The Texas Commission on Environmental Quality (commission) proposes amendments to §§285.2 - 285.6, 285.8, 285.13, 285.21, 285.30, 285.32 - 285.34, 285.50, 285.60 - 285.65, 285.70, 285.71, 280.90, and 285.91. The commission also proposes the repeal of §285.7 and new §285.7.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

The proposed rules implement requirements in House Bill (HB) 2482, 80th Legislature, 2007, persons who service or maintain on-site sewage disposal systems using aerobic treatment. HB 2482 impacts two chapters within 30 TAC: Chapter 30, Occupational Licenses and Registrations, and Chapter 285, On-Site Sewage Facilities (OSSFs). This proposal addresses the revisions to Chapter 285.

This proposal also addresses a petition filed with the commission by the Texas Environmental Health Association (TEHA) asking that designated representatives be prohibited from participating in on-site related work for compensation in areas beyond their jurisdiction.

Finally, this proposed rulemaking addresses a general revision to a number of different elements within Chapter 285. The elements affected by this proposed rulemaking include: OSSF site requirements for small lots; conditioning proposed permits; retesting protocol of proprietary disposal systems; specification for sewer pipe located between treatment and disposal units; flow equalization; utility regulations for cluster systems; Authorized Agent (AA) review of the executive director's findings; soil bore pit location reference in soil evaluation reports; structural requirements for septic tanks; minimum treatment effluent quality prior to entering any disposal system; define high strength wastewater; foundation sizing requirements; leak testing and water tightness requirements for OSSF tanks; definitions for cluster systems, testing and reporting; OSSF

setback requirements; site evaluator requirements; Model Deed requirements; and non-substantive cleanup of errata and inconsistencies in the rules.

The commission administers the OSSF Program that currently includes executive director delegation of OSSF authority to counties, municipalities, special districts, and river authorities.

The proposed rules revise existing requirements for the general public, installers, all aerobic system maintenance providers, engineers, sanitarians, site evaluators, authorized agents, and designated representatives.

The proposed rules further define the commission's regulations regarding servicing or maintenance of OSSFs using aerobic treatment under Texas Health and Safety Code (THSC), Chapter 366. One purpose in the statute is to allow homeowners to maintain their own aerobic systems without the need for training and reporting and to remove existing requirements for registering maintenance providers. It also allows the commission to develop and implement a new program to register maintenance providers. In Fiscal Year 2006 alone, there were more than 37,000 newly permitted OSSFs in Texas.

The proposed rules specify requirements for maintenance providers to obtain an occupational license to perform service and maintenance of on-site sewage disposal systems using aerobic treatment. Additionally, the rules create a new registration category for maintenance technicians.

SECTION BY SECTION DISCUSSION

Subchapter A - General Provisions

The proposed amendment to §285.2(10), Definitions, would revise the current definition for cluster systems to include units which contribute sewage to a central collection, treatment or disposal system, such as condominiums.

The proposed amendment to §285.2(19), would expand the definition of direct supervision to include the working relationship between maintenance providers and maintenance technicians.

The proposed amendment to §285.2(36), would eliminate the definition of a maintenance company, effective September 1, 2009, and creates a new definition for a maintenance provider and renumbers the definition of a maintenance provider to §285.2(37).

The proposed amendment to §285.2(37), would renumber the definition for maintenance findings to §285.2(36).

The proposed amendment to §285.2(38), would create a new definition for maintenance technician which would facilitate the provisions within Chapter 30 for registering individuals who maintain aerobic systems under the supervision of a maintenance provider.

The proposed amendments to §285.2, would provide for the renumbering of paragraphs (39) - (72) to incorporate the new definition for maintenance technician.

The proposed amendment to §285.2(73), would create a new definition for testing and reporting which would describe the minimum scope for inspection systems requiring testing and reporting and would renumber the definition for a well from paragraph (72) to (74).

The proposed amendment to §285.3(a)(4), General Requirements, would provide for requirements under which a permitting authority may require conditions for a permit in order to ensure that the permitted OSSF system will operate in accordance with the planning materials and the final approval of a proposed OSSF.

The proposed amendment to §285.3(b)(3), would change the terminology from a "deed" to an "affidavit" for OSSFs which require maintenance, including the requirements contained within the recorded affidavit. The proposed amendment would remove the necessity of a maintenance contract and would allow the homeowner to either self-maintain the system or enter into a contract with a maintenance provider.

The proposed amendment to §285.3(g), would eliminate the outdated reference to 30 TAC Chapter 331.

The proposed amendment to §285.4(b)(1), Facility Planning, would eliminate the redundancy in requirements for small lots or tracts created before January 1, 1988, by striking requirements and adding a general statement that OSSFs on small lots or tracts of land must comply with the requirements of Chapter 285.

The proposed amendment to §285.4(c), would clarify the current language for subdivision or development plans and require buildings with food service establishments and restaurants to have twice

the initial required disposal area available for disposing wastewater in order to allow for growth and expansion.

The proposed amendment to §285.5(a)(3)(A), Submittal Requirements for Planning Materials, would eliminate the outdated reference to the Civil Statutes requiring a permit applicant to have a professional engineer design the OSSF when the foundation size exceeds 5,000 square feet. This portion of the Civil Statute has been recodified within the Texas Occupations Code (§1001.56(f)) and is not a requirement related to OSSF siting, design, permitting, construction, operation, or inspection.

The proposed amendment to §285.5(a)(3)(B) and (C), would provide for verifications required from a professional engineer. Specifically, these are to verify the structural requirements for septic tanks and to provide verification of OSSF designs when OSSFs are proposed in floodways.

The proposed amendment to §285.6, Cluster Systems, would: prohibit condominiums with cluster systems; prohibit permitting authorities from granting a permit for condominiums with cluster systems; provide clarification that a cluster-type system can be permitted for rental or lease-related properties; and would provide notice that a Certificate of Convenience and Necessity is required when compensation is collected for repair, maintenance and operation of a cluster system, as defined in 30 TAC Chapter 291, Utility Regulations.

The proposed repeal to §285.7, Maintenance Requirements, would eliminate the current requirements for OSSF maintenance and be replaced with the new §285.7, Maintenance Requirements. This new section would provide requirements for maintenance providers and maintenance technicians, clarify the

difference between the initial two-year service policy and maintenance contracts after the initial two-year service policy, clarify the initial two-year policy with respect to the sale of the residence and would require manufacturers to make replacement parts available to homeowners, installers, and maintenance providers. This new section would provide for a one-year transition period for maintenance companies and maintenance providers to comply with new licensing and registration requirements. This new section would differentiate between the current citing for the sample testing and reporting record in Figure: 30 TAC §285.90(3) and the required testing and reporting in the table in Figure: 30 TAC §285.91(4) and would include maintenance procedures approved by the executive director. Finally, this new section would allow a permitting authority to inspect an aerobic treatment system at any time.

The proposed amendment to §285.8, Multiple On-Site Sewage Facility (OSSF) Systems on One Large Tract of Land, would eliminate the outdated reference to 30 TAC Chapter 331.

Subchapter B - Local Administration of the OSSF Program

The proposed amendment to §285.13(b)(3), Revocation of Authorized Agent Delegation, would remove the allowance for other authorized agents to review the commission's investigation findings of another authorized agent.

Subchapter C - Commission Administration of the OSSF Program in Areas Where No Authorized Agent Exists

The proposed amendment to §285.21(c), Fees, would replace "Texas Natural Resource Conservation Commission" with "Texas Commission on Environmental Quality."

Subchapter D: Planning, Construction, and Installation Standards for OSSFs

The proposed amendment to §285.30, Site Evaluation, would require all design planning materials to include soil borings or backhoe pits, slope patterns, 100-year flood boundaries, and separation distances.

The proposed amendment to §285.32, Criteria for Sewage Treatment Systems, would provide for specific site and related OSSF design details such as: preventing tank infiltration by requiring sealed risers, watertight caps, and prevention of unauthorized access; structural verification by a professional engineer for the manufacture of pre-cast tanks with a 30-day notification time limit to the permitting authority; leak testing for tanks; proprietary tank size conformance with revised §285.91(2); and provides for influent limits and use of proprietary systems for pre-treatment. The proposed amendment would remove the mandatory seven-year proprietary disposal system testing protocol. Finally, the proposed amendment to §285.32(f), Other Design Considerations, would provide for listing limits for high strength sewage, OSSF biochemical oxygen demand (BOD) design justification and adding design consideration for flow equalization.

The proposed amendment to §285.33, Criteria for Effluent Disposal Systems, would provide for pressure-rated pipe within disposal areas with the exception of drip disposal tubing. This proposed amendment would also: add the minimum disinfection requirement for effluent in the pump tank to meet the requirements in the table in Figure: 30 TAC §285.91(4), and revise the effective date for color-coding pipe.

The proposed amendment to §285.34(d), Grease Interceptors, would remove the statement "or under any other standards approved by the executive director" and replace it with the reference to the 1980 EPA Design Manual: Onsite Wastewater Treatment and Disposal Systems.

Subchapter F: Licensing and Registration Requirements for Installers, Apprentices, Designated Representatives, Site Evaluators, and Maintenance Providers and Maintenance Companies

The proposed amendment to Subchapter F, §285.50 would eliminate the word "companies" and add "providers and maintenance technicians" to the title and throughout the proposed rules. The proposed amendment would also remove the effective date of September 1, 2002, to obtain a site evaluator's license.

The proposed amendment to §285.60, Duties and Responsibilities of Site Evaluators, would eliminate the necessity to maintain an installer or designated representative's license after being granted a site evaluator's license and would update the reference to include professional geoscientist which is a license that became effective after this section was last amended.

The proposed amendment to §285.61, Duties and Responsibilities of Installers, would eliminate the requirements for installers to: maintain aerobic treatment systems, train a homeowner in aerobic system maintenance, or make replacement parts available to the homeowner for aerobic systems; and require installers to make all aerobic system repairs in accordance with the approved planning materials.

The proposed amendment to §285.62, Duties and Responsibilities of Designated Representatives, would require designated representatives to verify the existence of a maintenance contract between the homeowner and the maintenance provider or, until September 1, 2009, a maintenance company. This proposed amendment would require written permission from the designated representative's employer if the designated representative desires to perform OSSF-related activities for compensation outside of the authorized agent's regulatory jurisdiction.

The proposed amendment to §285.63, Duties and Responsibilities of Apprentices, would add the requirement that apprentices maintain a registration with the commission and renumber the remainder of that section.

The proposed amendment to §285.64, Duties and Responsibilities of Maintenance Companies, would eliminate the word "companies" from the heading and add "providers and maintenance technicians." The proposed amendment would create two sections within these requirements – one for maintenance providers and the other for maintenance technicians. The proposed amendment would add the requirement for licensure of maintenance providers and registration for maintenance technicians. The amendment would eliminate the need for: a maintenance provider to work in a company under an Installer II and eliminate the need for maintenance providers or maintenance technicians to obtain manufacturer's certification. The proposed amendment would eliminate the requirement to train a homeowner in aerobic system maintenance when requested by the homeowner. The proposed amendment would require maintenance technicians to: be registered with the commission; represent the maintenance provider while performing maintenance on an OSSF; perform services associated with OSSF maintenance under the direct supervision and direction of the maintenance provider on-site or be in direct communication with

the maintenance provider; refrain from receiving compensation for OSSF maintenance from anyone except the supervising maintenance provider; maintain a current address and phone number with the executive director and submit any change in address or phone number to the executive director in writing within 30 days after the date of the change; and not advertise or otherwise portray themselves as a maintenance provider.

The proposed amendment to §285.65, Suspension or Revocation of License or Registration, would amend the current list of causes for suspension or revocation to include provisions for maintenance providers, maintenance technicians and would amend the statutory authority under which the commission may suspend or revoke a license or registration by adding reference to Texas Water Code (TWC), §7.303 and eliminate the reference to 30 TAC §30.33.

Subchapter - OSSF Enforcement

The proposed amendment to §285.70, Duties of Owners With Malfunctioning OSSFs, would add provisions from HB 2482 under which a designated representative could fine a homeowner who maintains their own aerobic system and violates the Chapter 285 rules, and in the case of repeat non-compliance, the proposed amendment would require the homeowner to enter into a maintenance contract with a maintenance provider.

The proposed amendment to §285.71, Authorized Agent Enforcement of OSSFs, would expand the pool of individuals whom a DR could receive complaints against to include professional engineers performing site evaluations, maintenance providers, and maintenance technicians.

Subchapter I - Appendices

The proposed amendment to §285.90, Figures, would revise the title of Figure 2, "Model Deed and Affidavit Language" to "Model Affidavit to the Public" and would incorporate changes in the rules for homeowners with OSSFs that require maintenance. The proposed amendment to Figure 3, Sample Testing and Reporting Record, would eliminate the need for homeowners to record or send testing and reporting results to permitting authorities. The proposed amendment would also require that the maintenance provider check the sludge condition and to send the owner a copy of the testing and reporting results.

The proposed amendment to §285.91, Tables, would revise the title of Table II, "Septic Tank Minimum Liquid Capacity" to "Septic Tank and Aerobic Treatment Unit Sizing." The proposed amendment would add a section to this table entitled "Aerobic Treatment Unit Sizing For Residences", which require slightly larger treatment tanks for proposed aerobic systems. This change is being proposed based on input from the OSSF work group. The proposed amendment to Table III, Wastewater Usage Rate, would add a provision for restaurant influent wastewater quality, revise the commission's name, and correct a spelling error. The proposed amendment to Table X, Minimum Required Separation Distances for On-Site Sewage Facilities, would add categories for setbacks to underground and overhead easements, include retention ponds and basins, allow solid pipe in sleeved lines under driveways and sidewalks, remove setback requirements for secondary effluent and building foundations, and add requirements for drainage easements and detention ponds. The proposed amendment to Table XI, Intermittent Sand Filter Media Specifications (ASTM C-33), would correct the current spelling and terminology of "finess modulus" to "fineness modulus". Finally, the proposed amendment to Table XII, OSSF Maintenance Contracts, Affidavit, and Testing/Reporting Requirements, would eliminate the requirement for a maintenance

contract as well as eliminate testing and reporting requirements for homeowners who maintain their own aerobic system.

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

Jeff Horvath, Strategic Planning and Assessment Section Analyst, has determined that for the first five-year period the proposed rules are in effect, no fiscal implications are anticipated for the agency or other units of state government as a result of administration or enforcement of the proposed rules. Units of local government such as counties, municipalities, or river authorities who have been delegated regulatory authority for OSSFs may experience fiscal implications as a result of the administration or enforcement of the proposed rules, but these fiscal implications are not anticipated to be significant.

The proposed rules implement HB 2482, 80th Legislature, 2007, and affect persons who service or maintain on-site sewage disposal systems using aerobic treatment. The implementation of HB 2482 impacts two chapters within 30 TAC Chapter 30, Occupational Licenses and Registrations, and Chapter 285, On-Site Sewage Facilities. This fiscal note addresses the revisions to Chapter 285.

The proposed rules allow homeowners to maintain their aerobic septic systems, but they also include an administrative penalty for homeowners who fail to maintain their systems under the proposed rules. In addition, the proposed rulemaking addresses a number of different elements within Chapter 285, including issues concerning designing, permitting, and operating on-site sewage facilities. In general, these revisions are not expected to result in significant fiscal implications for the general public, installers, aerobic system maintenance providers, engineers, sanitarians, site evaluators, authorized agents, or designated representatives. The proposed rules also address a petition by the TEHA who requested a

prohibition of designated representatives performing on-site related work in areas beyond their regulatory jurisdiction. The proposed changes in response to this request are not expected to result in fiscal implications, though there may be a decrease in the number of experienced personnel in certain rural areas of the state who perform on-site related work.

The proposed rules allow the commission to develop and implement a new program requiring maintenance providers to obtain an occupational license to perform service and maintenance of on-site sewage disposal systems using aerobic treatment. In addition, the proposed rules create a new occupational license category for maintenance technicians who would have to register with the commission. The proposed licensing and registration requirements are discussed in the fiscal note for the Chapter 30 proposal.

The proposed rules are anticipated to affect approximately 335 counties, cities, districts, and river authorities who have been delegated OSSF regulatory authority by the commission. In general, no significant fiscal implications are anticipated for these local governments as a result of the proposed rules. The proposed rules allow homeowners to maintain their own aerobic systems without the need for training and reporting to local authorities. Local governments, therefore, will not be receiving as many maintenance reports, resulting in a possible reduction in administrative costs. Because homeowners are no longer required to be trained in system maintenance, there may be an increased responsibility on local governments to respond to complaints, conduct inspections, or initiate enforcement activities.

PUBLIC BENEFITS AND COSTS

Mr. Horvath determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rules will be compliance with state law and additional flexibility for OSSF owners in maintaining their aerobic systems.

In general, the proposed rules are not expected to result in significant fiscal implications for OSSF aerobic system owners, installers, aerobic system maintenance providers, engineers, sanitarians, site evaluators, authorized agents, or designated representatives.

Since homeowners are no longer required to be trained in system maintenance and there is no longer the necessity for maintenance contracts between maintenance providers and homeowners, homeowners may realize lower costs to annually maintain their aerobic systems. However, those who do choose to have maintenance contracts may realize slightly higher costs as the costs for the new licensing requirements are expected to be passed on to consumers. These costs are not expected to be significant.

The proposed rulemaking addresses a general revision to a number of different elements within Chapter 285 including the following: OSSF site requirements for small lots; conditioning proposed permits; retesting protocol of proprietary disposal systems; specification for sewer pipe located between treatment and disposal units; flow equalization; utility regulations for cluster systems; AA review of the executive director's findings; soil bore pit location reference in soil evaluation reports; structural requirements for septic tanks; minimum treatment effluent quality prior to entering any disposal system; definition of high strength wastewater; foundation sizing requirements; leak testing and water tightness requirements for OSSF tanks; definitions for cluster systems, testing and reporting; OSSF setback requirements; site evaluator requirements; Model Deed requirements; and non-substantive cleanup of errata. These

proposed changes are not expected to result in significant fiscal implications for the general public, installers, aerobic system maintenance providers, engineers, sanitarians, site evaluators, authorized agents, or designated representatives.

SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

No adverse fiscal implications are anticipated for small or micro-businesses as a result of the proposed rules. It is estimated that there may be as many as 425 small or micro-businesses affected by the proposed rules. None of the proposed changes for Chapter 285 are expected to result in fiscal implications for small or micro-businesses.

SMALL BUSINESS REGULATORY FLEXIBILITY ANALYSIS

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules do not adversely affect a small or micro-business in a material way for the first five years that the proposed rules are in effect.

LOCAL EMPLOYMENT IMPACT STATEMENT

The commission has reviewed this proposed rulemaking and determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed this proposed rulemaking action in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking does not meet

the definition of a major environmental rule as defined in that statute. A "major environmental rule" is a rule that is specifically intended to protect the environment or to reduce risks to human health from environmental exposure, and that may also have a material, adverse affect on the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. Although the intent of these proposed rules is to protect the environment or reduce risks to human health from environmental exposure, these rules are not expected to cause any adverse material effects, and. therefore do not meet the definition of a "major environmental rule." The intent of these proposed rules is to implement the provisions of HB 2482 (80th Legislature, 2007) regarding homeowner maintenance of aerobic treatment systems (ATUs) and develop a new program for licensing maintenance providers and registering maintenance technicians; to address a petition by TEHA requesting that designated representatives be prohibited from performing on-site related work in areas beyond their regulatory jurisdiction; and to address a number of other issues concerning the design, permitting, and operation of on-site sewage facilities. In general, these revisions are not expected to result in significant fiscal implications for the general public, installers, aerobic system maintenance providers, engineers, sanitarians, site evaluators, authorized agents or designated representatives. Similarly, these proposed rules are intended to be protective of the environment and public health and safety and are not expected to affect the environment and public health and safety in any material, adverse way. Thus, these proposed rules do not meet the definition of "a major environmental rule" as defined in Texas Government Code, §2001.0225(g)(3), and do not require a full regulatory impact analysis.

Furthermore, these proposed rules do not meet any of the four applicability requirements listed in Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225 applies only to a major environmental rule which 1) exceeds a standard set by federal law, unless the rule is specifically required

by state law; 2) exceeds an express requirement of state law, unless the rule is specifically required by federal law; 3) exceeds a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopts a rule solely under the general powers of the agency instead of under a specific state law. The proposed rules do not exceed a federal standard because there are no federal standards regulating on-site sewage facilities. The proposed rules do not exceed state law requirements because many changes to these rules are required by HB 2482. Also, the proposed rules do not exceed a requirement of an agreement because there are no delegation agreements or contracts between the State of Texas and an agency or representative of the federal government to implement a state and federal program regarding on-site sewage facilities. Finally, these rules are being proposed under specific state laws, in addition to the general powers of the agency. Therefore, Texas Government Code, §2001.0225 is not applicable to these proposed rules. The commission invites public comment regarding this draft regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission evaluated these proposed rules and performed an assessment of whether these proposed rules constitute a taking under Texas Government Code, Chapter 2007. The intent of these proposed rules is to implement the provisions of HB 2482 (80th Regular Legislature, 2007) regarding homeowner maintenance of ATUs and develop a new program for licensing maintenance providers and registering maintenance technicians; to address a petition by the TEHA requesting that designated representatives be prohibited from performing on-site related work in areas beyond their regulatory jurisdiction; and to address a number of other issues concerning the design, permitting, and operation of on-site sewage facilities. Promulgation and enforcement of these adopted rules would be neither a statutory nor a

constitutional taking of private real property. Specifically, the subject adopted regulations would not affect a landowner's rights in private real property because this rulemaking does not burden or restrict or limit the owner's right to property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulations. These proposed rules do not affect private real property.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the proposed rulemaking and found that the proposal is subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act, Texas Natural Resources Code, §§33.201 *et seq*., and therefore must be consistent with all applicable CMP goals and policies. The commission conducted a consistency determination for the proposed rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22 and found the proposed rulemaking is consistent with the applicable CMP goals and policies.

The applicable goals of the CMP are: to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas; to ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone; to ensure and enhance planned public access to and enjoyment of the coastal zone in a manner that is compatible with private property rights and other uses of the coastal zone; and to balance these competing interests.

The specific CMP policies applicable to these proposed amendments include Nonpoint Source (NPS) Water Pollution and require, under the THSC, Chapter 366, governing on-site sewage disposal systems, that on-site disposal systems be located, designed, operated, inspected, and maintained so as to prevent

releases of pollutants that may adversely affect coastal waters. The proposed amendments require that applicants, maintenance providers and maintenance technicians show protectiveness through proper maintenance of aerobic systems and the amendments are therefore, consistent with the CMP policies.

Promulgation and enforcement of these rules will not violate or exceed any standards identified in the applicable CMP goals and policies because the proposed rules are consistent with these CMP goals and policies, because these rules do not create or have a direct or significant adverse effect on any coastal natural resource areas, and because the proposed rules do not relax current treatment or disposal standards.

Written comments on the consistency of this rulemaking may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

ANNOUNCEMENT OF HEARING

The commission will hold a public hearing on this proposal in Austin on April 29, 2008 at 10:00 am in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Kristin Smith, Office of Legal Services at (512) 239-0177. Requests should be made as far in advance as possible.

SUBMITTAL OF COMMENTS

Written comments may be submitted to Kristin Smith, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: *http://www5.tceq.state.tx.us/rules/ecomments/*. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2007-033-285-CE. The comment period closes May 5, 2008. Copies of the proposed rulemaking can be obtained from the commission's Web site at *http://www.tceq.state.tx.us/nav/rules/propose_adopt.html*. For further information, please contact Joseph L. Strouse, P.E., Compliance Support Division, at (512) 239-6003.

SUBCHAPTER A: GENERAL PROVISIONS

§§285.2 - 285.6, 285.7, 285.8

STATUTORY AUTHORITY

These amendments and new section are proposed under THSC, §§366.001-366.078, concerning On-Site Sewage Disposal Systems. These amendments and new section are also proposed under the general authority granted in TWC, §5.013, concerning the General Jurisdiction of the Commission; TWC, §5.102, concerning General Powers; TWC, §5.103, concerning Rules; TWC, §5.105, concerning General Policy; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC. The amendments and new section are further proposed under the authority granted to the commission by the Texas Legislature in TWC, §§37.001-37.015, concerning Occupational Licenses and Registrations.

These proposed amendments and new section implement THSC, §§366.001-366.078; TWC, §§5.013, 5.102, 5.103, 5.105, 7.002, and 37.001-37.015.

§285.2. Definitions.

The following words and terms in this section are in addition to the definitions in Chapter 3 and Chapter 30 of this title (relating to Definitions and Occupational Licenses and Registrations). The words and terms in this section, when used in this chapter, have the following meanings.

(1) Aerobic digestion--The bacterial decomposition and stabilization of sewage in the presence of free oxygen.

(2) Alter--To change an on-site sewage facility resulting in:

(A) an increase in the volume of permitted flow;

(B) a change in the nature of permitted influent;

(C) a change from the planning materials approved by the permitting authority;

(D) a change in construction; or

(E) an increase, lengthening, or expansion of the treatment or disposal system.

(3) Anaerobic digestion--The bacterial decomposition and stabilization of sewage in the absence of free oxygen.

(4) Apprentice--An individual who has been properly registered with the executive director according to Chapter 30 of this title (relating to Occupational Licenses and Registrations), and is undertaking a training program under the direct supervision of a licensed installer.

(5) Authorization to construct--Written permission from the permitting authority to construct an on-site sewage facility showing the date the permission was granted. The authorization to construct is the first part of the permit.

(6) Authorized agent--A local governmental entity that has been delegated the authority by the executive director to implement and enforce the rules adopted under Texas Health and Safety Code, Chapter 366.

(7) Borehole--A drilled hole four feet or greater in depth and one to three feet in diameter.

(8) Certified professional soil scientist--An individual who has met the certification requirements of the American Society of Agronomy to engage in the practice of soil science.

(9) Cesspool--A non-watertight, covered receptacle intended for the receipt and partial treatment of sewage. This device is constructed such that its sidewalls and bottom are open-jointed to allow the gradual discharge of liquids while retaining the solids for anaerobic decomposition.

(10) Cluster system--A system that collects, treats or disposes of no more than 5,000 gallons of sewage per day from more than one sewage generating structure. A sewage generating structure includes a residence, condominium, business, or any structure that contains commodes, sinks, showers, baths or laundry facilities. [A sewage collection, treatment, and disposal system designed to serve two or more sewage-generating units on separate legal tracts where the total combined flow from all units does not exceed 5,000 gallons per day.]

(11) Commercial or institutional facility--Any building that is not used as a single-family dwelling or duplex.

