused aeration, and in which the aeration system is designed to keep solids in suspension.

(16) Construct--To build, erect, place, assemble, remodel, alter, or otherwise create a treatment unit, a collection system unit or an associated component or appurtenance of a treatment unit or collection system unit. For purposes of this chapter, construction also includes installation of fencing, excavation, site preparation, and placement of skid-mounted or modular units.

(17) Constructed wetland--A wastewater treatment unit designed to replicate the processes that occur in natural wetlands. Constructed wetlands are complex, integrated systems in which wastewater, plants, animals, microorganisms, and the environment (including sun, soil, and air) interact to improve water quality.

(18) Day--A period of 24 consecutive hours beginning at 12:00 a.m. local time.

(19) Decanter--A device used to draw off liquid without disturbing solids that are in the process of sedimentation.

(20) Design flow--The highest anticipated 30-day average flow rate.

(21) Design life--The length of time that an engineered structure or device is intended to function without failing.

(22) Diurnal flow--The daily cycle of high and low influent flows to a wastewater treatment facility.

(23) Domestic wastewater--Wastewater which originates primarily from kitchen, bathroom, and laundry sources, including waste from food preparation, dishwashing, garbage grinding, toilets, baths, showers, and sinks of a residential dwelling. Domestic wastewater may contain commercial or industrial wastewater contributions.

(24) Dry Well--The portion of a pumping station where non-submersible pumps and controls are housed separately from the liquid being pumped.

(25) Effective size--The particle diameter that represents the smallest 10th percentile of a sample of filter media particles on a mass basis. In other words, 10% of the sample mass consists of particles that are smaller than the effective size and 90% of the sample mass consists of particles that are larger than the effective size.

(26) Effluent--Liquid that flows out of a process or confined space. This term may also be used to identify items or properties associated with effluent (e.g., effluent constituents, effluent limits, or effluent pump).

(27) Emergency overflow--A conduit or spillway designed to prevent an unauthorized discharge of wastewater by redirecting excess flow for processing in a treatment unit.

(28) Engineer--A professional engineer, licensed by the Texas Board of Professional Engineers, with expertise in design and construction of wastewater treatment facilities and collection systems.

(29) Engineering Report--The final engineering design report prepared, signed, and sealed by the engineer. The report must include calculations and written descriptions of processes, equipment, and structures that demonstrate compliance with this chapter, as described in §217.10 of this title (relating to Final Engineering Report) and as required throughout this chapter.

(30) Equalization basin--A treatment unit designed primarily to dampen fluctuations of flow or concentration before wastewater flows into a subsequent treatment unit.

(31) Equivalent dwelling unit--Any building or section of a building that produces wastewater of a composition and quantity equal to that discharged by a single, private residence. For calculation purposes, an equivalent dwelling unit is occupied by 3.5 individuals, unless a different number is justified by actual data.

(32) Filter media--The material placed in a filter containment structure to separate solids from a liquid.

(33) Firm pumping capacity--The maximum flow rate achievable, under design conditions, with the largest pumping unit out of service.

(34) Force main--A pressure-rated conduit that conveys wastewater from a lift station.

(35) Free water surface wetland--A constructed wetland designed to have the water surface above the wetland bed or substrate.

(36) Gravity relief sewer--A part of a collection system built to manage the flow of wastewater that exceeds the capacity of the existing collection system.

(37) Grinder pump--A collection system unit that receives raw wastewater, grinds the solids in the wastewater into a slurry, and provides the motive force for transporting the slurry to a lift station or a collection system.

(38) Headworks--The location where wastewater enters a wastewater treatment facility and preliminary treatment occurs, typically by removing large solids or grit.

(39) Influent--Liquid that flows into a process or confined space. This term may also be used to identify items or properties associated with influent (e.g., influent constituents, influent limits, or influent pump).

(40) Innovative technology--A process, method, product, or material not addressed in this chapter or a process specifically identified as innovative by this chapter.

(41) Interceptor tank--A collection system unit that receives raw wastewater, removes floatable and settleable solids, stores the removed solids, and provides flow attenuation.

(42) Lift station--A structure that collects wastewater and uses pumps to raise it to a higher elevation. The term lift station applies to a structure in which the static head exceeds the frictional head losses.

(43) Maintenance--The scheduled preventative care, repair, or equivalent replacement of components or appurtenances of a treatment unit or a collection system unit (e.g., replacing a pump with an equivalent pump - not replacing an entire lift station, and not replacing a pump in a lift station with a pump that will operate at a different flow rate or pressure). Replacement must not cause alteration, as defined in this chapter. Maintenance does not include replacement of a treatment unit or a collection system unit.

(44) Membrane bioreactor system--An activated sludge process that uses membrane filtration rather than clarification to remove solids.

(45) Minimum grade effluent sewer--An alternative collection system pipeline with a constant downward slope that transports effluent from an interceptor tank by gravity flow.

(46) Multiple equivalent dwelling unit--Either:

(A) a group of two or more residences served by a common service connection; or

(B) a commercial, industrial, institutional, or other non-residential establishment that produces wastewater:

(i) in excess of 1,500 gallons per day; or

(ii) not comparable in composition to that discharged by a single private residence.