(12) Compensation--A payment to construct, alter, repair, extend, maintain, or install an on-site sewage facility. Payment may be in the form of cash, check, charge, or other form of monetary exchange or exchange of property or services for service rendered.

(13) Composting toilet--A self-contained treatment and disposal facility constructed to decompose non-waterborne human wastes through bacterial action.

(14) Condensate drain--A pipe that is used for the disposal of water generated by air conditioners, refrigeration equipment, or other equipment.

(15) Construct--To engage in any activity related to the installation, alteration, extension, or repair of an on-site sewage facility (OSSF), including all activities from disturbing the soils through connecting the system to the building or property served by the OSSF. Activities relating to a site evaluation are not considered construction.

(16) Delegate--The executive director's act of assigning authority to implement the on-site sewage facility program under this chapter.

(17) Designated representative--An individual who holds a valid license issued by the executive director according to Chapter 30 of this title (relating to Occupational Licenses and

Registrations), and who is designated by the authorized agent to review permit applications, site evaluations, or planning materials, or conduct inspections on on-site sewage facilities.

(18) Direct communication--The demonstrated ability of an installer and the apprentice to communicate immediately with each other in person, by telephone, or by radio.

(19) Direct supervision--The responsibility of an installer to oversee, direct, and approve all actions of an apprentice relating to the construction of an on-site sewage facility, or the responsibility of a maintenance provider to oversee, direct, and approve all actions of a maintenance technician relating to the maintenance of an on-site sewage facility.

(20) Discharge--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) Edwards Aquifer--That portion of an arcuate belt of porous, waterbearing predominantly carbonate rocks (limestones) known as the Edwards (Balcones Fault Zone) Aquifer trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Group, and Georgetown Formation, or as amended under Chapter 213 of this title (relating to Edwards Aquifer). The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

(22) Edwards Aquifer Recharge Zone--That area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as a geographic area delineated on official maps located in the agency's central office and in the appropriate regional office, or as amended by Chapter 213 of this title (relating to Edwards Aquifer).

(23) Extend--To alter an on-site sewage facility resulting in an increase in capacity, lengthening, or expansion of the existing treatment or disposal system.

(24) Floodplain (100-year)--Any area susceptible to inundation by flood waters from any source and subject to the statistical 100-year flood (has a 1% chance of flooding each year).

(25) Floodway--The channel of a watercourse and the adjacent land areas (within a portion of the 100-year floodplain) that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface elevation more than one foot above the 100-year flood elevation before encroachment into the 100-year floodplain.

(26) Geotextile filter fabric--A non-woven fabric suitable for wastewater applications.

(27) Gravel-less drainfield pipe--An eight-inch or ten-inch diameter geotextile fabric-wrapped piping product without gravel or media.

(28) Grease interceptor--Floatation chambers where grease floats to the water surface and is retained while the clearer water underneath is discharged.

(29) Groundwater--Subsurface water occurring in soils and geologic formations that are fully saturated either year-round or on a seasonal or intermittent basis.

(30) Holding tank--A watertight container equipped with a high-level alarm used to receive and store sewage pending its delivery to an approved treatment process.

(31) Individual--A single living human being.

(32) Install--To put in place or construct any portion of an on-site sewage facility.

(33) Installer--An individual who is compensated by another to construct an on-site sewage facility.

(34) Local governmental entity--A municipality, county, river authority, or special district, including groundwater conservation districts, soil and water conservation districts, and public health districts.

(35) Maintenance--Required or routine performance checks, examinations, upkeep, cleaning, or mechanical adjustments to an on-site sewage facility, including replacement of pumps, filters, aerator lines, valves, or electrical components. Maintenance does not include alterations.

(36) Maintenance findings--The results of a required performance check or component examination on a specific on-site sewage facility. [Maintenance company--A person or business that maintains on-site sewage facilities. For the purposes of this chapter, the definition of a maintenance company includes all maintenance providers, as defined in §30.7 of this title (relating to Definitions).]

(37) Maintenance provider--an individual who maintains on-site sewage facilities for compensation. Through August 31, 2009, a maintenance company is a person or business that maintains on-site sewage facilities for compensation. [Maintenance findings--The results of a required performance check or component examination on a specific on-site sewage facility.]

(38) Maintenance technician--An individual who holds a valid registration issued by the executive director to maintain on-site sewage facilities and works under a maintenance provider.

(39)[(38)]) Malfunctioning OSSF--An on-site sewage facility that is causing a nuisance or is not operating in compliance with this chapter.

(40)[(39)] Manufactured housing community--Any area developed or used for lease or rental of space for two or more manufactured homes.

(41)[(40)] Multi-unit residential development--Any area developed or used for a structure or combination of structures designed to lease or rent space to house two or more families.

(42)[(41)] Notice of approval--Written permission from the permitting authority to operate an on-site sewage facility. The notice of approval is the final part of the permit.

(43)[(42)] Nuisance--

(A) sewage, human excreta, or other organic waste discharged or exposed in a manner that makes it a potential instrument or medium in the transmission of disease to or between persons;

(B) an overflow from a septic tank or similar device, including surface discharge from or groundwater contamination by a component of an on-site sewage facility; or

(C) a blatant discharge from an OSSF.

(44)[(43)] On-site sewage disposal system--One or more systems that:

(A) do not treat or dispose of more than 5,000 gallons of sewage each day; and

(B) are used only for disposal of sewage produced on a site where any part of the system is located.

(45)[(44)] On-site sewage facility (OSSF)--An on-site sewage disposal system.

(46)[(45)] On-site waste disposal order--An order, ordinance, or resolution adopted by a local governmental entity and approved by the executive director.

(47)[(46)] Operate--To use an on-site sewage facility.

(48)[(47)] Owner--A person who owns property served by an on-site sewage facility (OSSF), or a person who owns an OSSF. This includes any person who holds legal possession or ownership of a total or partial interest in the structure or property served by an OSSF.

(49)[(48)] Owner's agent--An installer, professional sanitarian, or professional engineer who is authorized to submit the permit application and the planning materials to the permitting authority on behalf of the owner.

(50)[(49)] Permit--An authorization, issued by the permitting authority, to construct or operate an on-site sewage facility. The permit consists of the authorization to construct (including the approved planning materials) and the notice of approval.

(51)[(50)] Permitting authority--The executive director or an authorized agent.

(52)[(51)] Planning material--Plans, applications, site evaluations, and other supporting materials submitted to the permitting authority for the purpose of obtaining a permit.

(53)[(52)] Platted--The subdivision of property which has been recorded with a county or municipality in an official plat record.

(54)[(53)] Pretreatment tank--A tank placed ahead of a treatment unit that functions as an interceptor for materials such as plastics, clothing, hair, and grease that are potentially harmful to treatment unit components.

(55)[(54)] Professional engineer--An individual licensed by the Texas Board of Professional Engineers to engage in the practice of engineering in the State of Texas.

(56)[(55)] Professional sanitarian--An individual registered by the Texas Department of Health to carry out educational and inspection duties in the field of sanitation in the State of Texas.

(57)[(56)] Proprietary system--An on-site sewage facility treatment or disposal system that is produced or marketed under exclusive legal right of the manufacturer or designer or for which a patent, trade name, trademark, or copyright is used by a person or company.

(58)[(57)] Recharge feature--Permeable geologic or manmade feature located on the Edwards Aquifer Recharge Zone where:

(A) a potential for hydraulic interconnectedness between the surface and the aquifer exists; and

(B) rapid infiltration from the on-site sewage facility to the subsurface may occur.

(59)[(58)] Recreational vehicle park--A single tract of land that has rental spaces for two or more vehicles that are intended for recreational use only and has a combined wastewater flow of less than 5,000 gallons per day.

(60)[(59)] Regional office--A regional office of the agency.

(61)[(60)] Repair--To replace any components of an on-site sewage facility (OSSF) in situations not included under emergency repairs according to §285.35 of this title (relating to Emergency Repairs), excluding maintenance. The replacement of tanks or drainfields is considered a repair and requires a permit for the entire OSSF system.

(62)[(61)] Scum--A mass of organic or inorganic matter which floats on the surface of sewage.

(63)[(62)] Secondary treatment--The process of reducing pollutants to the levels specified in Chapter 309 of this title (relating to Domestic Wastewater Effluent Limitation and Plant Siting).

(64)[(63)] Seepage pit--An unlined covered excavation in the ground which operates in essentially the same manner as a cesspool.

(65)[(64)] Septic tank--A watertight covered receptacle constructed to receive, store, and treat sewage by: separating solids from the liquid; digesting organic matter under anaerobic conditions; storing the digested solids through a period of detention; and allowing the clarified liquid to be disposed of by a method approved under this chapter.

(66)[(65)] Sewage--Waste that:

(A) is primarily organic and biodegradable or decomposable; and

(B) originates as human, animal, or plant waste from certain activities, including the use of toilet facilities, washing, bathing, and preparing food.

(67)[(66)] Single family dwelling--A structure that is either built on or brought to a site, for use as a residence for one family. A single family dwelling includes all detached buildings located on the residential property and routinely used only by members of the household of the single family dwelling.

(68)[(67)] Site evaluator--An individual who holds a valid license issued by the executive director according to Chapter 30 of this title (relating to Occupational Licenses and Registrations) and who conducts preconstruction site evaluations, including visiting a site and performing soil analysis, a site survey, or other activities necessary to determine the suitability of a site for an on-site sewage facility. A professional engineer may perform site evaluations without obtaining a site evaluator license.

(69)[(68)] Sludge--A semi-liquid mass of partially decomposed organic and inorganic matter which settles at or near the bottom of a receptacle containing sewage.

(70)[(69)] Soil--The upper layer of the surface of the earth that serves as a natural medium for the growth of plants.

(71)[(70)] Soil absorption system--A subsurface method for the treatment and disposal of sewage which relies on the soil's ability to treat and absorb moisture and allow its dispersal by lateral and vertical movement through and between individual soil particles.

(72)[(71)] Subdivision--A division of a tract of land, regardless of whether it is made by using a metes and bounds description in a deed of conveyance or in a contract for a deed, by using a contract of sale or other executory contract to convey, or by using any other method.

(73) Testing and reporting--Routine inspection, sampling and performance checks performed by the maintenance provider or maintenance technician and the submittal of findings to the OSSF owner and the permitting authority. Testing and reporting does not include repair or replacement of parts.

(74)[(72)] Well--A water well, injection well, dewatering well, monitoring well, piezometer well, observation well, or recovery well as defined under Texas Water Code, Chapters 26, 32, and 33, and 16 TAC Chapter 76 (relating to Water Well Drillers and Water Well Pump Installers).

§285.3. General Requirements.

(a) Permit required. A person shall hold a permit for an OSSF unless the OSSF meets one of the exceptions in subsection (f) of this section.

(1) All aspects of the permitting, planning, construction, operation, and maintenance of OSSFs shall be conducted according to this chapter, or according to an order, ordinance, or resolution of an authorized agent.

(2) The executive director is the permitting authority unless a local governmental entity has an OSSF order, ordinance, or resolution approved by the executive director. In areas where the executive director is the permitting authority, the staff from the appropriate regional office shall be responsible for the proper implementation of this chapter.

(3) Permits shall be transferred to a new owner automatically upon sale or other legal transfer of an OSSF.

(4) Conditioning of Permits. The permitting authority may require conditions to a permit in order to ensure that the permitted OSSF system will operate in accordance with the planning materials and system approval. Failure to comply with these conditions is a violation of the permit and this chapter. Any violation of a condition of a permit that would be considered an alteration as defined in §285.2(2) of this title (relating to Definitions) would require a new permit.

(b) General Application Requirements.

(1) The owner or owner's agent must obtain an authorization to construct from the permitting authority before construction may begin on an OSSF. Before an authorization to construct can be issued, the permitting authority shall require submittal of the following from the owner or owner's agent:

(A) an application, on the form provided by the permitting authority;

(B) all planning materials, according to §285.5 of this title (relating to Submittal Requirements for Planning Materials);

(C) the results of a site evaluation, conducted according to §285.30 of this title (relating to Site Evaluation); and

(D) the appropriate fee.

(2) Variance requests shall be submitted with the application and shall be reviewed by the permitting authority according to subsection (h) of this section.

(3) Before the permitting authority issues an authorization to construct, the owner of OSSFs identified in §285.91(12) of this title (relating to Tables) or the owner's agent, must record an [the] affidavit in the county deed records of the county or counties where the OSSF is located. Additionally, the owner or the owner's agent must submit, to the permitting authority, an affidavit affirming the recording. An example of the affidavit [deed language and affidavit] is located in §285.90(2) of this title (relating to Figures). The affidavit [deed recording] must include:

(A) the owner's full name;

(B) the legal description of the property;

(C) that an OSSF requiring [a] continuous maintenance [contract] is located on the property;

(D) that the permit for the OSSF shall [must] be transferred to the new owner upon transfer of the property; and

(E) that at any time after the initial two-year service policy, the owner of an aerobic treatment system for a single family residence shall either obtain a maintenance contract within 30 days of the transfer or maintain the system personally.

[(E) that maintenance must be performed by an approved maintenance company; and]

[(F) that a signed maintenance contract must be submitted to the appropriate permitting authority within 30 days after the property has been transferred.]

(c) Action on Applications. The permitting authority shall either approve or deny an application within 30 days of receiving an application. If the application and planning materials are approved, the permitting authority shall issue an authorization to construct. If the application and planning materials are denied, the permitting authority shall explain the reasons for the denial in writing to the owner, and the owner's agent.

(d) Construction and Inspection.

(1) An authorization to construct is valid for one calendar year from the date of its issuance. If the installer does not request a construction inspection by the permitting authority within one year of the issuance of the authorization to construct, the authorization to construct expires, and the owner will be required to submit a new application and application fee before an OSSF can be installed. A new application and application fee are not required if the owner decides not to install an OSSF.

(2) The installer shall notify the permitting authority at least five working days (Monday through Friday, excluding holidays) before the date the OSSF will be ready for inspection.

(3) The permitting authority shall conduct a construction inspection.

(4) If the OSSF does not pass the construction inspection, the permitting authority shall:

(A) at the close of the inspection, advise the owner and the owner's agent, if present, of the deficiencies identified and that the OSSF cannot be used until it passes inspection; and

(B) within seven calendar days after the inspection, issue a letter to the owner and the owner's agent listing the deficiencies identified and stating that the OSSF cannot be used until it passes inspection.

(5) If a reinspection is necessary, a reinspection fee may be assessed by the permitting authority.

(6) The reinspection fee must be paid before the reinspection is conducted.

(e) Notice of Approval.

(1) Within seven calendar days after the OSSF has passed the construction inspection, the permitting authority shall issue, to the owner or owner's agent, a written notice of approval for the OSSF.

(2) The notice of approval shall have a unique identification number, and shall be issued in the name of the owner.

(f) Exceptions.

(1) An owner of an OSSF will not be required to comply with the permitting, operation, and installation requirements of this chapter if the OSSF is not creating a nuisance and:

(A) the OSSF was installed before September 1, 1989, provided the system has not been altered, and is not in need of repair;

(B) the OSSF was installed before the effective date of the order, ordinance, or resolution in areas where the local governmental entity had an approved order, ordinance, or resolution dated before September 1, 1989, provided the system has not been altered and is not in need of repair; or

(C) the owner received authorization to construct from a permitting authority before the effective date of this chapter.

(2) No planning materials, permit, or inspection are required for an OSSF for a single family dwelling located on a tract of land that is ten acres or larger and:

(A) the OSSF is not causing a nuisance or polluting groundwater;

(B) all parts of the OSSF are at least 100 feet from the property line;

(C) the effluent is disposed of on the property; and

(D) the single family dwelling is the only dwelling located on that tract of land.

(3) Connecting recreational vehicles or manufactured homes to rental spaces is not considered construction if the existing OSSF system is not altered.

(g) Exclusions. The following systems are not authorized by this subchapter and may require a permit under Chapter 205 or Chapter 305 of this title (relating to General Permits for Waste Discharges or Consolidated Permits, respectively) [or an authorization under Chapter 331 of this title (relating to Undergound Injection Control)]:

(1) one or more systems that cumulatively treat and dispose of more than 5,000 gallons of sewage per day on one piece of property;

(2) any system that accepts waste that is either municipal, agricultural, industrial, or other waste as defined in Texas Water Code, Chapter 26;

(3) any system that will discharge into or adjacent to waters in the state; or

(4) any new cluster systems.

(h) Variances. Requests for variances from provisions of this chapter may be considered by the appropriate permitting authority on a case-by-case basis.

(1) A variance may be granted if the owner, or a professional sanitarian or professional engineer representing the owner, demonstrates to the satisfaction of the permitting authority that conditions are such that equivalent or greater protection of the public health and the environment can be provided by alternate means. Variances for separation distances shall not be granted unless the provisions of this chapter cannot be met.

(2) Any request for a variance under this subsection must contain planning materials prepared by either a professional sanitarian or a professional engineer (with appropriate seal, date, and signature).

(i) Unauthorized systems. Boreholes, cesspools, and seepage pits are prohibited for installation or use. Boreholes, cesspools, and seepage pits that treat or dispose of less than 5,000 gallons of sewage per day shall be closed according to §285.36 of this title (relating to Abandoned Tanks, Boreholes,

Cesspools, and Seepage Pits). Boreholes, cesspools, and seepage pits that exceed 5,000 gallons of sewage per day must be closed as a Class V injection well under Chapter 331 of this title (relating to Underground Injection Control).

§285.4. Facility Planning.

(a) Land planning and site evaluation. Property that will use an OSSF for sewage disposal shall be evaluated for overall site suitability. For property located on the Edwards Aquifer recharge zone, see §285.40 of this title (relating to OSSFs on the Recharge Zone of the Edwards Aquifer) for additional requirements. The following requirements apply to all sites where an OSSF may be located.

(1) Residential lot sizing.

(A) Platted or unplatted subdivisions served by a public water supply. Subdivisions of single family dwellings platted or created after the effective date of this section, served by a public water supply and using individual OSSFs for sewage disposal, shall have lots of at least 1/2 acre.

(B) Platted or unplatted subdivisions not served by a public water supply. Subdivisions of single family dwellings platted or created after the effective date of this section, not served by a public water supply and using individual OSSFs, shall have lots of at least one acre.

(2) Manufactured housing communities or multi-unit residential developments. The owners of manufactured housing communities or multi-unit residential developments that are served by

an OSSF and rent or lease space shall submit a sewage disposal plan to the permitting authority for approval. The total anticipated sewage flow for the individual tract of land shall not exceed 5,000 gallons per day. The plan shall be prepared by a professional engineer or professional sanitarian. This plan is in addition to the requirements of subsection (c) of this section.

(b) Approval of OSSF systems on existing small lots or tracts.

(1) Existing small lots or tracts[,] that do not meet the minimum lot size requirements under subsection (a)(1)(A) or (B) of this section, and were either subdivided before January 1, 1988, or had a site-specific sewage disposal plan approved between January 1, 1988, and the effective date of this section, are allowed to use OSSFs, but the OSSFs must comply with the requirements set forth in this Chapter. [may be approved for an OSSF provided:]

[(A) minimum separation distances in §285.31(d) of this title (relating to General Criteria for Treatment and Disposal Systems) are maintained;]

[(B) the site has been evaluated according to §285.30 of this title (relating to Site Evaluation); and]

[(C) all other requirements of this chapter regarding treatment and disposal are met.]

(2) The owner of a single family dwelling on an existing small lot or tract (property 1) may transport the wastewater from the dwelling to an OSSF at another location (property 2) provided that:

(A) both properties (properties 1 and 2) are owned by the same person;

(B) the owner or owner's agent demonstrates that no OSSF authorized under these rules can be installed on the property which contains the single-family dwelling (property 1);

(C) if property not owned by the owner of properties 1 and 2 must be crossed in transporting the sewage, the application includes all right-of-ways and permanent easements needed for the sewage conveyance lines; and

(D) the application includes an affidavit indicating that the owner or the owner's agent recorded the information required by §285.3(b)(3) on the real property deeds of both properties (properties 1 and 2). The deed recording shall state that the properties cannot be sold separately.

(c) Review of subdivision or development plans. Persons proposing residential subdivisions, manufactured housing communities, multi-unit residential developments, business parks, or other similar structures that use OSSFs for sewage disposal shall submit planning materials for these developments to the permitting authority and receive approval prior to submitting an OSSF application. [Before the permit process for individual OSSFs can begin, persons proposing residential subdivisions, manufactured housing communities, multi-unit residential developments, business parks, or other similar uses and using

OSSFs for sewage disposal shall submit planning materials for these developments to the permitting authority. The planning materials shall be prepared by a professional engineer or professional sanitarian and shall include an overall site plan, topographic map, 100-year floodplain map, soil survey, location of water wells, locations of easements as identified in §285.91(10) of this title (relating to Tables), and a complete report detailing the types of OSSFs to be considered and their compatibility with area-wide drainage and groundwater. A comprehensive drainage plan shall also be included in these planning materials. The permitting authority will either approve or deny the planning materials, in writing, within 45 days of receipt.]

(1) The planning materials must be prepared by a professional engineer or professional sanitarian and must include:

(A) an overall site plan;

(B) a topographic map;

(C) a 100-year floodplain map;

(D) a soil survey;

(E) the locations of water wells;

(F) the locations of easements, as identified in §285.91(10) of this title (relating to Tables);

(G) a comprehensive drainage plan;

(H) a complete report detailing the types of OSSFs to be considered and their compatibility with area-wide drainage and groundwater; and

(I) other requirements, including Edwards Aquifer requirements that are pertinent to the proposed OSSF.

(2) If the proposed development includes restaurants or buildings with food service establishments, the planning materials must show adequate land area for doubling the land needed for the treatment units. The designer may consider increasing the amount of land area beyond doubling the minimum required area.

(3) The permitting authority will either approve or deny the planning materials, in writing, within 45 days of receipt.

§285.5. Submittal Requirements for Planning Materials.

(a) Submittal of planning material. Planning materials required under this chapter shall be submitted by the owner, or owner's agent, to the permitting authority for review and approval according

to this section. All planning materials shall comply with this chapter and shall be submitted according to §285.91(9) of this title (relating to Tables). A legal description of the property where an on-site sewage facility (OSSF) is to be installed must be included with the permit application. Additionally, a scale drawing of the OSSF, all structures served by the OSSF, and all items specified in §285.30(b) of this title (relating to Site Evaluation) and §285.91(10) of this title [(relating to Tables)] must be included with the permit application.

(1) Planning materials prepared by an owner or installer. Either the owner or installer may prepare the planning materials for any proposed OSSF not requiring the preparation of plans according to paragraphs (2) or (3) of this subsection.

(2) Planning materials prepared by a professional engineer or professional sanitarian. OSSF planning materials shall be prepared by a professional engineer or professional sanitarian (with appropriate seal, date, and signature) as follows, unless otherwise specified in this chapter:

(A) any proposals for treatment or disposal that are not standard as described in Subchapter D of this chapter (relating to Planning, Construction, and Installation Standards for OSSFs) unless otherwise specified under §285.91(9) of this title;

(B) any proposal for an OSSF to serve manufactured housing communities, recreational vehicle parks, or multi-unit residential developments where spaces are rented or leased;

(C) all subdivision and development plans as required in §285.4(c) of this title (relating to Facility Planning); or

(D) a proposal for multiple treatment and disposal systems on large tracts of land.

(3) Planning materials prepared by a professional engineer. OSSF planning materials shall be prepared by a professional engineer (with appropriate seal, date, and signature) as follows, unless otherwise specified in this chapter:

[(A) any proposals for an OSSF for a structure not exempted by Texas Civil Statutes, Article 3271a, §20; or]

(A) [(B)] all proposals for non-standard treatment systems that require secondary treatment as detailed in Subchapter D of this chapter; or [.]

(B) verifications that precast concrete septic tanks conform to the requirements of §285.32(b)(1)(E)(i) of this title (relating to Criteria for Sewage Treatment Systems); or

(C) designs demonstrating that the requirements of §285.31(c)(2) of this title (relating to Selection Criteria for Treatment and Disposal Systems) related to the regulated floodway have been met.

(b) Review of planning materials.

(1) Standard planning materials. All planning materials for standard treatment or disposal systems shall be reviewed by the permitting authority.

(2) Non-standard planning materials. The executive director shall review and respond to initial plans for all non-standard planning material for any system described in §285.32(d) and §285.33(d)(6) of this title [(relating to Criteria for Sewage Treatment Systems and Criteria for Effluent Disposal Systems, respectively)] within ten calendar days of receipt of the planning materials. After favorable review by the executive director, the same non-standard system planning materials may be reviewed and approved by the authorized agent for different locations, provided the same site conditions exist for which the planning materials were developed.

(3) Proprietary planning materials. Planning materials for proprietary treatment or disposal systems, as described in §285.32(c) or §285.33(c) of this title, shall be submitted to the executive director for review. The systems and the testing protocol shall be approved by the executive director before the systems can be installed in the state.

§285.6. Cluster Systems.

(a) Cluster systems are not authorized under this chapter to serve: [Cluster systems are not authorized under this chapter after the effective date of these rules. Cluster systems may be authorized under other chapters of this title including Chapter 331 of this title (relating to Underground Injection Control).]

(1) sewage generating structures on separate legal tracts of land; or

(2) multiple sewage generating structures where the ownership of any sewage generating structure may be conveyed separately from the other sewage generating structures served by the cluster system, including cluster systems serving condominiums.

(b) Notwithstanding subsection (a) of this section, cluster systems may be permitted under this chapter for: [Existing cluster systems may not be repaired, altered, or extended under this chapter and may require authorization under other chapters of this title including Chapter 331 of this title when the system is malfunctioning or expanded.]

(1) Manufactured housing communities or multi-unit residential developments on a single tract of land that either rent or lease space and are served by an OSSF; or

(2) single residential units connected to their outbuildings such as barns, guest quarters, pool houses, or similar structures on a single tract of land.

(c) The authorized agent may not approve planning materials under this chapter for a subdivision which would create a cluster system that is prohibited under this section.

(d) Existing cluster systems prohibited under this section may not be repaired, altered, or extended under this chapter and may require authorization under other chapters of this title including

Chapter 305 of this title (relating to Consolidated Permits) when the system is malfunctioning or expanded.

(e) Persons (as defined in Texas Water Code, §13.002(15)), collecting or receiving compensation, whether directly or indirectly, for operating, maintaining or controlling facilities for providing sewer service are retail public utilities and shall meet the requirements of a retail public utility, as defined in Chapter 291 of this title (relating to Utility Regulations).

§285.7. Maintenance Requirements.

(a) Maintenance contract requirements. Maintenance contract requirements for all on-site sewage facilities (OSSFs) are identified in §285.91(12) of this title (relating to Tables). The permit holder shall ensure that the OSSF is properly operated and maintained in accordance with this chapter. Homeowners who maintain their own systems are exempt from contract requirements, as provided in subsection (d)(4) of this section.

(b) Maintenance provider.

(1) Effective September 1, 2009, in order to perform maintenance on an OSSF, an individual must either be licensed by the TCEQ as a maintenance provider or registered by the TCEQ as a maintenance technician and employed by a licensed maintenance provider. Prior to September 1, 2009, in

order to perform maintenance on an OSSF, an individual must be registered by the TCEQ as a maintenance provider.

(2) Effective September 1, 2009, the maintenance provider will be responsible for fulfilling the requirements of the maintenance contract. The maintenance provider will be responsible for the work performed by registered maintenance technicians under their direct supervision. Prior to September 1, 2009, the maintenance company will be responsible for fulfilling the requirements of the maintenance contract.

(3) Effective September 1, 2009, the maintenance provider must sign all maintenance reports.

(c) Initial Two-Year Service Policy. The initial two-year service policy shall be effective for two years from the date the OSSF is first used. For a new single family dwelling, this date is the date of sale by the builder. For an existing single family dwelling this date is the date the notice of approval is issued by the permitting authority. The owner, or owner's agent shall provide the permitting authority with a copy of the signed initial two-year service policy before the system is approved for use.

(d) Maintenance contracts. OSSFs required to have maintenance contracts are identified in §285.91(12) of this title.

(1) Contract provisions. The OSSF maintenance contract shall, at a minimum:

(A) list items that are covered by the contract;

(B) specify a time frame in which the maintenance provider or maintenance technician will visit the property in response to a complaint by the property owner regarding the operation of the system;

(C) specify the name of the maintenance provider who is responsible for fulfilling the terms of the maintenance contract;

(D) identify the frequency of routine maintenance and the frequency of the required testing and reporting; and

(E) identify who is responsible for maintaining the disinfection unit.

(2) Contract submittals. Unless the owner maintains the system, as excepted by paragraph (4) of this subsection, a copy of the signed maintenance contract shall be provided by the owner to the permitting authority 30 days before the expiration of the initial two-year service policy. For the time period after the initial two-year service policy, the owner is required to have a new maintenance contract signed and submitted to the permitting authority at least 30 days before the contract expires unless the owner maintains the system, as excepted by paragraph (4) of this subsection.

(3) Amendments or terminations.

(A) Effective September 1, 2009, if the maintenance provider discontinues the maintenance contract, the maintenance provider shall notify, in writing, the permitting authority, the manufacturer, and the owner at least 30 days before the date service will cease. Prior to September 1, 2009, if the maintenance company discontinues the maintenance contract, the maintenance company shall notify, in writing, the permitting authority, the manufacturer, and the owner at least 30 days before the date service will cease.

(B) Effective September 1, 2009, if the owner discontinues the maintenance contract, the maintenance provider shall notify, in writing, the permitting authority and the manufacturer at least 30 days before the date service will cease. Prior to September 1, 2009, if the owner discontinues the maintenance contract, the maintenance company shall notify, in writing, the permitting authority and the manufacturer at least 30 days before the date service will cease.

(C) Effective September 1, 2009, if a maintenance contract is discontinued or terminated, the owner shall contract with another maintenance provider and provide the permitting authority with a copy of the new signed maintenance contract no later than 30 days after termination, unless the owner meets the requirements of paragraph (4) of this subsection. Prior to September 1, 2009, if a maintenance contract is discontinued or terminated, the owner shall contract with another maintenance company and provide the permitting authority with a copy of the new signed maintenance contract no later than 30 days after termination, unless the owner meets the requirements of paragraph (4) of this subsection.

(4) Exceptions to maintenance contract. At the end of the initial two-year service policy, the owner of an OSSF for a single family residence shall either maintain the system personally or obtain a new maintenance contract.

(A) If the residence is sold before the end of the initial two-year service policy period, the terms of the initial service policy will apply to the new owner.

(B) An owner may not maintain an OSSF under the provisions of this section for commercial, speculative residential, or multifamily property.

(e) Testing and reporting. OSSFs that must be tested are identified in §285.91(12) of this title.

(1) Effective September 1, 2009, the maintenance provider shall test and report for each system as required in §285.91(12) of this title. Prior to September 1, 2009, the maintenance company shall test and report for each system as required in §285.91(12) of this title. The report must:

(A) include any responses to owner complaints; the results of the maintenance provider's findings as described in §285.90(3) of this title (relating to Figures) and the test results as required in §285.91(4) of this title, including procedures for the maintenance of the unit approved by the executive director; and

(B) be submitted to the permitting authority and the owner within 14 days after the date the test is performed.

(2) To provide the owner with a record of the maintenance check, the maintenance provider shall install a weather resistant tag, or some other form of weather resistant identification, on the system at the beginning of each maintenance contract. This identification shall:

(A) identify the maintenance provider;

(B) list the telephone number of the maintenance provider;

(C) specify the start date of the contract; and

(D) be either punched or indelibly marked with the date the system was checked at the time of each maintenance check, including any maintenance check in response to owner complaints.

(3) The number of required tests may be reduced to two per year for all systems having electronic monitoring and automatic telephone or radio access that will notify the maintenance provider of system or components failure and will monitor the amount of disinfection in the system. The maintenance provider shall be responsible for ensuring that the electronic monitoring and automatic telephone or radio access systems are working properly.

(4) The owner of an OSSF for a single family residence who elects to maintain their unit through the exemption described in subsection (d)(4) of this section is not subject to testing and reporting requirements.

(f) Replacement parts. The manufacturer of the installed on-site aerobic system shall make available to the homeowner all replacement parts for that aerobic system to any homeowner who elects to maintain the on-site aerobic system as identified in subsection (d)(4) of this section. The manufacturer shall also make replacement parts available to installers and maintenance providers. Failure to do so may result in removal of the manufacturer's product(s) from the list of approved systems.

(g) Inspections by authorized agents or commission. An authorized agent or the commission may inspect an on-site sewage system using aerobic treatment at any time.

§285.8. Multiple On-Site Sewage Facility (OSSF) Systems on One Large Tract of Land.

(a) The executive director may authorize the permitting authority to issue a permit for multiple treatment and disposal systems on a tract of land as an OSSF, instead of as a municipal wastewater treatment facility, if:

(1) the systems are located on a tract of land of 100 acres or more;

(2) the systems are used:

(A) on a seasonal or intermittent basis, which means any combination of weekends (Friday through Sunday) plus 60 weekdays (Monday through Thursday) or less during a calendar year; and

(B) the remainder of the year by employees, voluntary staff, or contractors performing work-related duties on the tract of land.

(3) the anticipated combined flow, calculated using either actual water use data or the data from §285.91(3) of this title (relating to Tables), from all systems is less than 5,000 gallons per day (gpd) on an annual average basis (the arithmetic average of all daily flows from the preceding 12 consecutive calendar months);

(4) the peak flow, calculated using either actual water use data or the data from §285.91(3) of this title, for each individual system is less than 5,000 gpd; and

(5) the systems are used only for disposal of sewage produced on the tract of land where the systems are located.

(b) To obtain an OSSF permit for multiple treatment and disposal systems, the owner or owner's agent must submit the following to the permitting authority:

(1) an application on the form provided by the permitting authority;

(2) all planning materials according to §285.5(a)(2) of this title (relating to Submittal Requirements for Planning Materials). The planning materials must include details on all existing systems, as well as any proposed new systems;

(3) the results of a site evaluation, conducted according to §285.30 of this title (relating to Site Evaluation);

(4) the location, types of systems, size of systems, and if permitted, information from the permit for all existing systems; and

(5) the appropriate fee.

(c) The permitting authority must submit the items listed in subsection (b) of this section to the executive director within five working days after receipt. The executive director shall review the materials submitted and shall determine if the systems may be permitted as an OSSF, the systems do not meet the requirements of this section, or the application is incomplete. The executive director shall provide the determination in writing to the owner or the owner's agent, and to the permitting authority, within 30 working days after receipt of the materials listed in subsection (b) of this section from the permitting authority.

(d) Executive director determination.

(1) If the executive director determines that the systems may be permitted as an OSSF, the permitting authority shall issue an authorization to construct for all new systems and a permit for existing systems. If the permitting authority issues an authorization to construct, all steps in §285.3(d)

and (e) of this title (relating to General Requirements) must be followed before the system receives a notice of approval.

(2) If the executive director determines that the systems do not meet the requirements of this section, the owner may be required to submit an application for either a permit under Chapters 205 or 305 of this title (relating to General Permits for Waste Discharges or Consolidated Permits, respectively) [and an authorization under Chapter 331 of this title (relating to Underground Injection Control)].

(e) In order to receive a notice of approval, all systems on the property, including the existing systems, must meet the requirements of this chapter.

(f) The owner shall submit a report of the actual flow data to both the permitting authority and the executive director once a year in the month following the anniversary month of the receipt of the notice of approval. The reported flows shall be based on sewage flows measured by a totalizing meter installed at each individual system, water usage for the facilities served by the individual systems, or by other means approved by the executive director. The flows shall be recorded in a table by calendar month. The table shall give a continuous average of flows.

(g) If, as a result of the submittal of the reports required in subsection (f) of this section, the executive director and the authorized agent determine that the systems no longer meet the requirements of this section, the owner shall either bring the systems into compliance with this section or submit an application for a permit under Chapter 205 or Chapter 305 of this title [and an authorization under Chapter 331 of this title].

SUBCHAPTER A: GENERAL PROVISIONS

[§285.7]

STATUTORY AUTHORITY

This repeal is proposed under THSC, §§366.001-366.078, concerning On-site Sewage Disposal Systems. This repeal is also proposed under the general authority granted in TWC, §5.013, concerning the General Jurisdiction of the Commission; TWC, §5.102, concerning General Powers; TWC, §5.103, concerning Rules; TWC, §5.105, concerning General Policy; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC. This repeal is further proposed under the authority granted to the commission by the Texas Legislature in TWC, §§37.001 - 37.015, concerning: Definitions; Rules; License or Registration Required; Qualifications; Issuance and Denial of Licenses and Registrations; Renewal of License or Registration; Licensing Examinations; Training; Continuing Education; Fees; Advertising; Complaints; Compliance Information; Practice of Occupation; Roster of License Holders and Registrants; and Power to Contract.

This repeal implements THSC, §§366.001-366.078; TWC, §§5.013, 5.102, 5.103, 5.105, 7.002, and 37.001-37.015.

[§285.7. Maintenance Requirements.]

[(a) Maintenance requirements. Maintenance requirements for all on-site sewage facilities (OSSFs) are identified in §285.91(12) of this title (relating to Tables).]

[(b) Maintenance company.]

[(1) An individual must be certified by the manufacturer of an OSSF using aerobic treatment to maintain the system under a maintenance contract with the owner of the system or to provide training to the owner in maintenance of the system. A manufacturer may not unreasonably withhold certification and, except as otherwise provided by this subsection, must offer the certification to individuals who are not employees of the manufacturer on the same terms as the manufacturer offers the certification to the manufacturer's employees.]

[(A) Additionally, the individual shall:]

[(i) satisfactorily complete an executive director-approved course for persons who provide aerobic system maintenance. This course must be a minimum of 16 classroom hours of instruction in public health and safety, proper maintenance procedures, and recordkeeping and reporting. This course must have been approved by the executive director after September 1, 2005;]

[(ii) be employed by a maintenance company in which at least one employee holds an Installer II license;]

[(iii) meet all of the manufacturer's criteria and requirements for entering into a business relationship; and]

[(iv) satisfactorily complete any other reasonable requirements imposed for certification by the manufacturer.]

[(B) A person providing maintenance with a valid wastewater Class D license on or before August 31, 2006, may continue to do so until August 31, 2008, provided that person also satisfies the requirements of subparagraph (A)(i), (iii), and (iv) of this title.]

[(2) For nonstandard systems, an individual providing maintenance shall be trained by the professional engineer or professional sanitarian responsible for preparing the planning materials for a nonstandard system.]

[(3) The maintenance company and the individual certified by the manufacturer will be responsible for fulfilling the requirements of the maintenance contract.]

[(c) Maintenance contracts. OSSFs required to have maintenance contracts are identified in §285.91(12) of this title. The OSSF shall be maintained and tested by the maintenance company holding a maintenance contract.]

[(1) Contract provisions. The OSSF maintenance contract shall, at a minimum:]

[(A) list items that are covered by the contract;]

[(B) specify a time frame in which the maintenance company will visit the property in response to a complaint by the property owner regarding the operation of the system;]

[(C) specify the name of the individual employed by the maintenance company who is certified by the manufacturer of the system and is responsible for fulfilling the terms of the maintenance contract;]

[(D) identify the frequency of routine maintenance and the frequency of the required testing and reporting; and]

[(E) identify who is responsible for maintaining the disinfection unit.]

[(2) Contract submittals. Unless excepted by paragraph (4) of this subsection, a copy of the signed maintenance contract shall be provided by the owner to the permitting authority before the authorization to construct is issued. Before the current contract expires, the owner of an OSSF is required to have a new maintenance contract signed. A copy of a new contract shall be submitted to the permitting authority at least 30 days before the contract expires.]

[(A) Initial maintenance contract. The initial written maintenance contract shall be effective for at least two years from the date the OSSF is first used. For a new single family dwelling, this date is the date of sale by the builder. For an existing single family dwelling this date is the date the notice of approval is issued by the permitting authority.]

[(B) Ongoing maintenance contract. After the expiration of the two-year initial maintenance contract, the owner shall have ongoing maintenance performed by either the original

maintenance company or another maintenance company qualified under subsection (b)(1) of this section, unless the exceptions in paragraph (4) of this subsection apply.]

[(3) Amendments or terminations.]

[(A) If the maintenance company changes the individual certified by the manufacturer under subsection (b) (1)(A) of this section, the maintenance company shall initiate an amendment of the contract. The contract shall be amended within 30 days after the change in personnel. The permitting authority shall be provided with a copy of the amended contract within 30 days after the amended contract is signed.]

[(B) If the maintenance company discontinues the maintenance contract, the maintenance company shall notify, in writing, the permitting authority, the manufacturer, and the owner at least 30 days before the date service will cease.]

[(C) If the owner discontinues the maintenance contract, the owner shall notify, in writing, the permitting authority, the manufacturer, and the maintenance company at least 30 days before the date service will cease.]

[(D) If a maintenance contract is discontinued or terminated, the owner shall contract with another maintenance company and provide the permitting authority with a copy of the new signed maintenance contract no later than 30 days after termination, unless the owner meets the requirements of paragraph (4) of this subsection.]

[(4) Exceptions to maintenance contract. At the end of the initial two-year maintenance period, the owner of an aerobic treatment system for a single family residence shall either maintain the system personally or obtain a new maintenance contract.]

[(A) If the owner of an OSSF using aerobic treatment for a single-family residence elects to maintain the system directly and in accordance with §30.244(a) of this title (relating to Exemptions), the owner must obtain specific on-site maintenance training for the system from either the manufacturer or an installer who has been certified by the manufacturer.]

[(i) Training for the homeowner of an aerobic OSSF must be given within 30 calendar days of the date when requested by the homeowner. Additionally, this training must be completed a minimum of 30 days prior to the end of the existing maintenance contract.]

[(I) A manufacturer shall train the owner of the aerobic OSSF when requested by the owner, under the time frames described in this subsection. Failure to provide the owner with approved training within the specified time frame may result in removal of the manufacturer's product(s) from the list of approved systems.]

[(II) An installer shall train the owner of the aerobic OSSF when requested by the owner, under the time frames described in this subsection. Failure to provide the owner with approved training within the specified time frame may result in penalties to the installer, as described

in §285.61 of this title (relating to Duties and Responsibilities of Installers). These penalties may include revocation of the installer's license and registration as a maintenance provider.]

[(III) The specific on-site maintenance training for owners of aerobic systems must:]

[(-a-) have been previously approved by the executive director;]

[(-b-) provide for six hours of training;]

[(-c-) be provided and completed in a timely manner that allows the owner to be trained and comply with the requirements of training and maintenance of this subsection and §285.70 of this title (relating to Duties of Owners With Malfunctioning OSSFs);]

[(-d-) include the importance to public health and safety of proper maintenance of the system; and]

[(-e-) a demonstration of the procedure for performing scheduled maintenance.]

[(ii) Within 30 days after the owner's completion of the training, the manufacturer or installer shall provide both the owner and the permitting authority with a written

certificate or letter, signed by the manufacturer or installer, stating that the owner has received and completed the required training.]

[(B) Maintenance of an aerobic system by a homeowner is subject to any inspection and reporting requirements imposed by an authorized agent or the commission applicable to a maintenance company that contracts to maintain a system.]

[(C) If the residence is sold, the new homeowner, not later than the 30th day after the date the owner takes possession of the property, must obtain the training required by this subsection from either an installer certified by the manufacturer of the system or the manufacturer. If the homeowner does not request training, then the homeowner must contract with a maintenance company for the maintenance of the system. However, this requirement does not limit a homeowner's ability to both receive training and maintain the homeowner's aerobic system as required in this paragraph.]

[(d) Testing and reporting. OSSFs that must be tested are identified in §285.91(12) of this title.]

[(1) The maintenance company, or the homeowner, if applicable under subsection (c)(4) of this section, shall test and report for each system as required in §285.90(3) of this title (relating to Figures) and §285.91(4) of this title. The report must:]

[(A) include any responses to owner complaints, the results of the maintenance company's findings or the owner's findings, and the test results; and]

[(B) be submitted to the permitting authority and, if applicable, the owner within 14 days after the date the test is performed.]

[(2) To provide the owner with a record of the maintenance check, the maintenance company shall install a weather resistant tag, or some other form of weather resistant identification, on the system at the beginning of each maintenance contract. This identification shall:]

[(A) identify the maintenance company;]

[(B) list the telephone number of the maintenance company;]

[(C) specify the start date of the contract; and]

[(D) be either punched or indelibly marked with the date the system was checked at the time of each maintenance check, including any maintenance check in response to owner complaints.]

[(3) The number of required tests may be reduced to two per year for all systems having electronic monitoring and automatic telephone or radio access that will notify the maintenance company, or the owner if applicable under subsection (c)(4) of this section, of system or components failure and will monitor the amount of disinfection in the system. The maintenance company shall be responsible for ensuring that the electronic monitoring and automatic telephone or radio access systems are working properly.]

[(4) The manufacturer and the installer of the installed on-site aerobic system shall make available to the homeowner all replacement parts for that aerobic system to any homeowner who elects to maintain the on-site aerobic system as identified in subsection (c)(4) of this section. Failure to do so may result in removal of the manufacturer's product(s) from the list of approved systems.]

[(5) An authorized agent or the commission may routinely inspect an on-site sewage system using aerobic treatment for a single-family residence that is maintained directly by the owner of the system not more than once every five years.]

SUBCHAPTER B: LOCAL ADMINISTRATION OF THE OSSF PROGRAM

§285.13

STATUTORY AUTHORITY

The amendment is proposed under THSC, §§366.001-366.078, concerning On-Site Sewage Disposal Systems. The amendment is also proposed under the general authority granted in TWC, §5.013, concerning the General Jurisdiction of the Commission; TWC, §5.102, concerning General Powers; TWC, §5.103, concerning Rules; TWC, §5.105, concerning General Policy; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC. The amendment is further proposed under the authority granted to the commission by the Texas Legislature in TWC, §§37.001-37.015, concerning Occupational Licenses and Registrations.

The proposed amendment implements THSC, §§366.001-366.078; TWC, §§5.013, 5.102, 5.103, 5.105, 7.002, and 37.001-37.015.

§285.13. Revocation of Authorized Agent Delegation.

(a) An authorized agent's on-site sewage facility (OSSF) order, ordinance, or resolution may be revoked by order of the commission, after notice and an opportunity for a hearing, for the authorized agent's failure to implement, administer, or enforce Texas Health and Safety Code, this chapter, or its order, ordinance, or resolution.

(b) If the executive director determines that cause exists for revocation, the executive director shall:

(1) meet with the authorized agent's county judge, mayor, general manager, or chairman of the board, or other authorized individual, to discuss the report of the executive director's findings, the authorized agent's response to the findings, and the possible revocation; and

(2) prepare a letter documenting the meeting in paragraph (1) of this subsection and forward it to the authorized agent within ten days after the meeting.[; and]

[(3) provide the authorized agent 60 days after the date of the letter in paragraph (2) of this subsection to allow other authorized agents to review the executive director's findings if requested by the authorized agent.]

(c) The authorized agent shall respond to the executive director's letter in subsection (b)(2) of this section in writing within 90 days after the date of the executive director's letter.

(d) If the executive director determines from the authorized agent's response that sufficient action will be taken to consistently enforce the OSSF program, the executive director will:

(1) respond to the authorized agent that the revocation process will be discontinued; and

(2) schedule another review of the authorized agent's program one year after the first review to verify that the authorized agent is consistently enforcing the OSSF program.

(e) If the executive director determines from the authorized agent's response that insufficient action will be taken, the executive director will:

(1) file a petition with the commission according to Chapter 70 of this title (relating to Enforcement) seeking revocation;

(2) initiate the hearing process with SOAH according to Chapter 80 of this title (relating to Contested Case Hearings);

(3) publish notice of a public hearing that will be held to review the commission's possible revocation of the delegated authority. The notice must be published in a regularly published newspaper of general circulation in the local governmental entity's area of jurisdiction and shall:

(A) include the time, date, and location of the public hearing; and

(B) be published at least 20 days before the public hearing; and

(4) hold a public hearing to review possible revocation of the delegated authority.

(f) An authorized agent may consent to the revocation of its OSSF delegation in writing before the public hearing. If the authorized agent consents to the revocation, the commission may revoke the authorized agent's delegated authority without a public hearing.

(g) After an opportunity for a hearing, the commission may:

(1) issue an order revoking the authorized agent's delegation, which may include a charge-back fee;

(2) issue an order requiring the authorized agent to take certain action or actions in order to retain delegation; or

(3) take no action.

(h) If the authorized agent's delegation is revoked, the executive director shall assume responsibility for the OSSF program in the former authorized agent's jurisdiction. The executive director shall implement the program on the date of the revocation.

(i) An authorized agent that has had its OSSF authority revoked may be subject to charge-back fees according to §285.14 of this title (relating to Charge-back Fee).

SUBCHAPTER C: COMMISSION ADMINISTRATION OF THE OSSF PROGRAM IN AREAS WHERE NO AUTHORIZED AGENT EXISTS

§285.21

STATUTORY AUTHORITY

The amendment is proposed under THSC, §§366.001-366.078, concerning On-Site Sewage Disposal Systems. The amendment is also proposed under the general authority granted in TWC, §5.013, concerning the General Jurisdiction of the Commission; TWC, §5.102, concerning General Powers; TWC, §5.103, concerning Rules; TWC, §5.105, concerning General Policy; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC. The amendment is further proposed under the authority granted to the commission by the Texas Legislature in TWC, §§37.001-37.015, concerning Occupational Licenses and Registrations.

The proposed amendment implements THSC, §§366.001-366.078; TWC, §§5.013, 5.102, 5.103, 5.105, 7.002, and 37.001-37.015.

§285.21. Fees.

(a) The application fee for an OSSF permit is:

(1) $200 for an OSSF serving a single family dwelling; or

(2) $400 for all other types of OSSFs.

(b) A fee of $10 shall also be collected for each OSSF permit for the On-Site Wastewater Treatment Research Council as required by the Texas Health and Safety Code, Chapter 367.

(c) The fees are payable when the owner, or owner's agent, applies to the executive director for an OSSF permit. The fee shall be submitted to the appropriate regional office and shall be paid by a money order or check. Payments shall be made payable to the Texas Commission on Environmental Quality. [Texas Natural Resource Conservation Commission.]

(d) The reinspection fee shall be equal to one-half of the permit fee that was in effect at the time the original application was submitted to the regional office.

(e) Refunds of the application fee shall not be granted.

SUBCHAPTER D: PLANNING, CONSTRUCTION, AND INSTALLATION STANDARDS FOR OSSFS

§§285.30, 285.32, 285.33, 285.34

STATUTORY AUTHORITY

These amendments are proposed under THSC, §§366.001-366.078, concerning On-Site Sewage Disposal Systems. These amendments are also proposed under the general authority granted in TWC, §5.013, concerning the General Jurisdiction of the Commission; TWC, §5.102, concerning General Powers; TWC, §5.103, concerning Rules; TWC, §5.105, concerning General Policy; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC. The amendments are further proposed under the authority granted to the commission by the Texas Legislature in TWC, §§37.001-37.015, concerning Occupational Licenses and Registrations.

These proposed amendments implement THSC, §§366.001-366.078; TWC, §§5.013, 5.102, 5.103, 5.105, 7.002, and 37.001-37.015.

§285.30. Site Evaluation.

(a) General Requirement. To document the soil and site conditions, a complete site evaluation shall be performed by either a site evaluator or a professional engineer on every tract of land where an OSSF will be installed. A report prepared by either the site evaluator or the professional engineer providing the site evaluation criteria in subsection (b) of this section shall be submitted with the planning materials.

(b) Site evaluation criteria. All aspects of the site evaluation shall be performed by either a site evaluator or a professional engineer according to this section. The information obtained during the site evaluation shall be used to determine the type and size of the OSSF.

(1) Soil analysis. The site evaluator or the professional engineer shall either drill two soil borings or excavate two backhoe pits at opposite ends of the proposed disposal area to determine the characteristics of the soil. In areas of high soil variability, the permitting authority may require additional borings or backhoe pits. The borings or backhoe pits shall either be excavated to a depth of two feet below the adopted excavation of the disposal area, or to a restrictive horizon, whichever is less. The location of all borings or backhoe pits shall be clearly indicated on the site drawing required in §285.5(a) of this title (relating to Submittal Requirements for Planning Materials).

(A) Soil texture analysis. A general texture analysis shall be performed to identify the classification of the soil. The different soils in each class are provided in §285.91(6) of this title (relating to Tables).

(i) Soil Class Ia. This class includes sandy textured soils that contain more than 30% gravel.

(ii) Soil Class Ib. This class includes sand and loamy sand soils that contain less than or equal to 30% gravel.

(iii) Soil Class II. This class includes sandy loam and loam soils.

(iv) Soil Class III. This class includes silt, silt loam, silty clay loam, clay loam, sandy clay loam, and sandy clay soils.

(v) Soil Class IV. This class includes silty clay and clay soils.

(B) Gravel analysis. Class II or Class III soils containing gravel shall be further evaluated by either a site evaluator or a professional engineer by using a sieve analysis to determine the percentage of gravel by volume and the size of the gravel as indicated in §285.91(5) of this title.