(47) Non-conforming technology--Technology or a process that does not conform to the design criteria of this chapter or a technology or process specifically identified as non-conforming in this chapter.

(48) Off-site component--A collection system component that includes collection system pipes, force mains, pump stations, lift stations, vacuum stations, and related appurtenances not located at a wastewater treatment facility.

(49) On-site component--Alternative collection system equipment placed on private property.

(50) Overflow--An unauthorized flow of untreated or partially treated wastewater from a collection system or from a treatment unit at a wastewater treatment facility.

(51) Owner--A person who owns a collection system or a wastewater treatment facility or part of a collection system or wastewater treatment facility. For the purposes of this chapter, "owner" refers to the owner and to the owner's representatives, agents, and designees (for example, an operator, an engineer, a staff member, a contractor).

(52) Partially mixed aerated lagoon--A lagoon in which oxygen is supplied mainly through mechanical or diffused aeration, in which the aeration system is designed to allow solids to settle out of suspension.

(53) Peak flow--The highest two-hour flow expected under any operational conditions, including times of high rainfall, based on a two-year, 24-hour storm or a prolonged period of wet weather.

(54) Plans--Construction drawings or other documents that show details of the design of a project.

(55) Preliminary treatment--Removal of wastewater constituents such as rags, sticks, floating material, and grit that may cause maintenance or operational problems in subsequent treatment units.

(56) Pressure sewer--A collection system that is pressurized by pumps at each service connection.

(57) Primary sedimentation unit--A treatment unit that removes solids from the wastewater by physical settling before the wastewater enters a unit that removes waste by biological conversion.

(58) Primary treatment--A physical treatment process, other than preliminary treatment, that removes biologically available wastewater constituents primarily by settling or floatation.

(59) Processing unit--A component of a wastewater treatment facility that performs a basic step in preparing sludge for disposal after the sludge has been separated from the wastewater (e.g., sludge thickener, digester, sludge drying bed, belt press). Processing units are considered a subset of treatment units for the purposes of this chapter.

(60) **Project**--A construction, repair, alteration, or rehabilitation of a collection system, a wastewater treatment facility, or an associated component, beginning with design initiation and ending with permanent decommissioning.

(61) **Pump**--A device that raises, transfers, or compresses fluids by suction, pressure, or both.

(62) **Rehabilitate**--To repair a collection system using a technology that is described in §217.56(c) of this title (relating to Trenchless Pipe Installation) or using any other lining or coating method.

(63) **Re-rate**--To change the design flow or design organic loading of a treatment unit, without altering the unit, based on actual performance data.

(64) **Secondary treatment**--The level of treatment defined as secondary treatment in §309.1(b) of this title (relating to Scope and Applicability).

(65) **Sequencing batch reactor (SBR)**--A fill and draw activated sludge treatment system where secondary aeration and secondary clarification processes are carried out sequentially in the same tank. An SBR system has the following five steps that are carried out in the following sequence:

- (A) fill - the basin is filled with the influent;
- (B) react - the influent in the basin is aerated;
- (C) settle - the mixed liquor within the basin is settled  
(clarification);
- (D) draw - the basin is decanted; and
- (E) idle - the sludge is removed from the basin.

(66) **Sludge stabilization**--The process of destroying or inactivating pathogens in sludge and reducing volatile solids content.

(67) **Small diameter effluent sewer**--A collection system that receives effluent from an interceptor tank and transports the flow by gravity. A small diameter effluent sewer may include minimum grade and variable grade effluent sewers.

(68) **Specifications**--Precise standards of performance for construction work, materials, and manufactured products, which make possible the expression of expected value when they are purchased or contracted for and which provide means of

determining their conformance with expectations after they are purchased or constructed.

(69) Stabilization lagoon--A shallow lagoon used to achieve secondary treatment through natural processes. In this chapter, "stabilization lagoon" is synonymous with "stabilization pond," "oxidation lagoon," and "oxidation pond."

(70) Subsurface flow wetland--A wetland system that maintains the water level below the surface of the gravel or other media placed in the wetland bed or cell.

(71) Summary transmittal letter--A letter submitted to the executive director that provides basic information about a project so that the executive director can determine whether to require a full review of the project plans and specifications.

(72) Surcharge--The hydraulic overloading of a portion of a gravity collection system. A surcharge causes wastewater to rise within manholes and may cause an overflow.

(73) Totalizing meter--A water measuring device that registers or accumulates total flow. The totalizing meter shall be non-resettable.

(74) Treatment unit--A component of a wastewater treatment facility that performs a basic step in the wastewater treatment process (e.g., lift station, bar screen, aeration basin, clarifier, chlorine contact chamber).

(75) 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.

(76) Two-year, 24-hour rainfall event--The maximum rainfall event with a probable recurrence interval of once in two 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.

(77) Variable grade effluent sewer--A small diameter gravity collection system that does not require a uniform gradient, but will allow for both positive and negative gradients. A variable grade effluent collection system may be used with septic tank effluent pumps.

(78) Variance--A deviation from a specific requirement of this chapter. A variance requires executive director approval.

(79) Wastewater--A waterborne industrial waste, recreational waste, domestic waste, or combination of these wastes.

(80) Wastewater treatment facility--All contiguous land and fixtures, structures, and appurtenances used for storing, processing, and treating wastewater. A wastewater treatment facility does not include the collection system located outside of the fenced area around a wastewater treatment facility.

(81) Wasting--The practice of removing sludge from a wastewater treatment process.

(82) Weir overflow--The flow of liquid through or over a clarifier weir or a weir used for flow measurement.

(83) Wet well--A pumping station or a portion of a pumping station that stores the fluid being pumped. A wet well may be used in conjunction with a dry well, or may contain its own submersible pumps and equipment.

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**§217.3. Purpose.**

(a) The purpose of this chapter is to establish the minimum design criteria for the comprehensive design of domestic wastewater collection systems, collection system units, wastewater treatment facilities, and treatment units. The design criteria in this chapter is intended to promote the design of facilities in accordance with good public health and water quality engineering practices. The minimum design criteria may not be sufficient for all situations. A design must protect the public health and meet water quality standards established by the commission.

(b) It is also the purpose of this chapter that all domestic wastewater treatment facilities, treatment units, collection systems, collection system units, and associated components must be installed, operated, and maintained:

(1) to ensure the safety of the public;

(2) to ensure the safety of all individuals authorized to access a wastewater treatment facility, treatment unit, collection system, or collection system unit;

(3) in accordance with the engineering report and the associated plans and

specifications approved by the executive director; and

(4) to ensure continuous compliance with all applicable statutory and regulatory requirements.

(c) This chapter establishes procedures for the review and approval of project plans and specifications. An approval granted by a municipality in accordance with §217.8 of this title (relating to Municipality Reviews) or by the Texas Water Development Board in accordance with §217.9 of this title (relating to Texas Water Development Board Reviews) is considered equivalent to approval by the executive director.

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**§217.4. Variances.**

(a) The engineering report must include all requested variances from the requirements of this chapter.

(b) The engineering report must include a technical justification for each variance requested. The executive director may determine what level of justification is acceptable.

(c) If the executive director determines that a variance may potentially endanger public health or the environment, the executive director may deny the variance or require that compensatory measures be taken to prevent a nuisance or the potential endangerment of public health or the environment.

(d) The executive director shall not grant or approve a variance that would violate any expressed prohibition in this chapter.

(e) A variance request that has been signed, dated, and sealed by an engineer; and certified by the engineer that the requested variance does not potentially endanger public health or the environment in the summary transmittal letter required by §217.6 of this title (relating to Submittal Requirements and Review Process) is automatically approved 30 business days after receipt by the executive director unless:

(1) the executive director requests additional information in writing;

(2) the variance request conflicts with any prohibition listed in this chapter; or

(3) the variance request conflicts with a provision in this chapter that specifically requires approval from the executive director to be in writing.

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**§217.5. Plans and Specifications General Requirements.**

(a) An owner is required to have an engineer design a collection system or wastewater treatment facility that meets the minimum requirements of this chapter. The executive director may determine that additional requirements are needed.

(b) An owner is required to construct a collection system or wastewater treatment facility according to the plans and specifications approved by the executive director or an approved review authority, as designated by §217.8 of this title (relating to Municipality Reviews) or §217.9 of this title (relating to Texas Water Development Board Reviews).

(c) The executive director's approval of plans and specifications of a wastewater treatment facility does not relieve an owner of the responsibility to obtain a wastewater permit or other authorization from the commission in accordance with Texas Water Code, Chapter 26.

(d) The commission's approval of a wastewater permit does not relieve an owner of the responsibility to obtain plans and specifications approval for a wastewater treatment facility and the associated collection system from the executive director in accordance with this chapter.

(e) An owner must ensure that its wastewater treatment facility plans and specifications meet all requirements in the associated wastewater permit.

(f) The executive director's approval of plans and specifications must be in writing, unless the project is approved through the automatic approval processes in §217.6(f) or (h) of this title (relating to Submittal Requirements and Review Process).

(g) Plans and specifications for a project that would alter an existing treatment unit or collection system unit must comply with the requirements of this chapter. The plans and specifications do not need to address existing treatment units or collection system units that will not be altered, unless specifically required by this chapter or requested in writing by the executive director.

(h) The executive director may require more stringent design criteria of a collection system or wastewater treatment facility if the executive director determines it is necessary to protect public health or to meet water quality standards established by the commission.

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**§217.6. Submittal Requirements and Review Process.**

(a) An owner is not required to submit collection system or wastewater treatment facility plans and specifications to the executive director for approval prior to the commission issuing the wastewater treatment facility's wastewater permit.

(b) An owner is not required to submit collection system or wastewater treatment facility plans and specifications for approval if the project only consists of maintenance, as defined in this chapter.

(c) A wastewater treatment facility's plans and specifications must be based on a design that will at least meet the requirements and effluent limits in the associated wastewater permit.