(C) Restrictive horizons analysis. The soils within the borings or backhoe pits shall be analyzed by either a site evaluator or a professional engineer to determine if a restrictive horizon exists. Clay subsoils, rock, and plugged laminar soils are considered restrictive horizons. Restrictive horizons are recognized by an abrupt change in texture from a sandy or loamy surface horizon to:

(i) a clayey subsoil which an auger will not penetrate; or

(ii) rock-like material which an auger will not penetrate.

(2) Groundwater evaluation. The soil profile shall be examined by either a site evaluator or a professional engineer to determine if there are indications of groundwater within 24 inches of the bottom of the excavation.

(A) If the designated representative and the site evaluator or the professional engineer disagree on the presence of groundwater, the designated representative shall verify groundwater information using the Natural Resources Conservation Service (NRCS) soil survey for that county, if it is available.

(B) If the designated representative or the site evaluator or the professional engineer disagree with the NRCS soil survey, or if an NRCS soil survey does not exist for that county, the owner has the option to retain a certified professional soil scientist to evaluate the presence of groundwater and present that information to the designated representative for a final decision.

(3) Surface drainage analysis.

(A) Topography. The slope of each tract of land where an OSSF will be installed, areas of poor drainage such as depressions, and areas of complex slope patterns where slopes are dissected by gullies and ravines shall be determined. All slope patterns shall be clearly indicated on the site drawing, as required in §285.5(a) of this title.

(B) Flood hazard. The 100-year floodplain for each tract of land where an OSSF will be installed shall be determined from either Federal Emergency Management Agency (FEMA) maps or from a flood study prepared by a professional engineer when FEMA maps are not available. The 100-year flood boundaries shall be clearly indicated on the site drawing, as required in §285.5(a) of this title. The drawing(s) shall also indicate if the 100-year floodplain does not exist within the tract.

(4) Separation requirements. All features in the area where the OSSF is to be installed that could be contaminated by the OSSF or could prevent the proper operation of the system shall be identified during the site evaluation. The separation requirements are in §285.91(10) of this title. All features and separation distances shall be clearly indicated on the site drawing, as required in §285.5(a) of this title.

§285.32. Criteria for Sewage Treatment Systems.

(a) Pipe from building to treatment system.

(1) The pipe from the sewer stub out to the treatment system shall be constructed of cast iron, ductile iron, polyvinyl chloride (PVC) Schedule 40, standard dimension ratio (SDR) 26 or other material approved by the executive director.

(2) The pipe shall be watertight.

(3) The slope of the pipe shall be no less than 1/8 inch fall per foot of pipe.

(4) The sewer stub out should be as shallow as possible to facilitate gravity flow.

(5) A two-way cleanout plug must be provided between the sewer stub out and the treatment tank. Only sanitary type fittings constructed of PVC Schedule 40 or SDR 26 shall be used on

this section of the sewer. An additional cleanout plug shall be provided every 50 feet on long runs of pipe and within five feet of 90 degree bends.

(6) Additional cleanout plugs shall be of the single sanitary type.

(7) The pipe shall have a minimum inside diameter of three inches.

(b) Standard treatment systems.

(1) Septic tanks. A septic tank shall meet the following requirements.

(A) Tank volume. The liquid volume of a septic tank, measured from the bottom of the outlet, shall not be less than established in §285.91(2) of this title (relating to Tables). Additionally, the liquid depth of the tank shall not be less than 30 inches.

(B) Inlet and outlet devices. The flowline of the tank's inlet device in the first compartment of a two-compartment tank, or in the first tank in a series of tanks, shall be at least three inches higher than the flowline of the outlet device. For a configuration of the tank and inlet and outlet devices, see §285.90(6) and (7) of this title (relating to Figures). The inlet devices shall be "T" branch fittings, constructed baffles or other structures or fittings approved by the executive director. The outlet devices shall use a "T" unless an executive director approved fitting is installed on the outlet. All inlet and outlet devices shall be installed water tight to the septic tank walls and shall be a minimum of three inches in diameter.

(C) Baffles and series tanks. All septic tanks shall be divided into two or three compartments by the use of baffles or by connecting two or more tanks in a series.

(i) Baffled tanks. In a baffled tank, the baffle shall be located so that one half to two thirds of the total tank volume is located in the first compartment. Baffles shall be constructed the full width and height of the tank with a gap between the top of the baffle and the tank top. The baffle shall have an opening located below the liquid level of the tank at a depth between 25% and 50% of the liquid level. The opening may be a slot or hole. If a "T" is fitted to the slot or hole, the inlet to the fitting shall be at the depth stated in this paragraph. See §285.90(6) of this title for details. Any metal structures, fittings, or fastenings shall be stainless steel.

(ii) Series tanks. Two or more tanks shall be arranged in a series to attain the required liquid volume. The first tank in a two-tank system shall contain at least one-half the required volume. The first tank in a three-tank system shall contain at least one-third of the total required volume, but no less than 500 gallons. The first tank in a four or more tank system shall contain no less than 500 gallons, and the last tank in a four or more tank system shall contain no more than one third of the total required volume. Interconnecting inlet and outlet devices may be installed at the same elevation for multiple tank installations.

(D) Inspection <u>or</u> [and] cleanout ports. All septic tanks shall have inspection or cleanout ports located on the tank top over the inlet and outlet devices. Each inspection or cleanout port shall be offset to allow for pumping of the tank. The ports may be configured in any manner as long as

the smallest dimension of the opening is at least 12 inches, and is large enough to provide for maintenance and for equipment removal. Septic tanks buried more than 12 inches below the ground surface shall have risers over the port openings. The risers shall extend from the tank surface to no more than six inches below the ground[,]. The risers shall be sealed to the tank[, and capped]. The risers shall have inside diameters which are equal to or larger than the inspection or cleanout ports. The risers shall be fitted with removable watertight caps and prevent unauthorized access.

(E) Septic tank design and construction materials. The septic tank shall be of sturdy, water-tight construction. The tank shall be designed and constructed so that all joints, seams, component parts, and fittings prevent groundwater from entering the tank, and prevent wastewater from exiting the tank, except through designed inlet and outlet openings. Materials used shall be steel-reinforced poured-in-place concrete, steel-reinforced precast concrete, fiberglass, reinforced plastic polyethylene, or other materials approved by the executive director. Metal septic tanks are prohibited. The septic tank shall be structurally designed to resist buckling from internal hydraulic loading and exterior loading caused by earth fill and additional surface loads. Tanks exhibiting deflections, leaks, or structural defects shall not be used. Sweating at construction joints is acceptable on concrete tanks.

(i) Precast concrete tanks. In addition to the general requirements in subparagraph (E) of this paragraph, precast concrete tanks shall conform to requirements in the Materials and Manufacture Section and the Structural Design Requirements Section of American Society for Testing and Materials (ASTM) Designation: C 1227, Standard Specification for Precast Concrete Septic Tanks (2000) or under any other standards approved by the executive director. A professional engineer shall verify in writing that the manufacturer is in compliance with ASTM Standard C 1227. This

verification shall be submitted to the permitting authority from the tank manufacturer. If this verification has not been previously submitted or accepted by the permitting authority, a new verification shall be completed within 30 days of the effective date of this section.

(ii) Fiberglass and plastic polyethylene tank specifications.

(I) The tank shall be fabricated to perform its intended function when installed. The tank shall not be adversely affected by normal vibration, shock, climate conditions, nor typical household chemicals. The tank shall be free of rough or sharp edges that would interfere with installation or service of the tank.

(II) Full or empty tanks shall not collapse or rupture when subjected to earth and hydrostatic pressures.

(iii) Poured-in-place concrete tanks. Concrete tanks shall be structurally sound and water-tight. The concrete tank shall be designed by a professional engineer.

(iv) Tank manufacturer specifications. All precast or prefabricated tanks shall be clearly and permanently marked, tagged, or stamped with the manufacturer's name, address, and tank capacity. The identification shall be near the level of the outlet and be clearly visible. Additionally, the direction of flow into and out of the tank shall be indicated by arrows or other identification, and shall be clearly marked at the inlet and outlet.

(F) Installation of tanks. For gravity disposal systems, septic tanks must be installed with at least a 12 inch drop in elevation from the bottom of the outlet pipe to the bottom of the disposal area. A minimum of four inches of sand, sandy loam, clay loam, or pea gravel, free of rock larger than 1/2 inch in diameter, shall be placed under and around all tanks, except poured-in-place concrete tanks. Unless otherwise approved by the permitting authority, tank excavations shall be left open until they have been inspected by the permitting authority. Tank excavations must be backfilled with soil or pea gravel[,] that is free of rock larger than 1/2 inch in diameter. Class IV soils and gravel larger than one-half inch in diameter are not acceptable for use as backfill material. If the top of a septic tank extends above the ground surface, soil may be mounded over the tank to maintain slope to the drainfield.

(G) Pretreatment (Trash) tanks. If an aerobic treatment unit does not prevent plastic and other non-digestible sewage from interfering with aeration lines and diffusers, the executive director may require the use of a pretreatment tank. All pretreatment tanks shall meet all applicable structural and fitting requirements of this section.

(H) Leak Testing. At the discretion of the permitting authority, leak testing using water filled to the inside level of the tank lid or to the top of the tank may be required.

(2) Intermittent sand filters. A typical layout and cross-section of an intermittent sand filter is presented in §285.90(8) of this title. Requirements for intermittent sand filters are as follows.

(A) Sand media specifications. Sand filter media must meet ASTM C-33 specifications as outlined in §285.91(11) of this title.

(B) Loading rate. The loading rate shall not exceed 1.2 gallons per day per square foot.

(C) Surface area. The minimum surface area shall be calculated using the formula: Q/1.2=Surface Area (Square Feet), where Q is the wastewater flow in gallons per day.

(D) Thickness of sand media. There shall be a minimum of 24 inches of sand media.

(E) Filter bed containment. The filter bed containment shall be an impervious lined pit or tank. Liners shall meet the specifications detailed in §285.33(b)(2)(A) of this title (relating to Criteria for Effluent Disposal Systems).

(F) Underdrains. For gravity discharge of effluent to a drainfield, there shall be a three inch layer of pea gravel over a six inch layer of 0.75 inch gravel, that contains the underdrain collection pipe. When pumpwells are to be used to pump the effluent from the underdrain to the drainfield, they must be constructed of concrete or plastic sewer pipe. The pumpwell must contain a sufficient number of holes so that effluent can flow from the gravel void space as rapidly as the effluent is pumped out of the pumpwell to the drainfield. Refer to §285.90(9) of this title.

(c) Proprietary treatment systems. This subsection does not apply to proprietary septic tanks described in subsection (b)(1) of this section.

(1) Tank sizing. Proprietary treatment systems must be designed using Table II, located in Figure: 30 TAC §285.91(2) of this title (relating to Septic Tank and Aerobic Treatment Unit Sizing).

(2)[(1)] Installation. Proprietary treatment systems shall be installed according to this subchapter. If the manufacturer has installation specifications that are more stringent than given in this subchapter, the manufacturer shall submit these specifications to the executive director for review. If approved by the executive director, the treatment systems may be installed according to these more stringent specifications. Any subsequent changes to these manufacturer's installation specifications must be approved by the executive director before installation. Tank excavations shall be backfilled according to the backfill provisions in subsection (b)(1)(F) of this section.

(3)[(2)] System maintenance. Ongoing maintenance contracts are required for all proprietary treatment systems. The maintenance contract shall satisfy §285.7(d) [§285.7(c)] of this title (relating to Maintenance Requirements).

(4)[(3)] Electrical wiring. Electrical wiring for proprietary systems shall be according to §285.34(c) of this title (relating to Other Requirements).

(5)[(4)] Approval of proprietary treatment systems. Proprietary treatment systems must be approved by the executive director prior to their installation and use. Approval of proprietary

treatment systems shall follow the procedures found in this section. After the effective date of these rules, only systems tested according to subparagraph (A) or (B) of this paragraph will be placed on the list of approved systems. The list may be obtained from the executive director. All systems on the list of approved systems on the effective date of these rules shall continue to be listed subject to the retesting requirements in paragraph (6)[(5)] of this subsection. In addition, all proprietary treatment systems undergoing testing under this paragraph on the effective date of these rules shall be considered for inclusion on the list of approved systems.

(A) Treatment systems that have been tested by and are currently listed by NSF International as Class I systems under NSF Standard 40 (1999), or have been tested and certified as Class I systems according to NSF Standard 40 (1999) by an American National Standard Institute (ANSI) accredited testing institution, or under any other standards approved by the executive director, shall be considered for approval by the executive director. All systems approved by the executive director on the effective date of these rules shall continue to be listed on the list of approved systems, subject to retesting under the requirements of NSF Standard 40 (1999) and Certification Policies for Wastewater Treatment Devices (1997) or under any standards approved by the executive director. The manufacturers of proprietary treatment systems and the accredited certification institution must comply with all the provisions of NSF Standard 40 (1999) and Certification Policies for Wastewater Treatment Devices (1997) or under any standards approved by the executive director.

(i) Proprietary units under this section have been approved to treat flows equal to or less than their rated capacity and with an influent wastewater strength ranging from a 30-day

average Carbonaceous Biochemical Oxygen Demand (CBOD) concentration between 100 milligrams per liter (mg/l) and 300 mg/l and a 30-day average TSS concentration between 100 mg/l and 350 mg/l.

(ii) Proprietary units may be used as components in an overall treatment system treating influent stronger than the ranges listed in this section. However, the overall treatment system will be considered a non-standard treatment system and shall meet the requirements set forth in subsection (d) of this section.

(B) Treatment systems that will not be accepted for testing because of system size or type by NSF International, or ANSI accredited third party testing institutions, and are not approved systems at the time of the effective date of these rules, may only be approved in the following manner.

(i) The proprietary systems shall be tested by an independent third party for two years and all the supporting data from the test shall be submitted to the executive director for review and approval, or denial before the system is marketed for sale in the state.

(ii) The independent third party shall obtain a temporary authorization from the executive director before testing. The temporary authorization shall contain the following:

(I) the number of systems to be tested (between 20 and 50);

(II) the location of the test sites (the test sites must be typical of the sites where the system will be used if final authorization is granted);

(III) provisions as to how the proprietary system will be installed and maintained;

(IV) the testing protocol for collecting and analyzing samples from the system;

(V) the equipment monitoring procedures, if applicable; and

(VI) provisions for recording data and data retention necessary to evaluate the performance as well as the effect of the proprietary system on public health, groundwater, and surface waters.

(iii) Permitting authorities may issue authorizations to construct upon receipt of the temporary authorization. The owner must be advised, in writing, that the system is temporarily approved for testing. If a system fails, regardless of the reason, it shall be replaced with a system that meets the requirements of this subchapter by the manufacturer at the manufacturer's expense. A system installed under this subparagraph is the responsibility of the manufacturer until the system has obtained final authorization by the executive director according to this subparagraph.

(iv) Upon completion of the two-year test period, the executive director shall require the independent third party to submit a detailed report on the performance of the system. After evaluating the report, the executive director may issue conditional approval of the system, or may deny use of the system.

(I) The conditional approval will authorize installations only in areas similar to the area in which the system was tested.

(II) The conditional approval shall be for a specified performance and evaluation (monitoring) period, not to exceed an additional five years. The system must be monitored according to a plan approved by the executive director. Approval or disapproval of these systems will be based on their performance during the monitoring period. Failure of one or more of the installed systems may be cause for disapproval of the proprietary system. The owner must be advised, in writing, that the system is conditionally approved.

(III) If the executive director denies use of the system after the two-year period, the executive director shall provide, in writing, the reasons for denying the use of the system. If a system fails, regardless of the reason, it shall be replaced with a system that meets the requirements of this subchapter by the manufacturer at the manufacturer's expense.

(v) Upon successful completion of the monitoring period, the monitoring requirements may be lifted by the executive director, the notice of approval may be made

permanent for the test systems and the systems will be deemed suitable for use in conditions similar to areas in which the systems were tested and monitored.

(6)[(5)] System reviews. The manufacturers of systems that are approved for listing under this section [, or included under §285.33(c) of this title (relating to Criteria for Effluent Disposal Systems),] shall ensure that their systems are reviewed every seven years, or as often as deemed necessary by the executive director, starting from the date the system was originally added to the executive director's approved list. All reviews shall be completed before the end of the seven-year period. The manufacturer of any system that was approved by the executive director more than seven years before the effective date of these rules, will be given 365 days from the effective date of these rules to complete a review.

(A) The review shall be performed by either an ANSI accredited institution according to the reevaluation requirements in NSF Standard 40 (1999) and Certification Policies for Wastewater Treatment Devices (1997), or under any standards approved by the executive director, or by an independent third party for those systems not tested under NSF Standard 40.

(B) If the system being reviewed was not approved under the requirements of NSF Standard 40, the independent third party shall evaluate between 20 and 50 systems in the state that have been in operation for at least two years and are the same design as originally approved.

(C) The review under this subsection shall include an evaluation of:

(i) the short-term and long-term effectiveness of the system;

(ii) the structural integrity of the system;

(iii) the maintenance of the system;

(iv) owner access to maintenance support;

(v) any impacts that system failures may have had on the environment; and

(vi) an evaluation of the effectiveness of the manufacturer's installer training program.

(D) Any system that is not approved by the executive director as a result of the review will be removed from the list of approved systems. The manufacturer shall ensure that maintenance support remains available for the existing systems.

(d) Non-standard treatment systems. All OSSFs not described or defined in subsections (b) and (c) of this section are non-standard treatment systems. These systems shall be designed by a professional engineer or a professional sanitarian, and the planning materials shall be submitted to the permitting authority for review according to §285.5(b)(2) of this title (relating to Submittal Requirements for

Planning Materials). Upon approval of the planning materials, an authorization to construct will be issued by the permitting authority.

(1) Non-standard treatment systems include all forms of the activated sludge process, rotating biological contactors, recirculating sand filters, trickling type filters, submerged rock biological filters, and sand filters not described in subsection (b)(2) of this section.

(2) The planning materials for non-standard treatment systems submitted for review will be evaluated using the criteria established in this chapter, or basic engineering and scientific principles.

(3) Approval for a non-standard treatment system is limited to the specific system described in the planning materials. Approval is on a case-by-case basis only.

(4) The need for ongoing maintenance contracts shall be determined by the permitting authority based on the review required by §285.5(b) of this title. If the permitting authority determines that a maintenance contract is required, the contract must meet the requirements in §285.7 of this title.

(5) Electrical wiring for non-standard treatment systems shall be installed according to §285.34(c)(4) of this title.

(e) Effluent quality. The following effluent criteria shall be met by the treatment systems for those disposal systems listed in §285.33 of this title that require secondary treatment.

Figure: 30 TAC §285.32(e) (No change.)

Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS):

30-day average..... 20 mg/l
seven-day average..... 30 mg/l
Daily Maximum..... 45 mg/l
Single Grab..... 65 mg/l

pH ..... 6.0 - 9.0 standard units

Carbonaceous Biochemical Oxygen Demand (CBOD) - to be used instead of BOD for proprietary treatment systems tested after 1996

30-day average..... 15 mg/l
seven-day average..... 25 mg/l
Daily Maximum..... 40 mg/l
Single Grab..... 60 mg/l

The 30-day average is the average of all 30-day averages, and seven-day average is the average of all seven-day averages over the length of the testing period.

(f) Other Design Considerations.

(1) Restaurant/food establishment sewage. When designing for restaurants, food service establishments, or similar activities, the minimum design strength value shall be 1,200 mg/l Biochemical Oxygen Demand (BOD) after a properly sized grease trap/interceptor. It is the responsibility of the designer to properly design a system which reduces the wastewater strength to 140 mg/l BOD prior to disposal unless secondary treatment levels are required.

(2) Other high-strength sewage. For situations where sewage as defined in this chapter is expected to be a higher strength than residential sewage, it is the responsibility of the professional designer to justify sewage design strength estimations and properly design a system that reduces the wastewater strength to 140 mg/l BOD prior to disposal unless secondary treatment levels are required. Residential sewage is sewage that has a strength of less than 300 mg/l BOD.

(3) Flow equalization. The designer should consider whether flow-equalization will be needed for the treatment system to function properly.

§285.33. Criteria for Effluent Disposal Systems.

(a) General requirements.

(1) All disposal systems in this section shall have an approved treatment system as specified in §285.32(b) - (d) of this title (relating to Criteria for Sewage Treatment Systems).

(2) All criteria in this section shall be met before the permitting authority issues an authorization to construct.

(3) The pipe between all treatment tanks and the pipe from the final treatment tank to a gravity disposal system shall be a minimum of three inches in diameter and be American Society for Testing and Materials (ASTM) 3034, Standard dimension ratio (SDR) 35 polyvinyl chloride (PVC) pipe

or a pipe with an equivalent or stronger pipe stiffness at a 5% deflection. The pipe must maintain a continuous fall to the disposal system.

(4) The pipe from the final treatment tank to a gravity disposal system shall be a minimum of five feet in length.

(5) Except for drip irrigation tubing, pipe under internal pressure within any part of an on-site sewage facility system shall meet the minimum requirements of ASTM Schedule 40.

(b) Standard disposal systems. Acceptable standard disposal methods shall consist of a drainfield to disperse the effluent either into adjacent soil (absorptive) or into the surrounding air through evapotranspiration (evaporation and transpiration).

(1) Absorptive drainfield. An absorptive drainfield shall only be used in suitable soil. There shall be two feet of suitable soil from the bottom of the excavation to either a restrictive horizon or to groundwater.

(A) Excavation. The excavation must be made in suitable soils as described in §285.31(b) of this title (relating to Selection Criteria for Treatment and Disposal Systems).

(i) The excavation shall be at least 18 inches deep but shall not exceed a depth of either three feet or six inches below the soil freeze depth, whichever is deeper. Single excavations shall not exceed 150 feet.

(ii) In areas of the state where annual precipitation is less than 26 inches per year (as identified in the *Climatic Atlas of Texas,* (1983) published by the Texas Department of Water Resources or other standards approved by the executive director), and suitable soils (Class Ib, II, or III) lie below unsuitable soil caps, the maximum permissible excavation depth shall be five feet.

(iii) Multiple excavations must be separated horizontally by at least three feet of undisturbed soil. The sidewalls and bottom of the excavation must be scarified as needed. When there are multiple excavations, it is recommended that the ends be looped together.

(iv) The bottom of the excavation shall be not less than 18 inches in width.

(v) The bottom of the excavation shall be level to within one inch over each 25 feet of excavation or within three inches over the entire excavation, whichever is less.

(vi) If the borings or backhoe pits excavated during the site evaluation encounter a rock horizon and the site evaluation shows that there is both suitable soil from the bottom of the rock horizon to two feet below the bottom of the proposed excavation and no groundwater anywhere within two feet of the bottom of the proposed excavation, a standard subsurface disposal system may be used, providing the following are met.

(I) The depth of the excavation shall comply with clause (i) of this subparagraph.

(II) The rock horizon shall be at least six inches above the bottom of the excavation.

(III) Surface runoff shall be prevented from flowing over the disposal area.

(IV) Subsurface flow along the top of the rock horizon shall be prevented from flowing into the excavation.

(V) The sidewall area will not be counted toward the required absorptive area.

(VI) The formulas in clause (vii)(I) - (III) of this subparagraph shall be adjusted so that no credit is given for sidewall area.

(VII) No single pipe drainfields on sloping ground as shown in §285.90(5) of this title (relating to Figures) or no systems using serial loading shall be used.

(vii) The size of the excavation shall be calculated using data from §285.91(1) and (3) of this title (relating to Tables). The soil application rate is based on the most

restrictive horizon along the media, or within two feet below the bottom of the excavation. The formula A = Q/Ra shall be used to determine the total absorptive area where:

Figure: 30 TAC §285.33(b)(1)(A)(vii) (No change.)

A = absorptive area
Q = average daily sewage flow in gallons per day
Ra = soil application rate in gallons per square foot per day

(I) The absorptive area shall be calculated by adding the bottom area (L x W) of the excavation to the total absorptive area along the excavated perimeter 2(L+W), (in feet) multiplied by one foot.

Figure: 30 TAC §285.33(b)(1)(A)(vii)(I) (No change.)

Absorptive Area = (L x W) + 2 (L+W) x 1.0 ft
Where: L = excavation length
W = excavation width

(II) The length of the excavation may be determined as follows when the area and width are known.

Figure: 30 TAC §285.33(b)(1)(A)(vii)(II) (No change.)

L = (A-2W)/(W+2)

A = absorptive area

W = excavation width

(III) For excavations three feet wide or less, use the following formula, or §285.91(8) of this title to determine L.

Figure: 30 TAC §285.33(b)(1)(A)(vii)(III) (No change.)

L = A/(W+2)

A = absorptive area

W = excavation width

(B) Media. The media shall consist of clean, washed and graded gravel, broken concrete, rock, crushed stone, chipped tires, or similar aggregate that is generally one uniform size and approved by the executive director. The size of the media must range from 0.75 - 2.0 inches as measured along its greatest dimension except as noted in clause (i) of this subparagraph.

(i) If chipped tires are used:

(I) a geotextile fabric heavier than specified in subparagraph (E) of this paragraph must be used; and

(II) the size of the chipped tires must not exceed three inches as measured along their greatest dimension.

(ii) Soft media such as oyster shell and soft limestone shall not be used.

(C) Drainline. The drainline shall be constructed of perforated distribution pipe and fittings in compliance with any one of the following specifications:

(i) three- or four-inch diameter PVC pipe with an SDR of 35 or stronger;

(ii) four-inch diameter corrugated polyethylene, ASTM F405 in rigid ten foot joints;

(iii) three- or four-inch diameter polyethylene smoothwall, ASTM F810;

(iv) three- or four-inch diameter PVC ASTM D2729 pipe;

(v) three- or four-inch diameter polyethylene ASTM F892 corrugated pipe with a smoothwall interior and fittings; or

(vi) any other pipe approved by the executive director.

(D) Drainline installation requirements. The drainline shall be placed in the media with at least six inches of media between the bottom of the excavation and the bottom of the drainline. The drainline shall be completely covered by the media and the drainline perforations shall be below the horizontal center line of the pipe. For typical drainfield configurations, see §285.90(5) of this title. For excavations greater than four feet in width, the maximum distance between parallel drainlines shall be four feet (center to center). Multiple drainlines shall be manifolded together with solid or perforated pipe. Additionally, the ends of the multiple drainlines opposite the manifolded end shall either be manifolded together with a solid line, looped together using a perforated pipe and media, or capped.

(E) Permeable soil barrier. Geotextile fabric shall be used as the permeable soil barrier and shall be placed between the top of the media and the excavation backfill. Geotextile fabric shall conform to the following specifications for unwoven, spun-bounded polypropylene, polyester, or nylon filter wrap.