(d) An owner shall submit a summary transmittal letter to the executive director and a copy to the appropriate regional office for each collection system project and wastewater treatment facility project, except as provided by §217.8 of this title (relating to Municipality Reviews). A summary transmittal letter must include:

- (1) the name and address of the design firm;
- (2) the name, phone number, facsimile number, and email address of the engineer;
- (3) the county or counties where the project will be located;
- (4) an identifying name for the project;
- (5) the collection system or wastewater treatment facility owner's name, and if applicable, the wastewater treatment facility permit number and wastewater treatment facility name;
- (6) a statement certifying that the plans and specifications are in substantial compliance with all requirements of this chapter, with the exception of any variance requests, which must be listed in the letter;
- (7) a statement certifying that any variances will not threaten public health or the environment, based on the best professional judgment of the engineer who prepared the engineering report and the project plans and specifications;
- (8) a brief description of the project scope including:

(A) a brief engineering summary of the collection system or wastewater treatment facility;

(B) a list of every treatment unit or collection system unit that will be altered, constructed, rehabilitated, or re-rated within the project scope;

(C) a map of the collection system or wastewater treatment facility that identifies the location of every treatment unit or collection system unit that will be altered, constructed, rehabilitated, or re-rated within the project scope;

(D) a description of all variances from the requirements of this chapter, including the use of non-conforming or innovative technology; and

(E) an explanation of the reasons for all variances in accordance with §217.4 of this title (relating to Variances).

(9) the signature and seal of the engineer responsible for the design of the collection system or wastewater treatment facility.

(e) The executive director may review the plans and specifications for any collection system or wastewater treatment facility.

(f) If the executive director does not notify an owner in writing within 30 business days of the receipt of a summary transmittal letter that a review will occur, the project is approved. However, such approval is conditional, and remains subject to an executive director determination under §217.4(c) or (d) of this title. Additionally, if this provision conflicts with a requirement in this chapter that requires executive director approval in writing, then this provision does not apply.

(g) If the executive director notifies an owner in writing of the intent to review a collection system or wastewater treatment facility's design, the owner shall submit the following within 30 days from the date of the notice:

(1) a complete set of plans and specifications;

(2) a complete engineering report as defined in §217.10 of this title (relating to Final Engineering Report);

(3) all requested variances; and

(4) sufficient information to satisfy the executive director that a project is in compliance with this chapter.

(h) If the executive director does not notify an owner of any deficiencies within 30 business days of receipt of any additional information requested, the project is approved as long as the project does not violate any expressed prohibition in this chapter. However, such approval is conditional, subject to an executive director determination under §217.4(c) or (d) of this title. Additionally, if this provision conflicts with a requirement in this chapter for written approval from the executive director, then this provision does not apply.

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### **§217.7. Types of Plans and Specifications Approvals.**

(a) Approval given by the executive director or other review authority authorized under Texas Water Code, §26.034(d) and §217.8 of this title (relating to Municipality Reviews) or §217.9 of this title (relating to Texas Water Development Board Reviews) does not relieve an owner of any liability or responsibility with respect to designing, constructing, or operating a collection system or wastewater treatment facility in accordance with applicable commission rules and the associated wastewater permit.

(b) The executive director, a municipality authorized under §217.8 of this title, or the Texas Water Development Board, as authorized in §217.9 of this title, may grant the following types of approvals: standard approvals; innovative and non-conforming technology approvals; and conditional approvals.

(1) Standard approval. The executive director may grant a standard approval for plans and specifications that do not include any variance requests, do not include any innovative or non-conforming technologies, and comply with all applicable parts of this chapter.

(2) Approval of innovative and non-conforming technologies. The executive director may grant approval of innovative and non-conforming technologies in accordance with §217.4 of this title (relating to Variances).

(A) An owner who requests approval for an innovative or non-conforming technology must submit a summary transmittal letter in accordance with §217.6(d) of this title (relating to Submittal Requirements and Review Process) and must describe the technology and give the reason(s) for selecting the technology.

(B) An owner must receive written approval from the executive director before constructing, installing, or operating any innovative or non-conforming technology.

(C) The executive director may require a pilot or demonstration study for an innovative or non-conforming technology. Performance data from a similarly designed full-scale process that has operated for a reasonable period under conditions similar to those of a proposed design, as determined by the executive director, may be submitted in addition to or in lieu of a pilot or demonstration study.

(D) The executive director may require an owner to submit evidence that the owner, the manufacturer, or the supplier of the equipment for innovative or non-conforming technology has provided a performance bond that:

(i) is acceptable to the executive director;

(ii) is from a surety company listed on the United States Treasury Department's current Listing of Certified Companies; and

(iii) insures the performance of the equipment for innovative or non-conforming technology.

(E) The performance bond referenced in subparagraph (D) of this paragraph must guarantee the innovative or non-conforming technology for at least two years from the date the treatment unit or equipment is put into service, and must include:

(i) the full cost of removing equipment and closing the innovative or non-conforming technology;

(ii) the full cost of replacing the innovative or non-conforming technology with standard processes and equipment that conform to this chapter; and

(iii) all associated engineering costs necessary for the removal and replacement of any failing treatment unit or equipment.

(F) The executive director may require an owner to submit a supplement to the report on the performance of an innovative or non-conforming technology after a collection system or wastewater treatment facility is constructed and operating.

(3) Conditional approval.

(A) The executive director may grant conditional approval for a specific set of operating conditions.

(B) If a conditional approval is granted, an owner is responsible for ensuring that the conditions, stipulations, and restrictions outlined in the approval letter are met. Operating outside the conditions, stipulations, or restrictions in a conditional approval is a violation of commission rules.

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**§217.8. Municipality Reviews.**

(a) The executive director may grant approval authority to a municipality that requests approval authority and meets the requirements in Texas Water Code, §26.034(d).

(b) The executive director may not require plans and specifications for a collection system that transports domestic wastewater to be submitted for approval from:

(1) a municipality that has been granted approval authority by the executive director under authority of Texas Water Code, §26.034(d), if the plans and specifications are prepared by a private engineering consultant and a review is conducted by an engineer who is an employee of or consultant to the municipality not affiliated with the private engineering consultant that prepared the plans and specifications under review; or

(2) an entity that is required by local ordinance to submit the plans and specifications to a municipality that has been granted approval authority by the executive director for review and approval under authority of Texas Water Code, §26.034(d).

(c) If a municipality seeks to perform technical reviews of collection systems, the municipality must submit a map or maps to the executive director delineating the municipality's jurisdictional boundaries for the area where it is seeking approval authority at least 30 days before commencing review of plans and specifications.

(d) The municipality shall submit a revised map or maps to the executive director identifying jurisdictional boundary changes at least 30 days prior to any proposed change.

(e) If a municipality ends its review authority, the municipality shall provide written notice to the executive director at least 30 days prior to ending municipal reviews.

(f) A municipality's review and approval program must incorporate the following requirements:

(1) the municipality's review and approval process shall ensure compliance with all the applicable rules of this chapter;

(2) the municipality may only review and approve engineering reports and plans and specifications for projects that transport domestic wastewater within the jurisdictional boundaries of that municipality;

(3) the municipality shall issue a written approval document that includes the details of each project approved for construction and all variances approved; and

(4) the municipality shall maintain complete files of all review and approval activities.

(g) The executive director may perform periodic audits of a municipality's review and approval program to ensure that the review process and approved projects comply with this chapter.

(1) The executive director shall provide written notice of a pending audit to a municipality a minimum of five business days prior to beginning an audit.

(2) The municipality shall make all files relating to its review and approval activities under this chapter available to the executive director, and shall maintain files for the life of each project.

(3) The municipality shall make documentation of all agreements between private consultants and the municipality that relate to its review and approval activities under this chapter available to the executive director.

(h) If the executive director finds, through review of specific projects or through audit of a municipality's review and approval program, that a municipality's review and approval program does not provide for compliance with the minimum design and installation requirements detailed in this chapter, the municipality must achieve compliance within a time frame established by the executive director.

(i) If the municipality does not achieve the required compliance within the time frame established by the executive director, the commission may revoke the review authority of a municipality. If the commission revokes the municipality's approval authority, subsections (j), (k), (l), and (m) of this section apply.

(j) The executive director shall notify a municipality in writing of the intention to revoke the municipality's approval authority and shall include a justification for revoking the authority.

(k) If the executive director revokes the approval authority of a municipality, all new projects proposed to be constructed within that municipality's jurisdiction must be submitted to the executive director in accordance with §217.6 of this title (relating to Submittal Requirements and Review Process).

(l) If the executive director revokes the approval authority of a municipality, the municipality shall return all subsequently submitted plans and specifications in its jurisdiction and notify any applicants of the requirement to seek approval from the executive director.

(m) If the executive director revokes the approval authority of a municipality, owners of a project whose plans and specifications were already approved by the municipality are not required to seek approval from the executive director.

Adopted November 4, 2015

Effective December 4, 2015

#### **§217.9. Texas Water Development Board Reviews.**

If the Texas Water Development Board reviews plans and specifications for a collection system or wastewater treatment facility in accordance with Texas Water Code, §17.276(d), the owner shall send a copy of the approval to the executive director.

Adopted November 4, 2015

Effective December 4, 2015

#### **§217.10. Final Engineering Report.**

(a) An owner shall submit an engineering report within 30 days of the date of the executive director's written request.

(b) The engineering report must include the signed and dated seal of the engineer responsible for the engineering report.

(c) The engineering report must include all pertinent calculations, analyses, graphs, formulas, constants, tables, geologic information, hydraulic information, hydrological information, historical data, manufacturer's recommendations, technical assumptions, and any other information needed to demonstrate that the design of the project complies with this chapter.

(d) If a variance is requested, the engineering report must include a justification for the variance and all pertinent supporting calculations, analyses, graphs, formulas, constants, tables, geologic information, hydraulic information, hydrological information, historical data, manufacturer's recommendations, technical assumptions, and any other information needed to justify the variance request.

(e) If the executive director requests additional information for the engineering report, an owner shall submit the requested information prepared, signed, and sealed by an engineer, within 30 days after the date of a written request.

(f) The engineering report for a collection system project must include the following:

(1) a map showing the current service area, the proposed service area, and any area proposed for future expansion;

(2) the topographical features of the current, the proposed, and any future service areas;

(3) a description of how the design flow was determined;

(4) the minimum and maximum grades for each size and type of pipe;

(5) calculations of expected minimum and maximum velocities in the collection system for each size and type of pipe;

(6) the proposed project's effect on the existing collection system's capacity;

(7) the existing and anticipated inflow and infiltration, the hydraulic effect of the inflow and infiltration on the proposed and existing systems, inflow and infiltration flow rate monitoring, and inflow and infiltration abatement measures;

(8) a description of the ability of the existing and proposed trunk and interceptor collection systems and lift stations to handle the peak flow;

(9) the capability of the associated wastewater treatment facility to receive and treat the anticipated peak flow;

(10) an engineering analysis demonstrating compliance with structural design, minimization of odor-causing conditions, and pipe design requirements of this chapter;

(11) a description of the areas not initially served by the project, and the projected means of providing service to these areas, including special provisions incorporated into the present plans for future expansion;

(12) the calculations and pump curves showing the operating characteristics of all collection system lift stations at minimum, maximum, and design flows during both present and future conditions; and

(13) the safety considerations incorporated into a project design, including ventilation, entrances, working areas, explosion prevention, and methods for rerouting a portion of the collection system during repair work.