Figure: 30 TAC §285.33(b)(1)(E) (No change.)

Minimum values
Weight oz/sq yd (ASTM D3776) 0.70
Grab Strength lbs (ASTM D4632) 11
Air Permeability cfm/sq ft (ASTM D737) 500
Water Flow Rate gpm/sq ft @ 3" head (ASTM D4491) 33
Trapezoidal Tear Strength Lbs (ASTM D4533) 6

(F) Backfilling. Only Class Ib, II, or III soils as described in §285.30 of this title (relating to Site Evaluation) shall be used for backfill. Class Ia and IV soils are specifically prohibited for use as a backfill material. The backfill material shall be mounded over the excavated area so that the center of the backfilled area slopes down to the outer perimeter of the excavated area to allow for settling. Surface runoff impacting the disposal area is not permitted and the diversion method shall be addressed during development of the planning materials.

(G) Drainfields on irregular terrain. Where the ground slope is greater than 15% but less than 30%, a multiple line drainfield may be constructed along descending contours as shown in §285.90(5) of this title. An overflow line shall be provided from the upper excavations to the lower excavations. The overflow line shall be constructed from solid pipe with an SDR of 35 or stronger, and the excavation carrying the overflow pipe shall be backfilled with soil only.

(H) Drainfield plans. A number of sketches, specifications, and details for drainfield construction are provided in §285.90(4) and (5) of this title.

(2) Evapotranspirative (ET) system. An ET system may be used in soils which are classified as unsuitable for standard subsurface absorption systems according to §285.31(b) of this title with respect to texture, restrictive horizons, or groundwater. Water saving devices must be used if an ET system is to be installed. ET systems shall only be used in areas of the state where the annual average evaporation exceeds the annual rainfall. Evaporation data is provided in §285.91(7) of this title.

(A) Liners. An impervious liner shall be used between the excavated surface and the ET system in all Class Ia soils, where seasonal groundwater tables penetrate the excavation, and where a minimum of two feet of suitable soil does not exist between the excavated surface and either a restrictive horizon or groundwater. Liners shall be rubber, plastic, reinforced concrete, gunite, or compacted clay (one foot thick or more). If the liner is rubber or plastic, it must be impervious, and each layer must be at least 20 mils thick. Rubber or plastic liners must be protected from exposed rocks and stones by covering the excavated surface with a uniform sand cushion at least four inches thick. Clay liners shall have a permeability of 10^{-7} centimeters/second or less, as tested by a certified soil laboratory.

(B) ET system sizing. The following formula shall be used to calculate the top surface area of an ET system.

Figure: 30 TAC §285.33(b)(2)(B) (No change.)

$A = 1.6\ Q/Ret$

Where: A = total top surface area of the excavations.

Q = estimated daily water usage in gallons/day in §285.91(3) of this title (relating to Tables).

Ret = net local evaporation rate in §285.91(7) of this title.

The owner of the ET system shall be advised by the person preparing the planning materials of the limits placed on the system by the Q selected. If the Q is less than required by

§285.91(3) of this title, the flow rate shall be included as a condition to the permit, and stated in an affidavit properly filed and recorded in the deed records of the county as specified in §285.3(b)(3) of this title (relating to General Requirements).

(C) Backfill material. Backfill material shall consist of Class II soil as described in §285.30 of this title. All drainlines must be surrounded by a minimum of one foot of media. Backfill shall be used to fill the excavation between the media to allow the backfill material to contact the bottom of the excavation.

(D) Vegetative cover for transpiration. The final grade shall be covered with vegetation fully capable of taking maximum advantage of transpiration. Evergreen bushes with shallow root systems may be planted in the disposal area to assist in water uptake. Grasses with dormant periods shall be overseeded to provide year-round transpiration.

(E) ET systems. ET systems shall be divided into two or more equal excavations connected by flow control valves. One excavation may be removed from service for an extended period of time to allow it to dry out and decompose biological material which might plug the excavation. If one of the excavations is removed from service, the daily water usage must be reduced to prevent overloading of the excavation(s) still in operation. Normally, an excavation must be removed from service for two to three dry months for biological breakdown to occur.

(F) ET system plans. A number of sketches for ET system construction are provided in §285.90(4) and (5) of this title.

(3) Pumped effluent drainfield. Pumped effluent drainfields shall use the specifications for low-pressure dosed drainfields described in subsection (d)(1) of this section, with the following exceptions.

(A) Applicability. If the slope of the site is greater than 2.0%, pumped effluent drainfields shall not be used. Pumped effluent drainfields may only be used by single family dwellings.

(B) Length of distribution pipe. There shall be at least 1,000 linear feet of perforated pipe for a two bedroom single family dwelling. For each additional bedroom, there shall be an additional 400 linear feet of perforated pipe. No individual distribution line shall exceed 70 feet in length from the header.

(C) Excavation width and horizontal separation. The excavated area shall be at least six inches wide. There shall be at least three feet of separation between trenches.

(D) Lateral depth and vertical separation. All drainfield laterals shall be between 18 inches and three feet deep. There shall be a minimum vertical separation distance of one foot from the bottom of the excavation to a restrictive horizon, and a minimum vertical separation of two feet from the bottom of the excavation to groundwater.

(E) Media. Each dosing pipe shall be placed with the drain holes facing down and placed on top of at least six inches of media (pea gravel or media up to two inches measured along its greatest dimension).

(F) Pipe and hole size. The distribution (dosing) and manifold (header) pipe shall be 1.25 - 1.5 inches in diameter. The manifold may have a diameter larger than the distribution pipe, but shall not exceed 1.5 inches in diameter. Distribution (dosing) pipe holes shall be 3/16 - 1/4 inch in diameter and shall be spaced five feet apart.

(G) Pump size. Pumped effluent drainfields shall use at least a 1/2 horsepower pump.

(H) Backfilling. Only Class Ib, II, or III soils as described in §285.30(b)(1)(A) of this title shall be used for backfill.

(c) Proprietary disposal systems.

(1) Gravel-less drainfield piping. Gravel-less pipe may be used only on sites suitable for standard subsurface sewage disposal methods. Gravel-less pipe shall be eight-inch or ten-inch diameter corrugated perforated polyethylene pipe. The pipe shall be enclosed in a layer of unwoven spun-bonded polypropylene, polyester, or nylon filter wrap. Gravel-less pipe shall meet ASTM F-667 Standard Specifications for large diameter corrugated high density polyethylene (ASTM D 1248) tubing. The filter cloth must meet the same material specifications as described under subsection (b)(1)(E) of this section.

(A) Planning parameters. Gravel-less drainfield pipe may be substituted for drainline pipe in both absorptive and ET systems. When gravel-less pipe is substituted, media will not be required. ET systems shall be backfilled with Class II soils only. All other planning parameters for absorptive or ET systems apply to drainfields using gravel-less pipe.

(B) Installation. The connection from the solid line leaving the treatment tank to the gravel-less line shall be made by using an eight or ten-inch offset connector. The gravel-less line shall be laid level, the continuous stripe shall be up, and the lines shall be joined together with couplings. A filter cloth must be pulled over the joint to eliminate soil infiltration. The gravel-less pipe must be held in place during initial backfilling to prevent movement of the pipe. The end of each gravel-less line shall have an end cap and an inspection port. The inspection port shall allow for easy monitoring of the amount of sludge or suspended solids in the line, and allow the distribution lines to be back-flushed.

(C) Drainfield sizing. To determine appropriate drainfield sizing, use a drainfield width of W = 2.0 feet for an eight-inch diameter gravel-less pipe, and an excavation width of W = 2.5 for a ten-inch gravel-less pipe.

Figure: 30 TAC §285.33(c)(1)(C) (No change.)

$L = A/(W+2)$

A = absorptive area as calculated in subsection (b)(1)(A)(vii) of this section

W = excavation width

(2) Leaching chambers. Leaching chambers are bottomless chambers that are installed in a drainfield excavation with the open bottom of the chamber in direct contact with the excavation. The ends of the chamber rows shall be linked together with non-perforated sewer pipe. The chambers shall completely cover the excavation, and adjacent chambers must be in contact with each other in such a manner that the chambers will not separate. To obtain the reduction in drainfield size allowed in subparagraph (A)(i) and (ii) of this paragraph for excavations wider than the chambers, the chambers shall be placed edge to edge.

(A) The following formulas shall be used to determine the length of an excavation using leaching chambers.

(i) The following formula is used for leaching chambers without water saving devices.

Figure: 30 TAC §285.33(c)(2)(A)(i) (No change.)

$L = 0.6A/(W+2)$

Where: A = minimum absorptive area calculated with no flow reduction; and

W = leaching chamber panel width

(ii) The following formula is used for leaching chambers with water saving devices.

Figure: 30 TAC §285.33(c)(2)(A)(ii) (No change.)

$L = 0.75A/(W+2)$

Where: A = minimum absorptive area calculated with flow reduction; and

W = leaching chamber panel width

(B) Leaching chambers shall not be used for absorptive drainfields in Class Ia or IV soils. Leaching chambers may be used instead of media in ET systems, low-pressure dosed drainfields, and soil substitution drainfields; however, the size of the drainfield shall not be reduced from the required area.

(C) Backfill covering leaching chambers shall be Class Ib, II, or III soil.

(3) Drip irrigation. Drip irrigation systems using secondary treatment may be used in all soil classes including Class IV soils. The system must be equipped with a filtering device capable of filtering particles larger than 100 microns and that meets the manufacturer's requirements.

(A) Drainfield layout. The drainfield shall consist of a matrix of small-diameter pressurized lines, buried at least six inches deep, and pressure reducing emitters spaced at a maximum of

30-inch intervals. The pressure reducing emitter shall restrict the flow of effluent to a flow rate low enough to ensure equal distribution of effluent throughout the drainfield.

(B) Effluent quality. The treatment preceding a drip irrigation system shall treat the wastewater to secondary treatment as described in §285.32(e) of this title unless the drip irrigation system has been approved by the executive director as a proprietary disposal system without the use of secondary treatment.

(C) System flushing. Systems must be equipped to flush the contents of the lines back to the pretreatment unit when intermittent flushing is used. If continuous flushing is used during the pumping cycle, the contents of the lines must be returned to the pump tank.

(D) Loading rates. Pressure reducing emitters can be used in all classes of soils using loading rates specified in §285.91(1) of this title. Pressure reducing emitters are assumed to wet four square feet of absorptive area per emitter; however, overlapping areas shall only be counted once toward absorptive area requirements. The loading rate shall be based on the most restrictive soil horizon within one foot of the pressure reducing emitter. When solid rock is less than 12 inches below the pressure reducing emitter, the loading rate shall be based on Class IV soils.

(E) Vertical separation distance. There shall be a minimum of one foot of soil between the pressure reducing emitter and groundwater and six inches between the pressure reducing emitter and solid rock, or fractured rock. For proprietary disposal systems that do not pretreat to

secondary treatment, there shall be two feet of soil between the groundwater and pressure reducing emitter and one foot of soil between solid rock or fractured rock and the pressure reducing emitter.

(F) Labeling or listing. All drip irrigation system devices shall either be labeled by the manufacturer as suitable for use with domestic sewage, or be on the list of approved devices maintained by the executive director according to §285.32(c)(4) of this title.

(4) Approval of proprietary disposal systems. All proprietary disposal systems, other than those described in this section, shall be approved by the executive director before they may be used. Proprietary disposal systems shall be approved by the executive director using the procedures established in §285.32(c)(4)(B) of this title.

(d) Nonstandard disposal systems. All disposal systems not described or defined in subsections (b) and (c) of this section are nonstandard disposal systems. Planning materials for nonstandard disposal systems must be developed by a professional engineer or professional sanitarian using basic engineering and scientific principles. The planning materials for paragraphs (1) - (5) of this subsection shall be submitted to the permitting authority and the permitting authority shall review and either approve or disapprove them on a case-by-case basis according to §285.5 of this title (relating to Submittal Requirements for Planning Materials). Electrical wiring for nonstandard disposal systems shall be installed according to §285.34(c) of this title (relating to Other Requirements). Upon approval of the planning materials, an authorization to construct will be issued by the permitting authority. Approval for a nonstandard disposal system is limited to the specific system described in the planning materials for the

specific location. The systems identified in paragraphs (1) - (5) of this subsection must meet these requirements, in addition to the requirements identified for each specific system in this section.

(1) Low-pressure dosed drainfield. Effluent from this type of system shall be pumped, under low pressure, into a solid wall force main and then into a perforated distribution pipe installed within the drainfield area.

(A) The effluent pump in the pump tank must be capable of an operating range that will assure that effluent is delivered to the most distant point of the perforated piping network, yet not be excessive to the point that blowouts occur.

(B) A start/stop switch or timer must be included in the system to control the dosing pump. An audible and visible high water alarm, on an electric circuit separate from the pump, must be provided.

(C) Pressure dosing systems shall be installed according to either design criteria in the *North Carolina State University Sea Grant College Publication UNC-S82-03* (1982) or other publications containing criteria or data on pressure dosed systems which are acceptable to the permitting authority. Additionally, the following sizing parameters are required for all low-pressure dosed drainfields and shall be used in place of the sizing parameters in the *North Carolina State University Sea Grant College Publication* or other acceptable publications.

(i) The low-pressure dosed drainfield area shall be sized according to the effluent loading rates in §285.91(1) of this title and the wastewater usage rates in §285.91(3) of this title. The effluent loading rate (Ra) in the formula in §285.91(1) of this title shall be based on the most restrictive horizon one foot below the bottom of the excavation. Excavated areas can be as close as three feet apart, measured center to center. All excavations shall be at least six inches wide. To determine the length of the excavation, use the following formulas, where L = excavation length, and A = absorptive area.

(I) If the media in the excavation is at least one foot deep, the length of the excavation is L = A/(w+2) where:

(-a-) w = the width of the excavation for excavations one foot wide or greater; or

(-b-) w = 1 for all excavations less than one foot wide.

(II) If the media in the excavation is less than one foot deep, the length of the excavation is L = A/(w + 2H), where H = the depth of the media in feet and:

(-a-) w = the width of the excavation for excavations one foot wide or greater; or

(-b-) w = 1 for all excavations less than one foot wide.

(ii) Each dosing pipe shall be placed with the drain holes facing down and placed on top of at least six inches of media (pea gravel or media up to two inches measured along the greatest dimension).

(iii) Geotextile fabric meeting the criteria in subsection (b)(1)(E) of this section shall be placed over the media. The excavation shall be backfilled with Class Ib, II, or III soil.

(iv) There shall be a minimum of one foot of soil between the bottom of the excavation and solid or fractured rock. There shall be a minimum of two feet of soil between the bottom of the excavation and groundwater.

(2) Surface application systems. Surface application systems include those systems that spray treated effluent onto the ground.

(A) Acceptable surface application areas. Land acceptable for surface application shall have a flat terrain (with less than or equal to 15% slope) and shall be covered with grasses, evergreen shrubs, bushes, trees, or landscaped beds containing mixed vegetation. There shall be nothing in the surface application area within ten feet of the sprinkler which would interfere with the uniform application of the effluent. Sloped land (with greater than 15%) may be acceptable if it is properly landscaped and terraced to minimize runoff.

(B) Unacceptable surface application areas. Land that is used for growing food, gardens, orchards, or crops that may be used for human consumption, as well as unseeded bare ground, shall not be used for surface application.

(C) Technical report. A technical report shall be prepared for any system using surface application and shall be submitted with the planning materials required in §285.5(a) of this title. The technical report shall describe the operation of the entire on-site sewage facility OSSF system, and shall include construction drawings, calculations, and the system flow diagram. Proprietary aerobic systems may reference the executive director's approval list instead of furnishing construction drawings for the system.

(D) Effluent disinfection. Treated effluent must be disinfected before surface application. The effluent quality in the pump tank must meet the minimum required test results specified in §285.91(4) of this title. Approved disinfection methods shall include chlorination, ozonation, ultraviolet radiation, or other method approved by the executive director. Tablet or other dry chlorinators shall use calcium hypochlorite properly labeled for wastewater disinfection. The effectiveness of the disinfection procedure will be established by monitoring either the fecal coliform count or total chlorine residual from representative effluent grab samples as directed in the testing and reporting schedule. The frequency of testing, the type of tests, and the required results are shown in §285.91(4) of this title.

(E) Minimum required application area. The minimum surface application area required shall be determined by dividing the daily usage rate (Q), established in §285.91(3) of this title,

by the allowable surface application rate (Ri = effective loading rate in gallons per square foot per day) found in §285.90(1) of this title or as approved by the permitting authority.

(F) Landscaping plan. Applications for surface application disposal systems shall include a landscape plan. The landscape plan shall describe, in detail, the type of vegetation to be maintained in the disposal area. Surface application systems may apply treated and disinfected effluent upon areas with existing vegetation. If any ground within the proposed surface application area does not have vegetation, that bare area shall be seeded or covered with sod before system start-up. The vegetation shall be capable of growth, before system start-up.

(G) Uniform application of effluent. Distribution pipes, sprinklers, and other application methods or devices must provide uniform distribution of treated effluent. The application rate must be adjusted so that there is no runoff.

(i) Sprinkler criteria. The maximum inlet pressure for sprinklers shall be 40 pounds per square inch. Low angle nozzles (15 degrees or less in trajectory) shall be used in the sprinklers to keep the spray stream low and reduce aerosols. If the separation distance between the property line and the edge of the surface application area is less than 20 feet, sprinkler operation shall be controlled by commercial irrigation timers set to spray between midnight and 5:00 a.m.

(ii) Planning criteria. Circular spray patterns may overlap to cover all irrigated area including rectangular shapes. The overlapped area will be counted only once toward the

total application area. For large systems, multiple sprinkler heads are preferred to single gun delivery systems.

(iii) Effluent storage and pumping requirements.

(I) For systems controlled by a commercial irrigation timer and required to spray between midnight and 5:00 a.m., there shall be at least one day of storage between the alarm-on level and the pump-on level, and a storage volume of one-third the daily flow between the alarm-on level and the inlet to the pump tank.

(II) For systems not controlled by a commercial irrigation timer, the minimum dosing volume shall be at least one-half the daily flow, and a storage volume of one-third the daily flow between the alarm-on level and the inlet to the pump tank.

(III) Pump tank construction and installation shall be according to §285.34(b) of this title.

(iv) Distribution piping. Distribution piping shall be installed below the ground surface and hose bibs shall not be connected to the distribution piping [outside the pump tank]. An unthreaded sampling port shall be provided in the treated effluent line in the pump tank.

(v) Color coding of distribution system. All [Effective 365 days after the effective date of these rules, all] new distribution piping, fittings, valve box covers, and sprinkler tops

shall be permanently colored purple to identify the system as a reclaimed water system according to Chapter 210 of this title (relating to Use of Reclaimed Water).

(3) Mound drainfields. A mound drainfield is an absorptive drainfield constructed above the native soil surface. The mound consists of a distribution area installed within fill material placed on the native soil surface. The required area of the fill material is a function of the texture of the native soil surface, the depth of the native soil, basal area sizing considerations, and sideslope requirements. A description of mound construction, as well as construction requirements not addressed in this section can be found in the *North Carolina State University Sea Grant College Publication UNC-SG-82-04* (1982).

(A) A mound drainfield shall only be installed at a site where there is at least one foot of native soil; however, approval for installation on sites with less than one foot of native soil may be granted by the permitting authority on a case-by-case basis.

(B) Mounds and mound distribution systems must be constructed with the longest dimension parallel to the contour of the site.

(C) Soil classification, loading rates (R(a)), and wastewater usage rates (Q) shall all be obtained from this chapter.

(D) The depth of soil material (with less than 30% gravel) between the bottom of the media and a restrictive horizon must be at least 1.5 feet to the restrictive horizon or two feet to groundwater. The soil material includes both the fill and the native soil.

(E) The distribution area is defined as the interface area between the media containing the distribution piping and the fill material or the native soil, if applicable. The distribution length is the dimension parallel with the contour and equivalent to the length of the distribution media which must also run parallel with the contour. The distribution lines within the distribution media must extend to 12 inches of the end of the distribution media. The distribution width is defined as the distribution area divided by the distribution length.

(i) The formula A(d) = Q/R(a) shall be used for calculating the minimum required distribution area of the mound where:

Figure: 30 TAC §285.33(d)(3)(E)(i) (No change.)

A(d) = minimum required distribution absorptive area in square feet
Q = design wastewater usage rate in gallons per day
R(a) = most restrictive application rate between the fill material or the soil surface if the soil surface is within four inches of the bottom of the distribution media. The application rate is in gallons per square foot per day.

(ii) The area credited toward the minimum required distribution area can be determined in either of the following ways.

(I) If the distribution area consists of a continuous six-inch layer of media over the fill, the credited area is the bottom interface area between the media and soil beneath the media.

(II) If the distribution area consists of rows of media and distribution piping, the credited area can be calculated using the formulas listed in paragraph (1)(C)(i)(I) or (II) of this subsection depending on the depth of the media.

(iii) For sites with greater than 2% slopes and solid bedrock, saturated zones, or class IV horizons within two feet of the native soil surface, the length to width ratio of the distribution area must be at least 7 : 1. For sites with greater than 2% slopes and no solid bedrock, saturated zones, or class IV horizons within two feet of the native soil surface, the length to width ratio of the distribution area must be at least 4 : 1. No length to width ratio is required on a site with 2% slope or less.

(iv) Effluent must be pressure dosed into the distribution piping to ensure equal distribution and to control application rates.

(v) If a continuous layer of media is used, the dosing lines must not be spaced more than three feet apart. If rows of media are used, the rows may be as close as three feet apart, measured edge to edge.

(vi) The dosing holes must not be greater than three feet apart.

(F) The basal area is defined as the interface area between the native soil surface and the fill material. The formula A(b) = Q/R(a) must be used for calculating the minimum required basal area of the mound where:

Figure: 30 TAC §285.33(d)(3)(F) (No change.)

A(b) = minimum required basal absorptive area in square feet

Q = design wastewater usage rate in gallons per day

R(a) = application rate of the native soil surface in gallons per square foot per day[.]

(i) On sites with greater than 2% slope, the area credited toward the required minimum basal area is computed by multiplying the length of the distribution system by the distance from the upslope edge of the distribution system to the downslope toe of the mound.

(ii) On sites with 2% slopes or less, the area credited toward the minimum required basal area sizing includes all areas below the distribution system as well as the side slope area on all side slope areas greater than six inches deep.

(G) Mounds shall only be installed on sites with less than 10% slope.

(H) The toe of the mound is considered the edge of the soil absorption system.

(I) The side slopes must be no steeper than three to one.

(J) There must be at least six inches of backfill over the distribution media and the mound shall be crowned to shed water.

(4) Soil substitution drainfields. Soil substitution drainfields may be constructed in Class Ia soils, highly permeable fractured rock, highly permeable fissured rock, or Class II and III soils with greater than 30% gravel.

(A) A soil substitution drainfield must not be used in Class IV soils or Class IV soils with greater than 30% gravel. Class III or IV soil shall not be used as the substituted soil in a soil substitution drainfield. There must be at least two feet of substituted soil between the bottom of the media and groundwater.

(B) A soil substitution drainfield is constructed similar to a standard absorptive drainfield except that a minimum two foot thick Class Ib or Class II soil buffer shall be placed below and on all sides of the drainfield excavation. The soil buffer must extend at least to the top of the media. The two-foot buffer area along the sides of the excavation is not credited as bottom area in calculating absorptive area. However, the interface between the media and the substituted soil is credited as absorptive area.

(C) Soil substitution drainfields must be designed to address soil compaction to prevent unlevel disposal. It is recommended that low-pressure dosing be used for effluent distribution.

The edge of the substituted soil is considered the edge of the soil absorption drainfield in determining the appropriate separation distances as listed in §285.91(10) of this title.

(D) Class Ia soils do not provide adequate treatment of wastewater through soil contact. A soil substitution drainfield may be constructed in Class Ia soils in order to provide adequate soil for treatment. Absorptive area sizing must be based on the textural class of the substituted soil and must follow the formulas in subsection (b)(1)(A)(vii)(I) of this section.

(E) Highly permeable fractured and fissured rock, which contains soil in the fractures and fissures, does not provide adequate treatment of wastewater through soil contact. A soil substitution drainfield can be constructed in this permeable fractured and fissured rock in order to provide adequate soil for treatment. Absorptive area sizing must be based on the most restrictive textural class between either the native soil residing in the fractures or fissures or the substituted soil. The sizing must follow the formulas in subsection (b)(1)(A)(vii)(I) of this section.

(F) Class II and III soils with greater than 30% gravel do not provide adequate treatment of wastewater through soil contact. A soil substitution drainfield can be constructed in Class II or III soils with greater than 30% gravel in order to provide adequate soil for treatment. Absorptive area sizing must be based on the most restrictive textural class between either the non-gravel portion of the native soil or the substituted soil. The sizing must follow the formulas in subsection (b)(1)(A)(vii)(I) of this section.

(5) Drainfields following secondary treatment and disinfection. Subsurface drainfields following secondary treatment and disinfection may be constructed in Class Ia soils, fractured rock, fissured rock, or other conditions where insufficient soil depth will allow septic tank effluent to reach fractured rock or fissured rock, as long as the following conditions are met.

(A) Drainfield sizing.

(i) If the unsuitable feature is Class Ia soil, the disposal area sizing shall be based on the application rate for Class Ib soil. Some form of pressure distribution shall be used for effluent disposal.

(ii) If the unsuitable feature is fractured or fissured rock, the system sizing should be based on the application rate for Class III soil. Some form of pressure distribution system shall be used for effluent disposal.

(B) Effluent disinfection. Treated effluent must be disinfected as indicated in §285.32(e) of this title before discharging into the drainfield.

(C) Other requirements. The affidavit, maintenance, and testing and reporting requirements of §285.3(b)(3) of this title and §285.7(a) and (d) of this title (relating to Maintenance Requirements) apply to these systems.

(6) All other nonstandard disposal systems. The planning materials for all non-standard disposal systems not described in paragraphs (1) - (5) of this subsection shall be submitted to the executive director for review according to §285.5(b)(2) of this title before the systems can be installed.

§285.34. Other Requirements.

(a) Septic tank effluent filters. Effective 180 days after the effective date of these rules, all effluent filters that are installed in septic tanks shall be listed and approved under the NSF Standard 46 (2000) or under any standard approved by the executive director.

(b) Pump tanks. Pump tanks may be necessary when the septic tank outlet is at a lower elevation than the disposal field or for systems that require pressure disposal. All requirements in §285.32(b)(1)(D) - (F) of this title (relating to Criteria for Sewage Treatment Systems) also apply to pump tanks. The pump tank shall be constructed according to the following specifications.