(g) The engineering report for a wastewater treatment facility project must include the quantity and characteristics of the influent, wastewater treatment facility siting information, a sludge management plan, methods to control bypassing, calculations and supporting information.

(1) **Influent Characteristics.** The engineering report must include quantity and characteristics of any existing wastewater influent, any proposed changes to the influent quantity and characteristics, and any anticipated changes to the influent quantity and characteristics. If adequate records are not available, analyses must be made of the existing conditions, and the results included in the engineering report.

(2) **Wastewater Treatment Facility Siting Information.** The engineering report must include:

(A) a general location map for the proposed wastewater treatment facility;

(B) a description of the area surrounding the wastewater treatment facility that includes prevailing winds, water treatment facilities, water supply wells, surface water intakes, housing developments, industrial sites, highways, streets, parks, schools, recreational areas, shopping centers, and any other information required by the executive director;

(C) a map of the wastewater treatment facility site, including the site boundary, buffer zones, and the 100-year floodplain, with supporting documentation of compliance with the buffer zone criteria and the 100-year floodplain restrictions specified in §309.13 of this title (relating to Unsuitable Site Characteristics) that is clearly legible; and

(D) a map of the discharge route or land application unit that is clearly legible.

(3) **Sludge Management Plan.** The engineering report must include a sludge management plan that provides information regarding:

(A) the estimated quantity and quality of sludge that will be generated, including future sludge loads based on flow projections;

(B) the sludge treatment requirements for final disposal, and the sludge storage requirements for each alternative;

(C) a method of sludge transport, use, storage, and disposal; and

(D) the alternatives, contingencies, and mitigation plans that ensure reliable capacity and operational flexibility.

(4) **Methods to Control Bypassing.** The engineering report must include:

(A) information and data describing features to prevent bypassing such as auxiliary power, standby and duplicate units, holding tanks, stormwater clarifiers, or flow equalization basins; and

(B) operational arrangements such as the ability of pipes and valves to control flow through the treatment units and reliability of power sources to prevent unauthorized discharges of untreated or partially treated wastewater.

(5) **Calculations and Supporting Information.** The engineering report must include:

(A) the types of units proposed and their capacities;

(B) the detention times, surface loadings, and weir loadings pertinent to each wastewater treatment unit;

(C) a plot of the hydraulic gradient at peak flow conditions for all gravity lines;

(D) the anticipated operation mode of the wastewater treatment facility;

(E) organic and volumetric loadings pertinent to each treatment unit; and

(F) aeration demands and how those demands will be supplied.

Adopted November 4, 2015

Effective December 4, 2015

**§217.11. Construction of an Approved Project.**

(a) An owner may not begin construction of a wastewater treatment facility with approved plans and specifications until the commission issues a wastewater permit for the wastewater treatment facility, unless the commission issues the owner an authorization to construct under Texas Water Code, §26.027(c).

(b) An owner must phase the construction of a wastewater treatment facility as required by the associated wastewater permit, unless a variance is granted under §217.4 of this title (relating to Variances).

(c) An owner must obtain a plans and specifications approval of a particular permitted phase before beginning to construct or operate under that permitted phase.

(d) A person is prohibited from allowing a discharge of untreated or partially treated wastewater during construction without a commission order for such discharge, such as an Emergency Order or a Temporary Order according to the requirements of Chapter 35 of this title (relating to Emergency and Temporary Orders and Permits; Temporary Suspension or Amendment of Permit Conditions).

(e) An owner that alters or constructs a treatment unit or collection system unit must comply with the requirements of this chapter that are in effect on the date the plans and specifications are submitted for approval unless granted a variance in accordance with §217.4 of this title.

(f) An owner that rehabilitates a collection system under §217.56(c) or §217.69 of this title (relating to Trenchless Pipe Installation; and Maintenance, Inspection, and Rehabilitation of the Collection System) must comply with the requirements of this chapter that are in effect on the date the plans and specifications are submitted for approval. The executive director may grant variances from specific requirements in this chapter according to §217.4 of this title for a rehabilitation project.

(g) The owner of an existing wastewater treatment facility that must apply for a new permit must comply with the requirements of this chapter that are in effect at the time the new permit application is received by the executive director.

(h) A wastewater treatment facility owner that never received a plans and specifications approval for an existing wastewater treatment facility or treatment unit must comply with the requirements of this chapter that are in effect at the time the lack of plans and specifications approval is discovered.

(i) A collection system owner that never received a plans and specifications approval for an existing collection system or collection system unit must meet the design criteria in effect at the time the lack of the plans and specifications approval is discovered.

Adopted November 4, 2015

Effective December 4, 2015

**§217.12. Substantial Design Changes.**

(a) A substantial design change is a change to the approved plans and specifications or an approved variance of a process, equipment, or design that has the potential to alter the way a wastewater treatment facility or collection system functions.

(b) A substantial design change request must include the signed and dated seal of the engineer.

(c) If the executive director determines that a substantial design change may potentially endanger public health or the environment, the executive director may deny the design change or require the owner to take compensatory measures.

(d) The executive director shall not grant or approve a substantial design change that would violate any expressed prohibition in this chapter.

(e) If the executive director does not notify an owner in writing that additional information is requested or that a substantial design change is denied within 30 business days after receiving a signed, dated, and sealed substantial design change request, the substantial design change is approved as long as it does not violate any prohibition in this chapter. However, such approval is conditional subject to an executive director determination under subsection (c) or (d) of this section. Additionally, if this provision conflicts with any other rule in this chapter that requires written approval from the executive director, then this provision does not apply.

(f) A substantial design change must be approved by the executive director before it can be constructed, installed, or put into service.

Adopted November 4, 2015

Effective December 4, 2015

**§217.13. Final Construction Drawings and Specifications.**

(a) If requested by the executive director, an owner shall submit final construction drawings and specifications for a constructed collection system or constructed wastewater treatment facility within 30 days from the date of the request.

(b) The signed and dated seal of an engineer must be on each sheet of the final construction drawings and on the title page of the bound final specifications.

(c) The final construction drawings and specifications must include each of the items in the following paragraphs that are applicable to the project.

(1) Construction drawings for a collection system.

(A) The drawings for a collection system must include plan and profile drawings for both gravity pipes and pressure pipes. The drawings must specify the size, grade, and type of pipe materials.

(B) The drawings must specify the location of any structural features of a collection system, including manholes, waterway crossings, bridge crossings, siphons, lift stations, and air release valves.

(C) The drawings must specify the location of all potable water distribution lines that are 9.0 feet or closer to any portion of a collection system and indicate the actual separation distances.

(D) The drawings must include dimensional section details of manholes, manhole covers, and any other collection pipe appurtenances.

(E) The drawings for a lift station must show the location of the following:

(i) all pumps, valves, pumping control equipment, safety equipment, and ventilation equipment;

(ii) points that may be accessed by operational staff, such as manholes and cleanout ports;

(iii) hatches and hoisting equipment for installing and removing equipment;

(iv) slope and location of any wet well, floor grouting, valve vaults, valve vault pipes, and gas migration prevention measures used between a wet well and a valve vault;

(v) pipe entrances and exits;

(vi) sump pumps;

(vii) elevations of level control switches; and

(viii) any other lift station-related appurtenances.

(2) Construction drawings for a wastewater treatment facility.

(A) The drawings for a wastewater treatment facility must show a vertical and horizontal scale and must include:

(i) plan drawings of all pipes;

(ii) plan and profile drawings of each treatment unit;

(iii) the dimensions of each treatment unit;

(iv) all mechanical, electrical, and construction details; and

(v) a hydraulic profile of a wastewater treatment facility at both design and peak flows.

(B) The construction drawings may include plans for future expansion of a wastewater treatment facility.

(C) The construction drawings may include a clarification of any complex details of pipe systems by including an isometric flow diagram.

(3) The specifications for an alteration of an existing collection system or wastewater treatment facility must include technical descriptions of all equipment including:

(A) the quantity and sizes of any equipment;

(B) any applicable materials specifications;

(C) testing requirements; and

(D) citations to national standards with which the project complies.

(4) If requested by the executive director in writing, an owner must submit additional information relating to the plans and specifications within 30 calendar days after the date the executive director sends a request.

Adopted November 4, 2015

Effective December 4, 2015

**§217.14. Completion Notice.**

(a) Upon completion of the construction of a collection system or wastewater treatment facility, an owner shall provide a completion notice to the executive director that:

(1) is signed, sealed, and dated by an engineer;

(2) certifies that the completed work complies with this chapter, the approved plans and specifications, any approved variances, any approved substantial design changes, and the associated wastewater permit; and

(3) states that an operation and maintenance manual, as required in §217.16 of this title (relating to Wastewater Treatment Facility Operation and Maintenance Manual), has been prepared and a copy is located at the wastewater treatment facility.

(b) An owner shall disclose in a completion notice any deviation from the approved plans and specifications that is incorporated into a project after construction began or from an approved substantial design change. An owner shall retain an engineer to review design changes and to certify, based on best professional judgment, all substantial design changes were submitted for approval, as substantial design change is defined in §217.12(a) of this title (relating to Substantial Design Changes).

Adopted November 4, 2015

Effective December 4, 2015

**§217.15. Inspection.**

(a) The executive director may inspect a project at any time during any phase of the project to determine compliance with the project plans and specifications, the engineering report, any variance approval, any substantial change approval, an associated permit, or the requirements of this chapter.

(b) All documents required by this chapter must be available for review by the executive director upon request, according to the requirements in §217.18 of this title (relating to Provisions that Apply to All Sections in this Chapter).