(1) Pump tank criteria. When effluent must be pumped to a disposal area, an appropriate pump shall be placed in a separate water-tight tank or chamber. A check valve may be required if the disposal area is above the pump tank. The pump tank shall be equipped to prevent siphoning. The tank shall be provided with an audible and visible high water alarm. If an electrical alarm is used, the power circuit for the alarm shall be separate from the power circuit for the pump. Batteries may be used for back-up power supply only. All electrical components shall be listed and labeled by Underwriters Laboratories (UL).

(2) Pump tank sizing. Pump tanks shall be sized to contain one-third of a day's flow between the alarm-on level and the inlet to the pump tank. The capacity above the alarm-on level may be reduced to four hours average daily flow if the pump tank is equipped with multiple pumps. See §285.33(d)(2)(G)(iii) of this title (relating to Criteria for Effluent Disposal Systems) for sizing of pump tanks for surface application systems.

(3) Pump specifications. A single pump may be used for flows equal to or less than 1,000 gallons per day. Dual pumps are required for flows greater than 1,000 gallons per day. A dual pump system shall have the "alarm on" level below the "second pump on" level, and shall have a lock-on feature in the alarm circuit so that once it is activated it will not go off when the second pump draws the liquid level below the "alarm on" level. All audible and visible alarms shall have a manual "silence" switch. The pump switch-gear shall be set such that each pump operates as the first pump on an alternating basis. All pumps shall be rated by the manufacturer for pumping sewage or sewage effluent.

(c) Electrical wiring. All electrical wiring shall conform to the requirements the National Electric Code (1999) or under any other standards approved by the executive director. Additionally, all external wiring shall be installed in approved, rigid, non-metallic gray code electrical conduit. The conduit shall be buried according to the requirements in the National Electrical Code and terminated at a main circuit breaker panel or sub-panel. Connections shall be in approved junction boxes. All electrical components shall have an electrical disconnect within direct vision from the place where the electrical device is being serviced. Electrical disconnects must be weatherproof (approved for outdoor use) and have maintenance lockout provisions.

(d) Grease interceptors. Grease interceptors shall be used on kitchen waste-lines from institutions, hotels, restaurants, schools with lunchrooms, and other buildings that may discharge large amounts of greases and oils to the OSSF. Grease interceptors shall be structurally equivalent to, and backfilled according to, the requirements established for septic tanks under §285.32(b)(1)(D) - (F) of this title. The interceptor shall be installed near the plumbing fixture that discharges greasy wastewater and shall be easily accessible for cleaning. Grease interceptors shall be cleaned out periodically to prevent the discharge of grease to the disposal system. Grease interceptors shall be properly sized and installed according to the requirements of the 2000 edition of the Uniform Plumbing Code, the 1980 EPA Design Manual: Onsite Wastewater Treatment and Disposal Systems, or other prevailing code[, or under any other standards approved by the executive director].

(e) Holding tanks. Tanks shall be constructed according to the requirements established for septic tanks under §285.32(b)(1)(D) - (E) of this title. Inlet fittings are required. No outlet fitting shall be provided. A baffle is not required. Holding tanks shall be used only on sites where other methods of sewage disposal are not feasible (these holding tank provisions do not apply to portable toilets or to an office trailer at a construction site). All holding tanks shall be equipped with an audible and visible alarm to indicate when the tank has been filled to within 75% of its rated capacity. A port with its smallest dimension being at least 12 inches shall be provided in the tank lid for inspection, cleaning, and maintenance. This port shall be accessible from the ground surface and must be easily removable and watertight.

(1) Minimum capacity. The minimum capacity of the holding tank shall be sufficient to store the estimated or calculated daily wastewater flow for a period of one week (wastewater usage rate in gallons per day x seven days).

(2) Location. Holding tanks shall be installed in an area readily accessible to a pump truck under all weather conditions, and at a location that meets the minimum distance requirements in §285.91(10) of this title (relating to Tables).

(3) Pumping requirements. A scheduled pumping contract with a waste transporter, holding a current registration with the executive director, must be provided to the permitting authority before a holding tank may be installed. Pumping records must be retained for five years.

(f) Composting toilets. Composting toilets will be approved by the executive director provided the system has been tested and certified under NSF International Standard 41 (1999) or under any other standards approved by the executive director.

(g) Condensation. If condensate lines are plumbed directly into an OSSF, the increased water volume must be accounted for (added to the usage rate) in the system planning materials.

SUBCHAPTER F: LICENSING AND REGISTRATION REQUIREMENTS FOR INSTALLERS, APPRENTICES, DESIGNATED REPRESENTATIVES, SITE EVALUATORS, AND MAINTENANCE PROVIDERS, AND MAINTENANCE TECHNICIANS [COMPANIES]

§§285.50, 285.60, 285.61, 285.62, 285.63, 285.64, 285.65

STATUTORY AUTHORITY

These amendments are proposed under THSC, §§366.001-366.078, concerning On-Site Sewage Disposal Systems. These amendments are also proposed under the general authority granted in TWC, §5.013, concerning the General Jurisdiction of the Commission; TWC, §5.102, concerning General Powers; TWC, §5.103, concerning Rules; TWC, §5.105, concerning General Policy; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC. The amendments are further proposed under the authority granted to the commission by the Texas Legislature in TWC, §§37.001-37.015, concerning Occupational Licenses and Registrations.

These proposed amendments implement THSC, §§366.001-366.078; TWC, §§5.013, 5.102, 5.103, 5.105, 7.002, and 37.001-37.015.

§285.50. General Requirements.

(a) The procedures for issuing licenses and registrations for on-site sewage facilities (OSSF) installers, designated representatives, apprentices, [and] site evaluators, maintenance providers, and maintenance technicians are in Chapter 30 of this title (relating to Occupational Licenses and Registrations).

(b) Any individual who constructs any part of an OSSF shall hold a current installer license appropriate for the type of system being installed, except as noted in §30.244 of this title (relating to Exemptions). This does not include the individuals under the direct supervision of the licensed installer or registered apprentice.

(c) Any individual who performs the duties of a designated representative under §285.62 of this title (relating to Duties and Responsibilities of Designated Representatives) on behalf of the authorized agent shall possess a current designated representative license. Individuals may not advertise or represent themselves to the public as designated representatives unless they are employed, appointed, or contracted by an authorized agent and hold a current designated representative license.

(d) Any individual who performs the duties of an apprentice under §285.63 of this title (relating to Duties and Responsibilities of Registered Apprentices) must hold a current apprentice registration under a licensed installer.

(e) Any [Effective September 1, 2002, any] individual, other than a professional engineer, who performs the duties of a site evaluator under §285.60 of this title (relating to Duties and Responsibilities of Site Evaluators) shall possess a current site evaluator license. An individual possessing a current professional engineer license is not required to possess a site evaluator license.

(f) When required by the permitting authority, the installer or the installer's apprentice must be present at the job site during the inspection or re-inspection of the OSSF.

(g) Any individual who acts in any capacity for a permitting authority shall not, within that permitting authority's area of jurisdiction:

(1) work as an apprentice to an OSSF installer;

(2) work as an OSSF installer;

(3) work for an OSSF maintenance provider or maintenance technician [company];

(4) work as a site evaluator; or

(5) perform any other OSSF-related activities which fall under the permitting authority's regulatory jurisdiction, except those activities directly related to the individual's duties as an employee of, appointee to, or contractor for the permitting authority.

(h) An Installer I is authorized to construct OSSFs as described in §285.91(9) of this title (relating to Tables).

(i) An Installer II is authorized to construct all types of OSSFs as described in §285.91(9) of this title.

(j) Any individual [or company that] who performs maintenance of aerobic OSSFs under §285.64 of this title (relating to Duties and Responsibilities of Maintenance Providers [Companies] and Maintenance Technicians) shall possess a current maintenance provider license or maintenance technician registration with the commission.

§285.60. Duties and Responsibilities of Site Evaluators.

A site evaluator shall:

(1) possess a current license from the executive director;

(2) record their license number on all site evaluations, and all other correspondence prepared as a site evaluator under this chapter;

(3) provide true and accurate information in the site evaluation report required by §285.30(a) of this title (relating to Site Evaluation) and in any other documentation;

(4) maintain a current [Installer II license, designated representative license,] professional engineer license, professional sanitarian license, professional geoscientist license or [a] certified professional soil scientist certificate, in addition to the site evaluator license if the site evaluator license was granted on the basis of holding one of the licenses listed in this subsection;

(5) conduct preconstruction site evaluations, including visiting the site and performing soil analysis, a site survey, or other activities necessary to determine if a site is suitable for an on-site sewage facility (OSSF); and

(6) maintain a current address and phone number with the executive director and submit any change in address or phone number in writing within 30 days after the date of the change.

§285.61. Duties and Responsibilities of Installers.

An installer shall:

(1) possess a current Installer I or Installer II license before beginning construction of an on-site sewage facility (OSSF);

(2) record the installer's license number on all bids, proposals, contracts, invoices, proposed construction drawings, or other correspondence with owners, the executive director, or authorized agents;

(3) provide true and accurate information on any application or any other documentation;

(4) begin the construction of an OSSF only after obtaining documentation that the owner, or owner's agent, has the permitting authority's authorization to construct, unless a permit is not required;

(5) notify the permitting authority of the date on which the installer plans to begin the construction of an OSSF, unless a permit is not required;

(6) construct an OSSF to meet the minimum criteria required by this chapter or the more stringent requirements of the permitting authority;

(7) construct the OSSF that has been authorized by the permitting authority for the specific location identified in the site evaluation;

(8) stop construction and return to the permitting authority to change the planning materials for the permit if site or soil conditions, materials, or supplies make compliance with the planning materials impossible;

(9) be present at the job site during the construction of the OSSF or be represented by an apprentice;

(10) be present at the job site at least once each work day if the OSSF work is supervised by an apprentice and verify that the work performed by the apprentice is according to the requirements of this chapter;

(11) request the initial, final, and any other required inspection or inspections from the permitting authority;

(12) refrain from removing materials from, or altering components of, an OSSF after the final inspection;

(13) submit to the permitting authority, within 72 hours of starting emergency repairs, a written statement describing the need for any emergency repair and the work performed;

(14) maintain a current address and phone number with the executive director and submit any change in address or phone number in writing within 30 days after the date of the change; and

[perform maintenance, keep a maintenance record, and submit maintenance reports to the permitting authority and the owner for an OSSF for which the installer has contracted to provide maintenance or, when requested by the homeowner of an aerobic OSSF, train the owner according to §285.7 of this title (relating to Maintenance Requirements);]

(15) make all OSSF repairs in accordance with the approved planning materials and this chapter.

[(15) maintain a current address and phone number with the executive director and submit any change in address or phone number in writing within 30 days after the date of the change; and]

[(16) when requested by the homeowner, make replacement parts available to all homeowners who have been trained to maintain their own aerobic system.]

§285.62. Duties and Responsibilities of Designated Representatives.

A designated representative shall:

(1) possess a current license from the executive director;

(2) be employed, appointed, or contracted by an authorized agent;

(3) enforce the rules and regulations of the Texas Health and Safety Code, Chapter 366, the Texas Water Code, this chapter, and the permitting authority;

(4) assist the authorized agent in amending the authorized agent's order, ordinance, or resolution when necessary;

(5) conduct subdivision reviews in conformance with this chapter;

(6) review variance requests to ensure compliance with the requirements of the permitting authority;

(7) approve only planning materials that conform with the requirements of this chapter and the requirements of the permitting authority;

(8) issue the authorization to construct;

(9) verify, before the initial inspection, that the installer possesses a current license and has the correct classification for constructing the permitted or planned on-site sewage facility (OSSF);

(10) conduct construction inspections as required under §285.3(d) of this title (relating to General Requirements);

(11) approve only construction that conforms with this chapter, the authorized agent's approved order, ordinance, or resolution, and the notice of approval;

(12) issue the notice of approval;

(13) ensure collection of all OSSF related fees;

(14) ensure maintenance of accurate records of permitting, fees, inspections, maintenance reports, and complaints;

(15) investigate complaints and take appropriate and timely action;

(16) record his license number on all plan reviews, complaint investigations, inspection reports, site evaluations, and any other correspondence prepared in performance of the duties of a Designated Representative under this chapter;

(17) record the installer license number in any inspection reports relating to that installer;

(18) receive compensation for OSSF related services within the authorized agent's area of jurisdiction, only from the authorized agent or according to a signed contract with the authorized agent;

(19) while employed by, appointed to, or contracted by the authorized agent, refrain from performing any of the following activities within the authorized agent's area of jurisdiction:

(A) working as an apprentice to an OSSF installer;

(B) working as an OSSF installer;

(C) working for an OSSF maintenance provider [company];

(D) working as a site evaluator; or

(E) performing any other OSSF-related activities which fall under the authorized agent's regulatory jurisdiction, except those activities directly related to the individual's duties as a designated representative for the authorized agent;

(20) verify the existence of a maintenance contract between an owner and the maintenance provider [company] according to §285.7(d) [§285.7(c)] of this title (relating to Maintenance Requirements); [and]

(21) maintain a current address and phone number with the executive director and submit any change in address or phone number in writing within 30 days after the date of the change; and[.]

(22) receive written permission from the designated representative's employer if the designated representative desires to perform any OSSF-related activities for compensation outside of the authorized agent's regulatory jurisdiction to be kept on file in the designated representative's office.

§285.63. Duties and Responsibilities of Registered Apprentices.

(a) An apprentice shall:

(1) possess a current registration from the executive director;

(2)[(1)] represent his supervising installer during construction at the site;

(3) [(2)] perform services associated with on-site sewage facility (OSSF) construction under the direct supervision and direction of the installer on-site or be in direct communication with the installer;

(4) [(3)] refrain from receiving compensation for an OSSF installation from anyone except the supervising installer; and

(5) [(4)] maintain a current address and phone number with the executive director and submit any change in address or phone number in writing within 30 days after the date of the change.

(b) An apprentice shall not act as, advertise, or offer to perform services of [as,] an installer. An apprentice may not perform any services associated with OSSF construction except under the direct supervision of an installer holding a current license or according to the supervising installer's express [expressed] directions.

§285.64. Duties and Responsibilities of Maintenance Providers and Maintenance Technicians [Companies].

(a) A maintenance provider [company] shall:

(1) possess a current license [registration] from the executive director [and a current certification from the manufacturer];

[(2) employ at least one individual who is licensed as an Installer II and who is certified by the manufacturer of the on-site sewage facility (OSSF) system as qualified to provide maintenance services;]

(2)[(3)] ensure maintenance of accurate records of [permitting,] fees, inspections, and reports;

(3)[(4)] satisfy the requirements of the maintenance contract between the homeowner of the OSSF system and the maintenance provider [company] according to §285.7[(a)] of this title (relating to Maintenance Requirements);

(4)[(5)] maintain a current address and phone number with the executive director and submit any change in address or phone number to the executive director in writing within 30 days after the date of the change; and

(5)[(6)] perform maintenance on each OSSF system under executed contract, keep a maintenance record, and submit maintenance reports to the permitting authority and the owner of the OSSF for whom the installer has contracted to provide maintenance, according to §285.7 of this title.[; and]

[(7) provide maintenance training to any homeowner of an aerobic on-site sewage system when requested, according to §285.7 of this title.]

(b) A maintenance technician shall:

(1) possess a current registration from the executive director;

(2) represent his supervising maintenance provider while performing maintenance on an OSSF;

(3) perform services associated with OSSF maintenance under the direct supervision and direction of the maintenance provider on-site or be in direct communication with the maintenance provider;

(4) refrain from receiving compensation for OSSF maintenance from anyone except the supervising maintenance provider;

(5) maintain a current address and phone number with the executive director and submit any change in address or phone number to the executive director in writing within 30 days after the date of the change; and

(6) not advertise or otherwise portray themselves as a maintenance provider.

§285.65. Suspension or Revocation of License or Registration.

(a) Suspension. In addition to the grounds [items] listed in Texas Water Code, §7.303 [§30.33 of this title (relating to License or Registration Denial, Warning, Suspension, or Revocation)], the commission [executive director] may suspend an OSSF installer's license, a designated representative's license, a site evaluator's license, an apprentice's registration, a maintenance provider's license, or a maintenance technician's registration for violation of duties and responsibilities listed in this subchapter, as recommended by the executive director. Additional grounds for suspension of these [the following] licenses and registrations include (and are not limited to) [for] the following reasons.

(1) A maintenance provider's [An on-site sewage facility (OSSF) installer's] license can be suspended for:

(A) failing to perform required maintenance on an OSSF for at least eight consecutive months (the failure to maintain records is evidence of failure to perform maintenance on the OSSF);

(B) failing to properly submit maintenance reports required by §285.7(d) of this title (relating to Maintenance Requirements) for an individual OSSF in a 12-month period; or

(C) failing to properly submit four or more required OSSF maintenance reports over any two-year period.[; or]

[(D) failing to provide proper maintenance training to an owner of an aerobic OSSF when requested by the owner;]

[(E) failing to provide proper maintenance training to an owner of an aerobic OSSF with a commission-approved course; or]

[(F) failure to make replacement parts available to all homeowners who have been trained to maintain their own aerobic system.]

(2) A designated representative's license can be suspended for:

(A) failing to verify, before the initial inspection for a particular OSSF, that the individual installing the OSSF is a properly licensed installer;

(B) failing to investigate nuisance complaints or complaints against installers, within 30 days of receipt of the complaint, according to §285.71 of this title (relating to Authorized Agent Enforcement of OSSFs); or

(C) failing to enforce the requirements of an order, ordinance, or resolution of an authorized agent.[;]

(b) Revocation. In addition to the grounds [items] listed in Texas Water Code, §7.303 [§30.33 of this title,] the commission [executive director] may revoke an OSSF installer's license, a designated representative's license, a site evaluator's license, an apprentice's registration, [or] a maintenance provider's license, [company's registration] or a maintenance technician's registration for violation of duties and responsibilities listed in this subchapter, as recommended by the executive director. Additional grounds for revocation of these licenses and registrations include (and are not limited to) [for] the following reasons.

(1) An OSSF installer's license can be revoked for:

(A) constructing, or otherwise facilitating the construction of, an OSSF that is not in compliance with this chapter; or

(B) allowing, or beginning, the construction of an OSSF without a permit when a permit is required. [;]

[(C) failing to provide proper maintenance training to an owner of an aerobic OSSF when requested by the owner;]

[(D) failing to provide proper maintenance training to an owner of an aerobic OSSF in a timely manner; or]

[(E) failing to provide proper maintenance training to an owner of an aerobic OSSF with a commission-approved course.]

(2) A designated representative's license can be revoked for:

(A) approving construction of an OSSF that is not in conformance with this chapter, the authorized agent's approved order, ordinance, or resolution or the notice of approval;

(B) practicing as an apprentice, maintenance provider, maintenance technician, site evaluator or an installer in the authorized agent's area of jurisdiction while employed, appointed, or contracted by that authorized agent; or

(C) working for a maintenance provider or maintenance company in the authorized agent's area of jurisdiction while employed, appointed, or contracted by that authorized agent.

(3) A site evaluator's license can be revoked for failing to maintain a current [Installer II license, designated representative license,] professional engineer license, professional sanitarian license, professional geoscientist license, or a certified professional soil scientist certificate.

(4) An apprentice's registration can be revoked for:

(A) acting as, advertising, or performing duties and responsibilities of an installer without the direct supervision of, or direct communication with, the supervising installer; or

(B) receiving compensation for an OSSF installation from someone other than the supervising installer.

(5) A maintenance provider's license or maintenance company's registration can be revoked for:

(A) failing to perform required maintenance on an aerobic OSSF in a 12-month period; or

(B) failing to properly submit maintenance reports required by §285.7(d) of this title for an individual homeowner in any consecutive 12-month period.

(6) A maintenance technician's registration can be revoked for:

(A) acting as, advertising, or otherwise portraying themselves as a maintenance provider, or performing duties and responsibilities of an maintenance provider without the direct supervision of, or direct communication with, the supervising maintenance provider; or

(B) receiving compensation for OSSF maintenance from someone other than the supervising maintenance provider.

SUBCHAPTER G: OSSF ENFORCEMENT

§285.70, §285.71

STATUTORY AUTHORITY

These amendments are proposed under Texas Health and Safety Code (THSC), §§366.001-366.078, concerning On-Site Sewage Disposal Systems. These amendments are also proposed under the general authority granted in Texas Water Code (TWC), §5.013, concerning the General Jurisdiction of the Commission; TWC, §5.102, concerning General Powers; TWC, §5.103, concerning Rules; TWC, §5.105, concerning General Policy; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC. The amendments are further proposed under the authority granted to the commission by the Texas Legislature in TWC, §§37.001-37.015, concerning Occupational Licenses and Registrations.

These proposed amendments implement THSC, §§366.001-366.078; TWC, §§5.013, 5.102, 5.103, 5.105, 7.002, and 37.001-37.015.

§285.70 Duties of Owners With Malfunctioning OSSFs.

(a) If the executive director or the authorized agent determines that an on-site sewage facility (OSSF) is malfunctioning, as defined in §285.2 of this title (relating to Definitions), the owner shall bring the OSSF into compliance by repairing the malfunction. The owner shall initiate repair of a malfunctioning OSSF no later than:

(1) the 30th day after the date which the owner is notified by the executive director or the authorized agent of the malfunctioning system, if the owner has not been notified of the malfunctioning system during the previous 12 months;

(2) the 20th day after the date on which the owner is notified by the executive director or the authorized agent of the malfunctioning system, if the owner has been notified of the malfunctioning system at least once during the previous 12 months; or

(3) the 10th day after the date on which the owner is notified by the executive director or the authorized agent of the malfunctioning system, if the owner has been notified of the malfunctioning system at least twice during the previous 12 months.

(b) If aerobic treatment system maintenance is provided by the homeowner, as described in §285.7(d)(4) [With the exception of §285.7(c)(4)] of this title (relating to Maintenance Requirements), an authorized agent or the commission may require the homeowner to contract for maintenance of the [condition the permit or the approval of a permit for an] on-site sewage disposal system using aerobic treatment for a single-family residence [on the owner's contracting with a maintenance company for the maintenance of the system] if the system is located in a county of at least 40,000 persons and:

(1) the authorized agent or commission determines that the owner has violated this chapter or a rule adopted or order or permit issued under this chapter and the owner fails to correct the violation no later than the 10th day after the date of receipt of notification by the permitting authority; or [system is a nuisance or has failed a periodic inspection under §285.7(d)(4) of this title;]

(2) the owner commits another violation before the third anniversary of the initial violation of this chapter or rule adopted under the Texas Health and Safety Code, Chapter 366.

[(2) the owner fails to timely inspect the system or submit a report on the inspection as required by §285.7(d) of this title, if applicable, for three consecutive intervals; or]

[(3) the owner is notified at least three times during a 12-month period that the system is malfunctioning.]

(c) If, under this section, [§285.71(d)(1) of this title (relating to Authorized Agent Enforcement of OSSFs),] an authorized agent or the commission requires [conditions approval of a permit for an on-site sewage disposal system using aerobic treatment on] the system's owner to contract [contracting] for the maintenance of the system, the order, resolution, or rule may require the maintenance provider [company] to:

(1) inspect the system at specified intervals;

(2) submit a report on each inspection to the authorized agent or commission; and

(3) provide a copy of each report submitted to the system's owner.

§285.71. Authorized Agent Enforcement of OSSFs.

(a) Complaints. The authorized agent shall investigate a complaint regarding an on-site sewage facility (OSSF) within 30 days after receipt of the complaint, notify the complainant of the findings, and take appropriate and timely action on all documented violations. Appropriate action may include criminal or civil enforcement action as necessary under the authority of their order, ordinance, or resolution, the Texas Water Code, Chapters 7 and 26, or the Texas Health and Safety Code, Chapters 341 and 366. This may include complaints against:

(1) registered apprentices, maintenance technicians, licensed installers, site evaluators, maintenance providers, and designated representatives;

(2) individuals performing the duties listed above not holding a current commission license or registration or failing to maintain a license or registration, including professional engineers and professional sanitarians; [for aerobic system maintenance as an apprentice, installer, designated representative, site evaluator, or a professional engineer who is performing site evaluations without a current registration or license;]

(3) owners in violation of this chapter or the authorized agent's order, ordinance, or resolution; or

(4) owners of malfunctioning OSSFs on the owners' property.

(b) Conviction or court judgment under subsection (a)(1) and (2) of this section. Upon conviction or court judgment, the authorized agent shall send a copy of the conviction or court judgment to the executive director.

(c) Referral of complaints under subsection (a)(1) and (2) of this section. If there are unusual circumstances involved, or if the authorized agent is unable to take enforcement action, the authorized agent may refer complaints to the executive director in writing at any time after a documented investigation of the complaint has been completed.

SUBCHAPTER I: APPENDICES

§285.90, §285.91

STATUTORY AUTHORITY

These amendments are proposed under Texas Health and Safety Code (THSC), §§366.001-366.078, concerning On-Site Sewage Disposal Systems. These amendments are also proposed under the general authority granted in Texas Water Code (TWC), §5.013, concerning the General Jurisdiction of the Commission; TWC, §5.102, concerning General Powers; TWC, §5.103, concerning Rules; TWC, §5.105, concerning General Policy; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC. The amendments are further proposed under the authority granted to the commission by the Texas Legislature in TWC, §§37.001-37.015, concerning Occupational Licenses and Registrations.

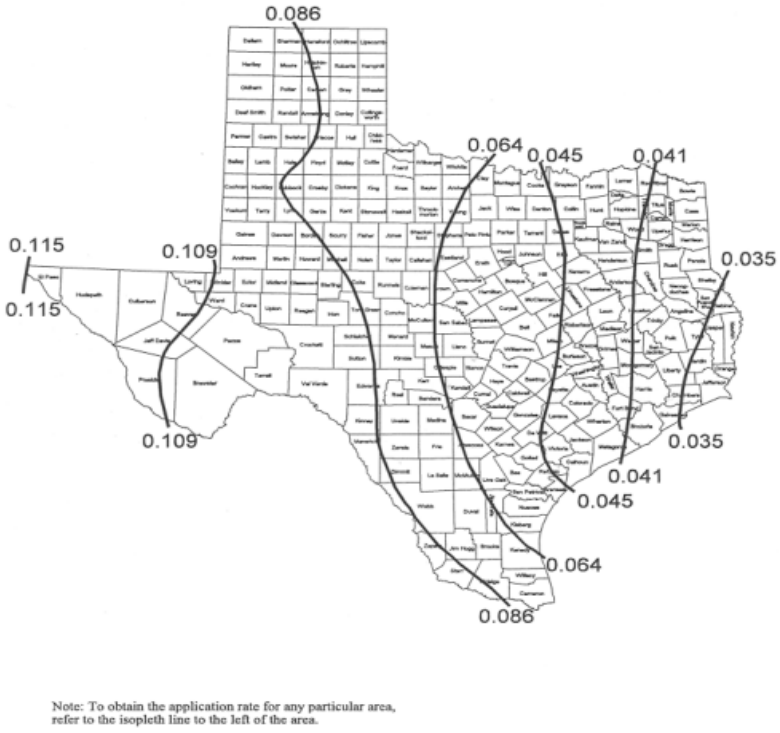
These proposed amendments implement THSC, §§366.001-366.078; TWC, §§5.013, 5.102, 5.103, 5.105, 7.002, and 37.001-37.015.