Adopted November 4, 2015

Effective December 4, 2015

**§217.16. Wastewater Treatment Facility Operation and Maintenance Manual.**

(a) An owner of a wastewater treatment facility is responsible for developing an operation and maintenance manual with the assistance of an engineer and certified wastewater operations staff. The manual must be updated when there are personnel changes, construction of treatment units, alteration of treatment units, re-rating of treatment units, or changes in the influent quality or quantity that require permanent changes in the operation of the wastewater treatment facility.

(b) An owner must ensure that the operation and maintenance manual includes all information specific to the wastewater treatment facility that is necessary to ensure efficient and safe operation, maintenance, monitoring, and reporting. The operation and maintenance manual must include administrative and recordkeeping items, operation and maintenance information, and safety information.

(1) Administrative and recordkeeping items must include:

(A) a table of contents;

(B) a copy of the current wastewater permit;

(C) names and telephone numbers for contacts with the appropriate state and federal regulatory agencies;

(D) names or job titles and current telephone numbers of staff contacts;

(E) a copy of the final engineering report, construction drawings, and specifications for each project, as required by §217.10 and §217.13 of this title (relating to Final Engineering Report; and Final Construction Drawings and Specifications);

(F) a copy of all documents required by this chapter, including correspondence with the executive director regarding approval of plans and specifications for each project;

(G) a copy of all manufacturer's recommendations relied on in the design of each project;

(H) a sample of each type of Discharge Monitoring Report or Monthly Effluent Report an owner is required to submit for the wastewater treatment facility;

(I) a sample daily activity report for documenting internal monitoring done in association with internal process control, including flow rates from treatment units, dissolved oxygen levels, pH, solids concentrations, sludge settling, clarifier sludge blanket depths, sludge age or retention time, and disinfection residuals; and

(J) a description of the quality assurance and quality control recordkeeping requirements for all laboratory analyses performed.

(2) Operation and maintenance information must include:

(A) expected flow patterns, size, and capacity of all treatment units and processing units within the wastewater treatment facility;

(B) start-up procedures, routine operational procedures, emergency operations procedures, and shut down procedures for all treatment units and processing units;

(C) the manner and expected volumes in which solids return to aeration or waste;

(D) expected solids concentrations in each treatment unit and processing unit;

(E) expected clarifier weir overflow rates;

(F) expected disinfectant and dechlorination usage and dosage amounts during normal and emergency operating conditions;

(G) descriptions and frequencies of all routine in-situ and laboratory analyses to be performed and a list of references to standard analytical procedures;

(H) description and schedule of routine maintenance activities to be performed, including lubrication and inspection of all pumps, motors, and other equipment;

(I) the design life of each treatment unit; and

(J) a recommended spare parts inventory with source information.

(3) Safety requirements information must include:

(A) all known potential or actual safety hazards within a wastewater treatment facility;

(B) the location and method of use for all personal protective equipment in accordance with §217.324(a) of this title (relating to Chemical Handling);

(C) a schedule for servicing all personal protective equipment, respiratory equipment, and protective equipment;

(D) evacuation, shelter, and shelter-in-place plans;

(E) the names and phone numbers of entities and individuals to be contacted during emergencies;

(F) emergency operation plans for power outages, flooding, and other site specific emergency situations that may develop;

(G) annual safety training curriculum and schedule for all wastewater treatment facility staff;

(H) first aid precautions, location of first aid supplies and description of appropriate emergency medical treatment;

(I) chemical disposal methods that comply with §217.247(q) of this title (relating to Chemical Pretreatment of Sludge), if applicable;

(J) ultraviolet light precautions in accordance with §217.299 of this title (relating to Ultraviolet Light Disinfection System Safety), if applicable; and

(K) hazardous task precautions in accordance with §217.323(b) of this title (relating to Hazardous Operation and Maintenance), if applicable.

(c) An owner shall keep a copy of a current operation and maintenance manual at the wastewater treatment facility site. The operation and maintenance manual shall be immediately available for inspection by the executive director upon request.

(d) An owner shall submit a copy of the operation and maintenance manual to the executive director within 30 days of a written request from the executive director.

**§217.17. Collection System Records.**

An owner of a collection system shall maintain collection system records for the life of the project. An owner shall make the following records available to the executive director in accordance with §217.18(d) of this title (relating to Provisions that Apply to All Sections in this Chapter):

(1) a copy of the final engineering report, construction drawings, and specifications for each project, as required by §217.10 and §217.13 of this title (relating to Final Engineering Report; and Final Construction Drawings and Specifications);

(2) a copy of all documents required by this chapter, including correspondence with the executive director regarding approval of plans and specifications for each project; and

(3) a copy of all manufacturer's recommendations relied on in the design of each project.

Adopted November 4, 2015

Effective December 4, 2015

**§217.18. Provisions that Apply to All Sections in this Chapter.**

(a) Whenever this chapter requires a "design," such designed component of the wastewater treatment facility or collection system must also be installed, operated, and maintained to meet the design requirement.

(b) All safety and emergency equipment required in this chapter must be operational for its intended use and maintained in a readily accessible location.

(c) Copies of all written executive director approvals must be kept with all other records required to be maintained by the wastewater treatment facility.

(d) Copies of all records required to be maintained by the wastewater treatment facility:

(1) must be readily available for inspection by the executive director within 24 hours after either a written or verbal request; and

(2) must be submitted to the executive director within 15 days of a written request.

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