§285.90. Figures.

The following figures are necessary for the proper location, planning, construction, and installation of an on-site sewage facility (OSSF).

(1) Figure 1. Maximum Application Rates for Surface Application of Treated Effluent in Texas.

Figure: 30 TAC §285.90(1) (No change.)



(2) Figure 2. Model [Deed and] Affidavit to the Public [Language].

Figure: 30 TAC §285.90(2)

[Figure: 30 TAC §285.90(2)]

Figure 2. Model [Deed and]Affidavit to the Public [Language].

THE COUNTY OF (insert county name))
STATE OF TEXAS)

AFFIDAVIT [CERTIFICATION OF OSSF REQUIRING MAINTENANCE]

According to Texas Commission on Environmental Quality Rules for On-Site Sewage (OSSFs) Facilities, this document is filed in the Deed Records of

(insert county name) County, Texas.

I

The Texas Health and Safety Code, Chapter 366 authorizes the Texas Commission on Environmental Quality (commission) to regulate on-site sewage facilities (OSSFs). Additionally, the Texas Water Code (TWC), §5.012 and §5.013, gives the commission primary responsibility for implementing the laws of the State of Texas relating to water and adopting rules necessary to carry out its powers and duties under the TWC. The commission, under the authority of the TWC and the Texas Health and Safety Code, requires owners [owner's] to provide notice to the public that certain types of OSSFs are located on specific pieces of property. To achieve this notice, the commission requires a recorded affidavit [deed recording]. Additionally, the owner must provide proof of the recording to the OSSF permitting authority. This recorded affidavit [deed certification] is not a representation or warranty by the commission of the suitability of this OSSF, nor does it constitute any guarantee by the commission that the appropriate OSSF was installed.

II

An OSSF requiring a maintenance contract, according to 30 Texas Administrative Code §285.91(12) will be installed on the property described as (insert legal description):

The property is owned by (insert owner's full name)

This OSSF shall [must] be covered by a continuous service policy [maintenance] for the first two years. [All maintenance on this OSSF must be performed by an approved maintenance company, and a signed maintenance contract must be submitted to (insert name of the permitting authority) within 30 days after the property has been transferred.] After the initial two-year service policy, the owner of an aerobic treatment system for a single family residence shall either obtain a maintenance contract within 30 days or maintain the system personally.

[The owner will, upon any] Upon sale or transfer of the above-described property, [request a transfer of the permit for the OSSF] the permit for the OSSF shall be transferred to the buyer or new owner. A copy of the planning materials for the OSSF may [can] be obtained from (insert name of permitting authority).

WITNESS BY HAND(S) ON THIS ____ DAY OF _____, _____.

_____

_____
(Owner(s) signature(s))

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS ____ DAY OF _____, _____.

_____
_
Notary Public, State of Texas
Notary's Printed Name:
My Commission Expires:

(3) Figure 3. Sample Testing and Reporting Record.

Figure: 30 TAC §285.90(3)

[Figure: 30 TAC §285.90(3)]

Figure 3. Sample Testing and Reporting Record.

This testing and reporting record shall be completed, signed, and dated after each maintenance check and test. One copy shall be retained by the maintenance provider [company or, if applicable, the homeowner] performing the maintenance. The second copy shall be sent to the local permitting authority and [, if applicable,] the third copy shall be sent to the system owner.

1. Required frequency of maintenance check and tests - (daily, weekly, monthly, quarterly, every 4 months).
   Actual date of test: _____

2. System inspection:
   Property Address: _____
   Permit Number: _____
   Person Performing Inspection: _____
   _____
   (Signature)

Inspected Item	Operational	Inoperative
Aerators		

Filters

Irrigation Pumps

Recirculation Pumps

Sludge Condition

Disinfection Device

Chlorine Supply

Electrical Circuits

Distribution System

Sprayfield Vegetation/Seeding
(if applicable)

Other as Noted

3. Repairs to system (list all components replaced):_____
_____
_____

4. Tests required and results:

Test	Required Yes No	Results mg/l, mpn/100 ml, or trace	Test Method
BOD (Grab)			
TSS (Grab)			

Cl_2 (Grab)

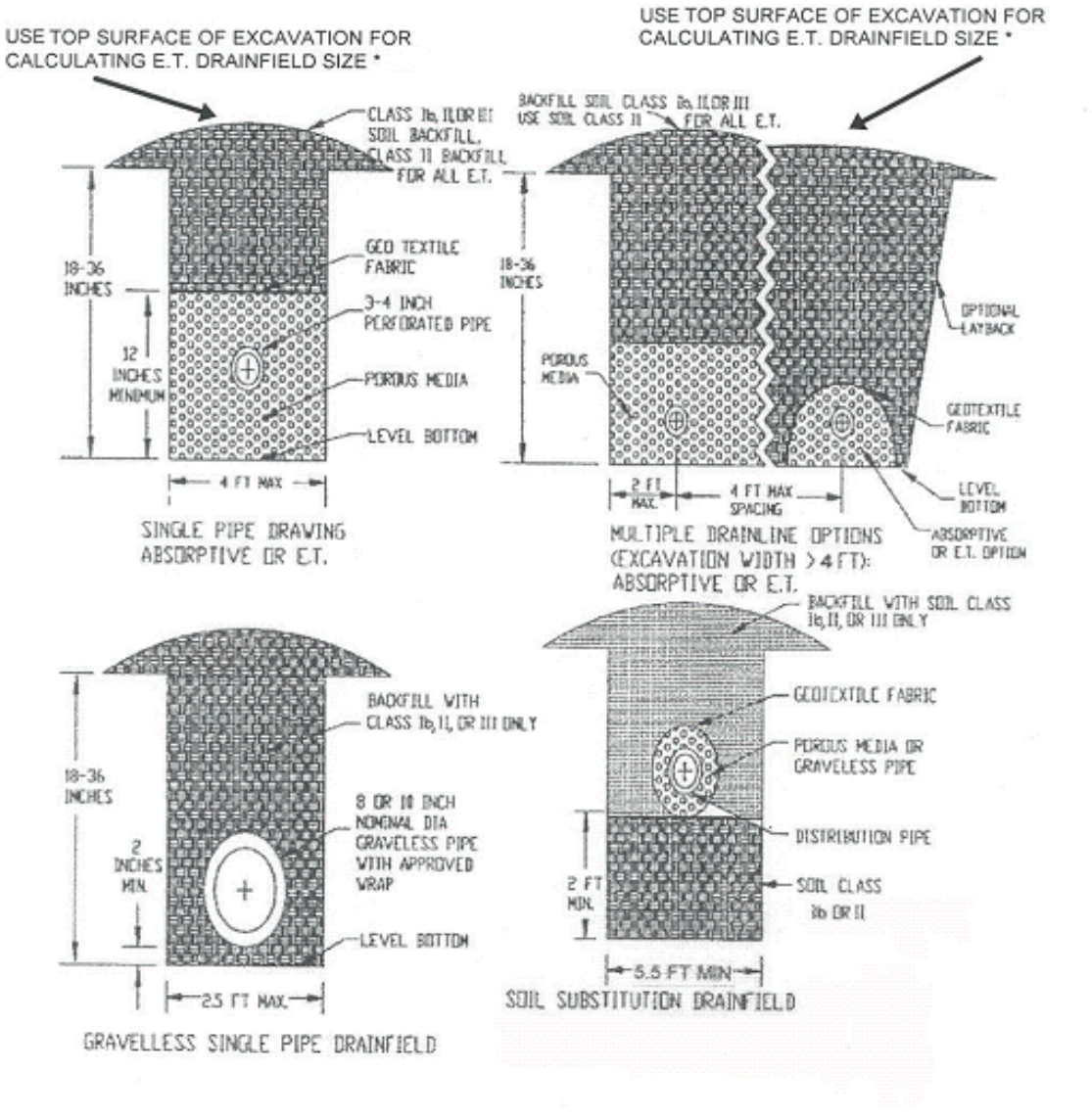
Fecal Coliform

5. Date(s) responded to owner complaints during reporting period (attach copy of complaint and findings): _____

6. General comments or recommendations: _____
_____
_____

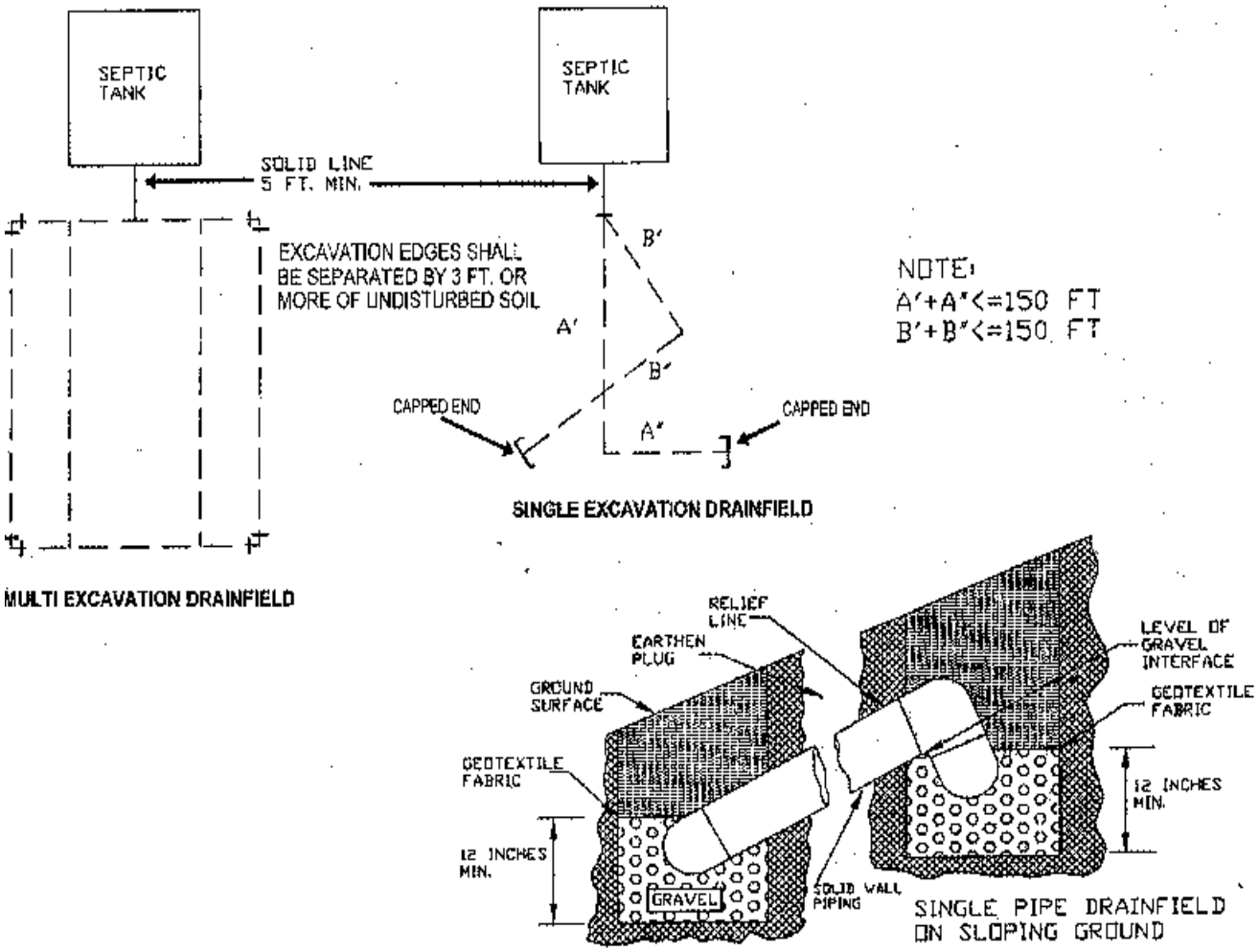
(4) Figure 4. Typical Drainfields - Sectional View.

Figure: 30 TAC §285.90(4) (No change.)



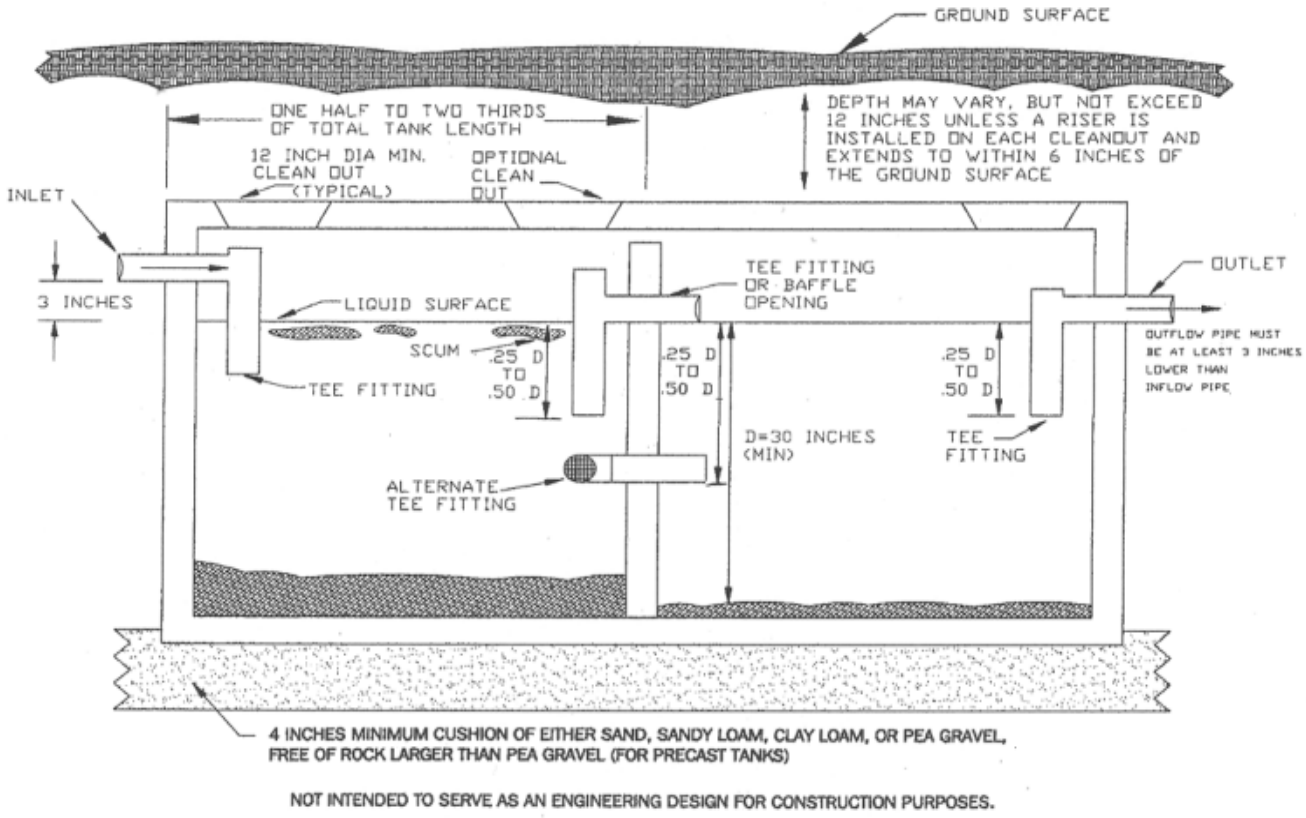
(5) Figure 5. Typical Drainfields.

Figure: 30 TAC §285.90(5) (No change.)



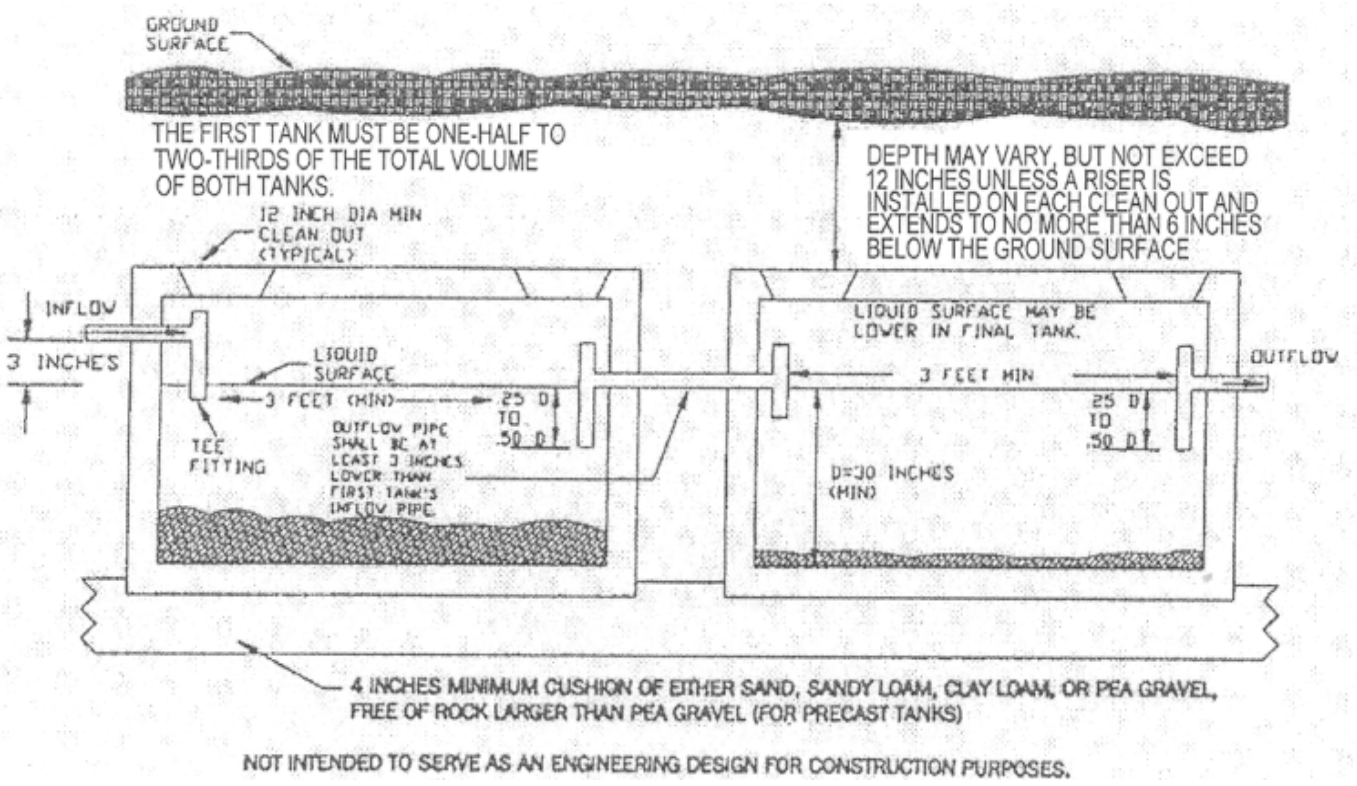
(6) Figure 6. Two Compartment Septic Tank.

Figure: 30 TAC §285.90(6) (No change.)



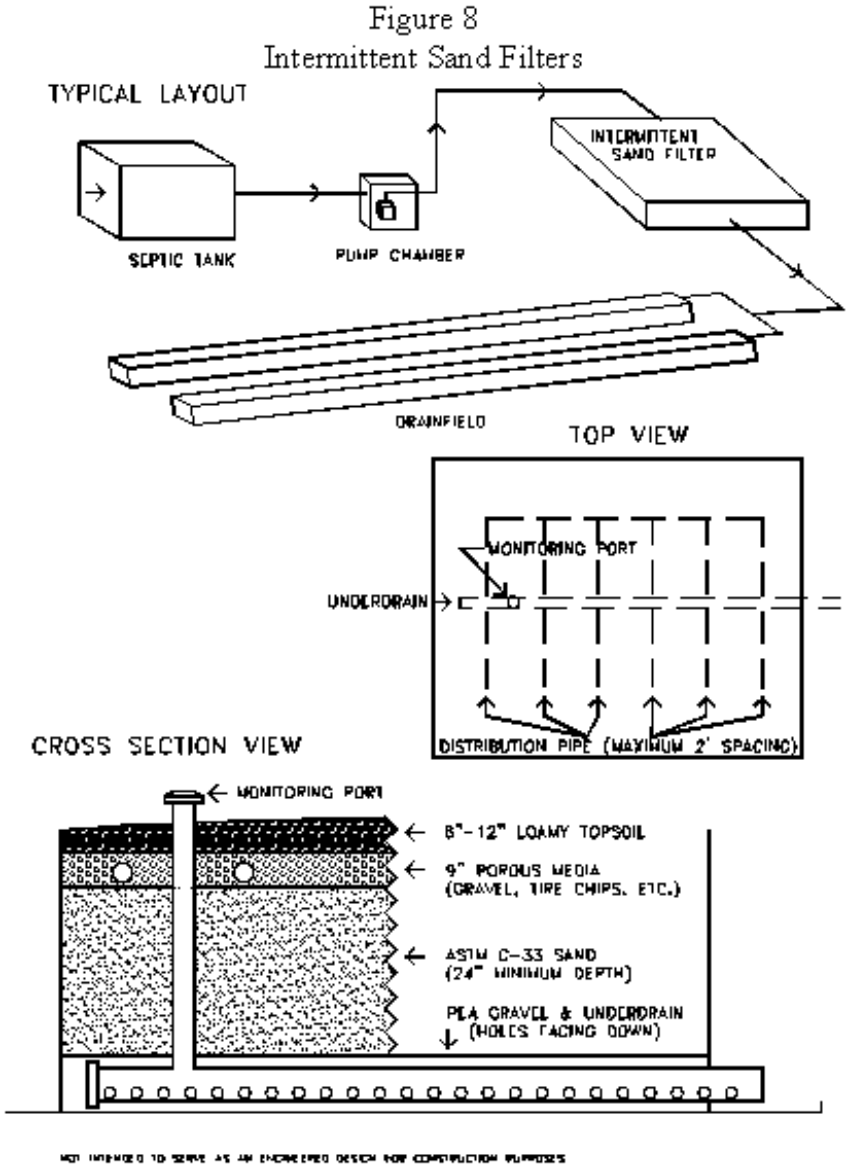
(7) Figure 7. Two Septic Tanks in Series.

Figure: 30 TAC §285.90(7) (No change.)



(8) Figure 8. Intermittent Sand Filters.

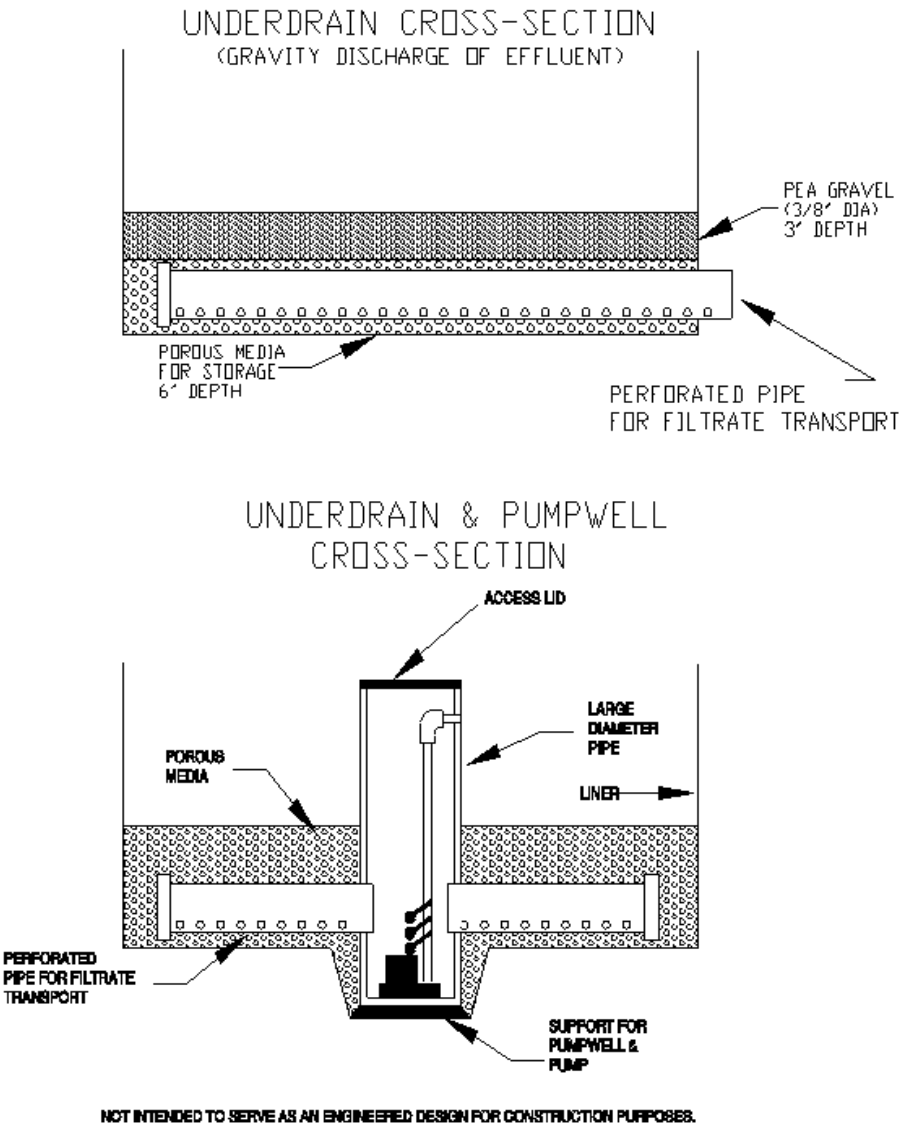
Figure: 30 TAC §285.90(8) (No change.)



(9) Figure 9. Intermittent Sand Filter Underdrain and Pumpwell.

Figure: 30 TAC §285.90(9) (No change.)

Figure 9
Intermittent Sand Filter Underdrain & Pumpwell



§285.91. Tables.

The following tables are necessary for the proper location, planning, construction, and installation of an OSSF.

Figure: 30 TAC §285.91(1) (No change.)

(1) Table I. Effluent Loading Requirements Based on Soil Classification. (No change.)

TABLE I
EFFLUENT LOADING REQUIREMENTS BASED ON SOIL CLASSIFICATION

SOIL CLASS (Refer to Table VI)	LONG TERM APPLICATION (R_a) *GALLONS PER ABSORPTIVE AREA (SF) PER DAY
Ia	>0.50
Ib	0.38
II	0.25
III	0.20
IV	0.1

- The absorptive area consists of the bottom area of the excavation **PLUS** one foot of sidewall area around the full perimeter of the excavation.

The required absorptive area shall be calculated by the following formula:

ABSORPTIVE AREA = Q/R_a, Where Q is the wastewater usage rate in gallons per day (see Table III, Relating to Wastewater Usage Rate).

(2) Table II. Septic Tank and Aerobic Treatment Unit Sizing [Minimum Liquid Capacity].

Figure: 30 TAC §285.91(2)

[Figure: 30 TAC §285.91(2)]

Table II. Septic Tank and Aerobic Treatment Unit Sizing [Minimum Liquid Capacity].

SEPTIC TANK MINIMUM LIQUID CAPACITY

A. Determine the applicable wastewater usage rate (Q) in TABLE III of 30 TAC Chapter 285.

B. Calculate the minimum septic tank volume (V) as follows:

1. For Q equal to or less than 250 gal/day:
V = 750 gallons

2. For Q greater than or equal to 251 gal/day but less than or equal to 350 gal/day:
V = 1000 gallons

3. For Q greater than or equal to 351 gal/day but less than or equal to 500 gal/day:
V = 1250 gallons

4. For Q greater than or equal to 501 gal/day but less than or equal to 1000 gal/day:
V = 2.5 Q

5. For Q greater than or equal to 1001 gal/day:
V= 1,750 + 0.75Q

AEROBIC TREATMENT UNIT SIZING FOR RESIDENCES

Number of bedrooms/living area of home	Minimum Aerobic Tank Treatment Capacity (gallons per day)
Four bedrooms and < 3,500 sq. ft. or Less than four bedrooms and 2,500 < sq. ft. < 3,501	480

Five bedrooms and < 4,500 sq. ft. or Less than five bedrooms and 3,500 < sq. ft. < 4,501	600
Six bedrooms and < 5,500 sq. ft. or Less than six bedrooms and 4,500 < sq. ft. < 5,501	720
Seven bedrooms and < 7,000 sq. ft. or Less than seven bedrooms and 5,500 < sq. ft. < 7,001	840
Eight bedrooms and < 8,500 sq. ft. or Less than eight bedrooms and 7,000 < sq. ft. < 8501	960
Nine bedrooms and < 10,000 sq. ft. or Less than nine bedrooms and 8,500 < sq. ft. < 10,001	1,080
Ten bedrooms and < 11,500 sq. ft. or Less than ten bedrooms and 10,000 < sq. ft. < 11,501	1,200
For each additional bedroom above ten or 1,500 additional square feet of living area above 11,500	120

(3) Table III. Wastewater Usage Rate.

Figure: 30 TAC §285.91(3)

[Figure: 30 TAC §285.91(3)]

Table III. Wastewater Usage Rate.

This table shall be used for estimating the hydraulic loading rates only [daily wastewater usage rate (Q) for sizing septic tank liquid capacity and drainfield area]. Sizing formulas are based on residential strength BOD_5. Commercial/institutional facilities must pretreat their wastewater to 140 BOD_5 prior to disposal unless secondary treatment quality is required. For design purposes, restaurant wastewater will be assumed to have a BOD_5 of at least 1,200 mg/l after exiting the grease trap or grease interceptor.

Actual water usage data or other methods of calculating wastewater usage rates may be used by the system designer if it is accurate and acceptable to the Texas [Natural Resource Conservation] Commission on Environmental Quality or its authorized agents. If actual water use records are greater than the usage [usuage] rates in this table, the system shall be designed for the higher flow.

TYPE OF FACILITY	USAGE RATE GALLONS/DAY (Without Water Saving Devices)	USAGE RATE GALLONS /DAY (With Water Saving Devices)
Single family dwelling (one or two bedrooms) - less than 1,500 square feet.	225	180
Single family dwelling (three bedrooms) - less than 2,500 square feet.	300	240
Single family dwelling (four bedrooms) - less than 3,500 square feet.	375	300
Single family dwelling (five bedrooms) - less than 4,500 square feet.	450	360
Single family dwelling (six bedrooms) - less than 5,500 square feet.	525	420
Greater than 5,500 square feet, each additional 1,500 square feet or increment thereof.	75	60
Condominium or Townhouse (one or two bedrooms)	225	180
Condominium or Townhouse (each additional	75	60

bedroom)		
Mobile home (one or two bedrooms) Mobile home (each additional bedroom)	225 75	180 60
Country Clubs (per member)	25	20
Apartment houses (per bedroom)	125	100
Boarding schools (per room capacity)	50	40
Day care centers (per child with kitchen) Day care centers (per child without kitchen)	25 15	20 12
Factories (per person per shift)	15	12
Hospitals (per bed)	200	160
Hotels and motels (per bed)	75	60
Nursing homes (per bed)	100	80
Laundries (self service per machine)	250	200
Lounges (bar and tables per person)	10	8
Movie Theaters (per seat)	5	4
Office buildings (no food or showers per occupant) Office buildings (with food service per occupant)	5 10	4 8
Parks (with bathhouse per person) Parks (without bathhouse per person)	15 10	12 8
Restaurants – minimum effluent BOD_5 quality described above this table Restaurants (per seat) Restaurants (fast food per seat)	35 15	28 12
Schools (with food service & gym per student) Schools (without food service)	25 15	20 12
Service stations (per vehicle)	10	8
Stores (per washroom)	200	160

Swimming pool bathhouses (per person)	10	8
Travel trailer/RV parks (per space)	50	40
Vet clinics (per animal)	10	8
Construction sites (per worker)	50	40
Youth camps (per camper)	30	24

(4) Table IV. Required Testing and Reporting.

Figure: 30 TAC §285.91(4) (No change.)

Table IV. Required Testing and Reporting.

Type and Size of Treatment Unit	Testing Frequency	Required Tests	Minimum Acceptable Test Results
Any Treatment Method in Conjunction with Surface Application	At least once every four months	One BOD_5 and TSS Grab Sample Per Year (non-single family residences only) Total Chlorine Residual or Fecal Coliform at Each Required Test	BOD_5 and TSS Grab Samples Not To Exceed 65 mg/l 0.1 mg/l Residual in Pump Tank or Fecal Coliform Not To Exceed 200 MPN/100 ml (CFU/100 ml)
Any Secondary Treatment System	At least once every four months	None	None
Non Standard	Permit Specific	Permit Specific	Permit Specific

(5) Table V. Criteria for Standard Subsurface Absorption Systems.

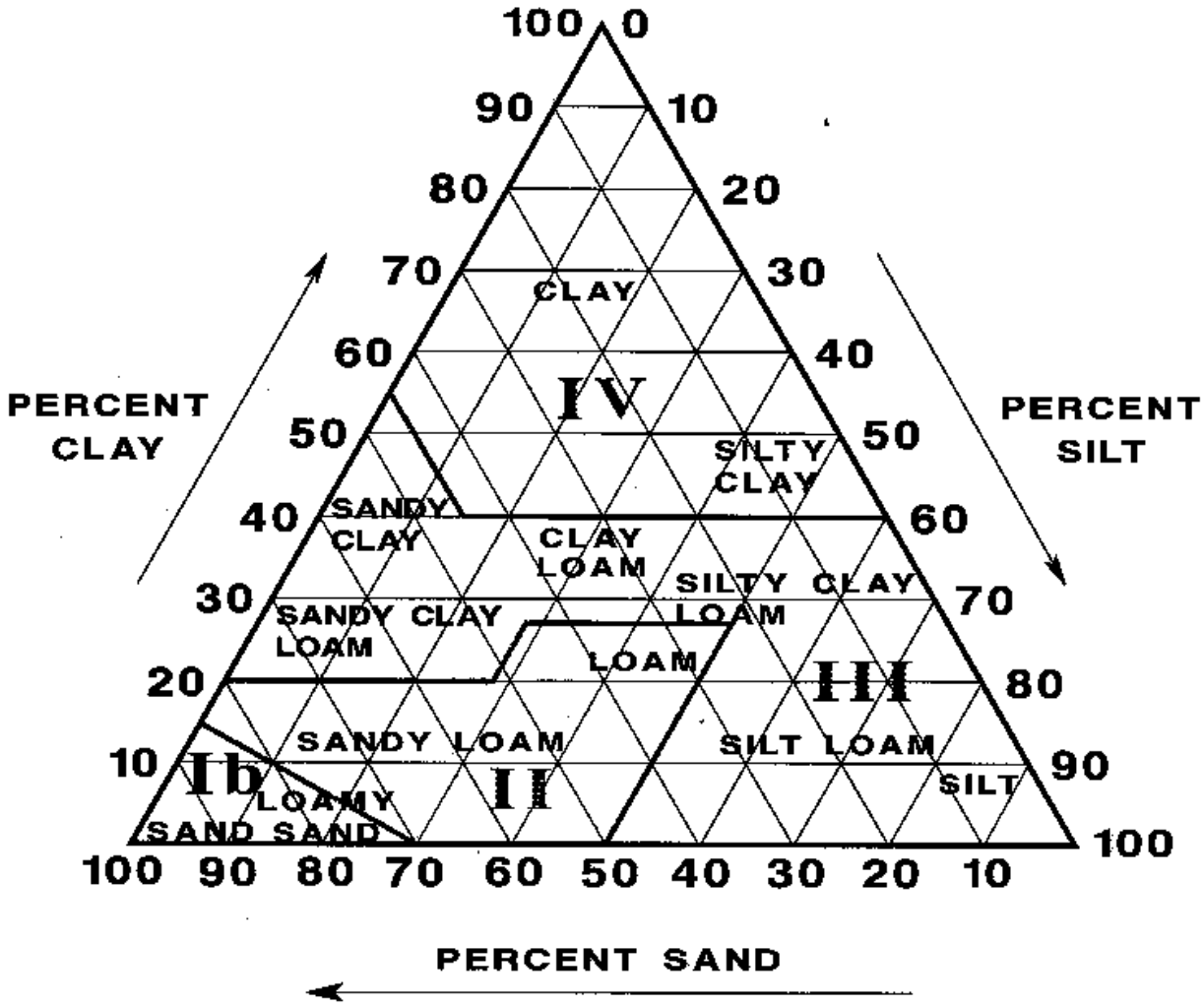
Figure: 30 TAC §285.91(5) (No change.)

Table V. Criteria for Standard Subsurface Absorption Systems.

FACTORS	SUITABLE (S)	UNSUITABLE (U)
Topography	Slopes 0-30%	Slopes greater than 30% Complex slopes
Subsoil Texture	Soil Class Ib, II, or III soils along the sidewall and two feet below the bottom of the excavation	Soil Class Ia soils along the sidewall or within two feet below the bottom of the excavation (Except for lined ET) Soil Class IV along the sidewall or within two feet below the bottom of the excavation (Except for pumped effluent and ET)
Restrictive Horizon	No restrictive horizon intersects the sidewall or is within 24 inches below the bottom of the proposed excavation.	A restrictive horizon intersects the sidewall or is within 24 inches below the bottom of the proposed excavation (Except as indicated in §285.33(b)(1)(A)(vi))
Gravel analysis	In Class II or III soils, only; Gravel portion less than 30% and gravel greater than 2.0 mm; or If greater than 30% gravel, 80% of the gravel portion must be less than 5.0 mm	All other Class II and III soils, which contain gravel in excess of what is described as suitable All other soils with greater than 30% gravel
Groundwater	No indication of seasonal groundwater anywhere within 24 inches of the bottom of the proposed excavation.	Indications of seasonal groundwater or drainage mottles anywhere within 24 inches of the bottom of the proposed excavation (Except for lined ET)
Flood Hazard	No flooding potential.	Areas located in the floodplain and regulatory floodway unless system designed according to §285.31(c)(2) Depressional areas without adequate drainage
Other		Fill material

(6) Table VI. USDA Soil Textural Classifications. (No change.)

Figure: 30 TAC §285.91(6) (No change.)



SOIL PARTICLE SIZE:

Clay - Smaller than 0.002 mm in diameter
Silt - 0.05 to 0.002 mm in diameter
Sand - 2.0 to 0.05 mm in diameter
Gravel - Greater than 2.0 mm in diameter
mm = millimeter

Note 1: Sand shall be free of organic matter and shall be composed of silica, quartz, mica, or any other stable mineral.
Note 2: Class Ia soils contain more than 30% gravel; therefore, they are not portrayed on the soil triangle.

(7) Table VII. Yearly Average Net Evaporation (Evaporation-Rainfall).

Figure: 30 TAC §285.91(7) (No change.)

TABLE VII
ANNUAL AVERAGE NET EVAPORATION
(EVAPORATION - RAINFALL)

REPORTING STATION	NET EVAPORATION*, RET INCHES/DAY
Amarillo	0.21
Austin	0.14
Beaumont	0.04
Big Spring	0.24
Brownsville	0.15
Chilicothe	0.20
Canyon Lake	0.15
College Station	0.12
Corpus Christi	0.15
Daingerfield	0.08
Dallas	0.14
El Paso	0.26
Fort Stockton	0.25
Houston	0.07
Laredo	0.23
Lubbock	0.21
Nacogdoches	0.06
San Antonio	0.15
San Angelo	0.23
Temple	0.15

Throckmorton	0.19
Tyler	0.08

* The calculations for all values listed include a 20% run-off consideration

(8) Table VIII. OSSF Excavation Length (3 Feet in Width or Less).

Figure: 30 TAC §285.91(8) (No change.)

Table VIII. OSSF Excavation Length (3 Feet in Width or Less)

	Excavation Length (Feet)								
	Soil Class Ib			Soil Class II			Soil Class III		
Daily Sewage Flow (Q)[2]	For 1.5 Foot Excavation Width[3]	For 2.0 Foot Excavation Width	For 3.0 Foot Excavation Width	For 1.5 Foot Excavation Width[3]	For 2.0 Foot Excavation Width	For 3.0 Foot Excavation Width	For 1.5 Foot Excavation Width[3]	For 2.0 Foot Excavation Width	For 3.0 Foot Excavation Width
100	75	66	53	114	100	80	143	125	100
125	94	82	66	143	125	100	179	156	125
150	113	99	79	171	150	120	214	188	150
180	135	118	95	206	180	144	257	225	180
200	150	132	105	229	200	160	286	250	200
225	169	148	118	257	225	180	321	281	225
240	180	158	126	274	240	192	343	300	240
275	207	181	145	314	275	220	393	344	275
300	226	197	158	343	300	240	429	375	300
325	244	214	171	371	325	260	464	406	325
360	271	237	189	411	360	288	514	450	360
375	282	247	197	429	375	300	536	469	375
400	301	263	211	457	400	320	571	500	400
420	316	276	221	480	420	336	600	525	420
450	338	296	237	514	450	360	643	563	450
475	357	313	250	543	475	380	679	594	475
500	376	329	263	571	500	400	714	625	500

1. To determine excavation lengths, greater than 3 feet in width or where the area and width are known, use the formulas provided in §285.33(b)(1)(A)(vii).
2. To determine excavation lengths (3 feet or less in width, but greater than or equal to 1.5 feet in width) for daily sewage flows (Q) not provided in this table, use the formula provided in §285.33(b)(1)(A)(vii)(III).
3. Minimum excavation width is 1.5 feet for all excavation lengths.

(9) Table IX. OSSF System Designation.

Figure: 30 TAC §285.91(9) (No change.)

Table IX. OSSF System Designation.

SYSTEM DESCRIPTION	SYSTEM TYPE	PLANNING MATERIAL TO BE PREPARED BY R.S. or P.E.[2]	INSTALLER REQUIREMENTS
Septic Tank & Absorptive Drainfield	Standard	No	Class I or II
Septic Tank & ET Drainfield (Unlined) Septic Tank & ET Drainfield (Lined)	Standard Standard	No No	Class I or II Class II
Septic Tank & Pumped Drainfield	Standard	No	Class I or II
Septic Tank & Leaching Chamber	Proprietary	No	Class I or II
Septic Tank & Gravelless Pipe	Proprietary	No	Class I or II
Septic Tank & Low Pressure Dosing	Non-standard	Yes	Class II
Septic Tank & Absorptive Mounds	Non-standard	Yes	Class II

Septic Tank & Soil Substitution	Non-standard	Yes	Class I or II
Septic Tank, Secondary Treatment, Filter & Surface Application	Non-standard	Yes	Class II
Aerobic Treatment & Standard Absorptive Drainfields	Proprietary	Yes	Class II
Aerobic Treatment & ET Drainfield	Proprietary	Yes	Class II
Aerobic Treatment & Leaching Chamber	Proprietary	Yes	Class II
Aerobic Treatment & Gravelless Pipe	Proprietary	Yes	Class II
Aerobic Treatment, Filter & Drip Emitter	Proprietary	Yes	Class II
Aerobic Treatment & Low Pressure Dosing	Proprietary	Yes	Class II
Aerobic Treatment & Absorptive Mounds	Proprietary	Yes	Class II
Aerobic Treatment & Surface Application	Proprietary	Yes	Class II

Any Other Treatment System	---	Yes	Class II
Any Other Subsurface Disposal System	---	(1)	(1)
Any Other Surface Disposal System	---	Yes	Class II
Non-Standard Treatment when Secondary Treatment Required	Non-Standard	Engineer Only	Class II
Holding Tank	---	No	Class I or II

(1) Determined by the executive director based upon review required by §285.5(b)(2) of this Chapter (relating to submittal requirements for planning materials).
(2) The site evaluation is required to be performed by either a site evaluator or a professional engineer.

(10) Table X. Minimum Required Separation Distances for On-Site Sewage Facilities.

Figure: 30 TAC §285.91(10)

[Figure: 30 TAC §285.91(10)]

Table X. Minimum Required Separation Distances for On-Site Sewage Facilities.

	TO					
FROM	Tanks	Soil Absorption Systems, & Unlined ET Beds	Lined Evapotranspiration Beds	Sewer Pipe With Watertight Joints	Surface Application (Edge of Spray Area)	Drip Irrigation
Public Water Wells[2]	50	150	150	50	150	150
Public Water Supply Lines[2]	10	10	10	10	10	10
Wells and Underground Cisterns	50	100	50	20	100	100
Private Water Line	10	10	5	10[5] except at connection to structure	No separation distances	10
Wells Completed in accordance	50	50	50	20	50	50

with 16 TAC §76.1000(a)(1)						
Streams, Ponds, Lakes, Rivers, Creeks (Measured From Normal Pool Elevation and Water Level); Salt Water Bodies (High Tide Only); Retention Ponds/Basin (Spillway elevation)	50	75 LPD with secondary treatment & disinfection - 50	50	20	50	25 when $R_a < 0.1$ 75 when $R_a > 0.1$ (With Secondary Treatment & Disinfection - 50)
Foundations, Buildings, Surface Improvements, Property Lines, Swimming Pools, and Other Structures	5	5	5	5 Pipe may run beneath driveways and sidewalks if sleeved in Schedule 40 pipe Pipe containing secondary effluent has no setbacks from building foundations	No Separation Distances Except: Property lines - 20[6] Swimming Pools - 25	No Separation Distances Except[4]: Property Lines - 5
Underground Easements	1	1	1	1	May spray to edge of easement, but not into.	1

					Sprinkler heads must be 1 feet from easement edge	
Overhead Easements	None With permission from easement holder	None With permission from easement holder	None With permission from easement holder	None With permission from easement holder	None With permission from easement holder	None With permission from easement holder
Slopes Where Seeps may Occur, drainage easements and detention ponds	5	25	5	10	10	10 when $R_a < 0.1$ 25 when $R_a > 0.1$
Edwards Aquifer Recharge Features (See Chapter 213 of this title relating to Edwards Aquifer)[3]	50	150	50	50	150	100 when $R_a < 0.1$ 150 when $R_a > 0.1$

1. All distances measured in feet, unless otherwise indicated.
2. For additional information or revisions to these separation distances, see Chapter 290 of this title (relating to Public Drinking Water).
3. No OSSF may be installed closer than 75 feet from the banks of the Nueces, Dry Frio, Frio, or Sabinal Rivers downstream from the northern Uvalde County line to the recharge zone.
4. Drip irrigation lines may not be placed under foundations.
5. Private water line/wastewater line crossings should be treated as public water line crossings, see Chapter 290 of this title (relating to Public Drinking Water).

6. Separation distance may be reduced to 10 feet when sprinkler operation is controlled by commercial timer. See §285.33(d)(2)(G)(i).

(11) Table XI. Intermittent Sand Filter Media Specifications (ASTM C-33).

Figure: 30 TAC §285.91(11) (No change.)

TABLE XI INTERMITTENT SAND FILTER MEDIA SPECIFICATIONS (ASTM C-33)

Particle Size Distribution		
Sieve	Particle Size	Percent Passing
3/8 inch	9.50 mm	100
No. 4	4.75 mm	95 to 100
No. 8	2.36 mm	80 to 100
No. 16	1.18 mm	50 to 85
No. 30	0.60 mm	25 to 60
No. 50	0.30 mm	10 to 30
No. 100	0.15 mm	2 to 10
No. 200	0.075 mm	3

1. The sand shall have not more than 45% passing any one sieve and retained on the next consecutive sieve listed in TABLE XI.
2. The limit for material that can pass the No. 200 sieve shall not be more than 3%.
3. The fineness modulus shall not be less than 2.3 nor more than 3.1, and is defined as a numeric quantity to control the distribution of filter media particle sizes within the specified range for intermittent sand filters. The fineness modulus is calculated by adding the cumulative percents of samples retained on the following screens, dividing the sum by 100.

U.S. Bureau of Standards

Sieve	**Particle Size**
3/8 inch	9 .50 mm
No. 4	4 .75 mm
No. 8	2 .36 mm
No. 16	1.18 mm
No. 30	0.60 mm
No. 50	0 .30 mm
No. 100	0.15 mm

(12) Table XII. OSSF Maintenance Contracts, Affidavit, and Testing/Reporting Requirements.

Figure: 30 TAC §285.91(12)

[Figure: 30 TAC §285.91(12)]

Table XII. OSSF Maintenance Contracts, Affidavit, and Testing/Reporting Requirements.

SYSTEM DESCRIPTION	Maintenance [Contract]/Affidavit Required	Maintenance Activities Required	Testing and Reporting Requirements [2,4]
Septic Tank & Absorptive Drainfield	No	See §285.39	No
Septic Tank & ET Drainfield (Unlined) Septic Tank & ET Drainfield (Lined)	No (3) No (3)	See §285.39 See §285.39	No No
Septic Tank & Pumped Drainfield	No	See §285.39	No
Septic Tank & Leaching Chamber	No	See §285.39	No
Septic Tank & Gravelless Pipe	No	See §285.39	No
Septic Tank & Low Pressure Dosing	No	See §285.39	No
Septic Tank & Absorptive Mounds	No	See §285.39	No
Septic Tank & Soil Substitution	No	See §285.39	No
Septic Tank, Secondary Treatment, Filter & Surface Application	Yes	Entire OSSF	Test & Report
Secondary Treatment & Standard Absorptive Drainfields	Yes	Treatment System	Report
Secondary Treatment & ET Drainfield	Yes	Treatment System	Report
Secondary Treatment & Leaching Chamber	Yes	Treatment System	Report
Secondary Treatment & Gravelless Pipe	Yes	Treatment System	Report
Secondary Treatment, Filter & Drip Emitter	Yes	Entire OSSF	Report
Secondary Treatment & Low Pressure Dosing	Yes	Treatment System	Report
Secondary Treatment & Absorptive Mounds	Yes	Treatment System	Report
Secondary Treatment & Surface Application	Yes	Entire OSSF	Test and Report
Any Other Treatment System	(1)	(1)	(1)

Any Other Subsurface Disposal System	(1)	(1)	(1)
Any Other Surface Disposal System	Yes	(1)	(1)
Non-Standard Treatment and Surface Application	Yes	Entire OSSF	Test and Report (1)
Holding Tank	Yes	Pump tank as needed	Keep pump records

(1) Determined by the permitting authority based upon review required by §285.5(b) of this title (relating to Submittal Requirements for Planning Materials).
(2) Requirements for Planning Materials). Testing criteria and reporting frequency for those systems not covered under (1) shall be according to §285.91(4) of this title.
(3) Required if design Q is less than required by §285.91(3) of this title.
(4) Not required if the homeowner maintains the system.

(13) Table XIII. Disposal and Treatment Selection Criteria.

Figure: 30 TAC §285.91(13) (No change.)

TABLE XIII: DISPOSAL AND TREATMENT SELECTION CRITERIA

ON-SITE SEWAGE FACILITY[9] (OSSF)	SOIL TEXTURE OR FRACTURED ROCK[10] (MOST RESTRICTIVE CLASS ALONG MEDIA[1] or 2 FEET BELOW EXCAVATION)				MINIMUM DEPTH TO GROUNDWATER	MINIMUM DEPTH TO RESTRICTIVE HORIZON[1]
Disposal Method (section) Treatment	Class Ia	Class Ib, II[8] or III[8]	Class IV	Fractured Rock	MEASURED FROM BOTTOM OF MEDIA[7]	MEASURED FROM BOTTOM OF MEDIA[7]
Absorptive drainfield[2] (285.33(b)(1))Septic tank	U	S	U	U	2 feet	2 feet
Absorptive drainfield[2] Secondary treatment	S[5]	S	U	S[5]	2 feet	2 feet
Lined E-T[2] Septic tank	S	S	S	S	N/A	N/A
Lined E-T[2] Secondary treatment	S	S	S	S	N/A	N/A
Unlined E-T[2] Septic tank	U	S	S	U	2 feet	2 feet
Unlined E-T[2] Secondary treatment	S[5]	S	S	S[5]	2 feet	2 feet
Pumped Effluent Drainfield[3] Septic tank	U	S	S	U	2 feet	1 foot
Leaching chamber[2] Septic tank	U	S	U	U	2 feet	2 feet
Leaching chamber[2] Secondary treatment	S[5]	S	U	S[5]	2 feet	2 feet
Gravelless pipe[2] Septic tank	U	S	U	U	2 feet	2 feet
Gravelless pipe[2] Secondary treatment	S[5]	S	U	S[5]	2 feet	2 feet

Drip Irrigation Septic tank/ filter	U	S	S	U	2 feet	1 foot
Drip Irrigation Secondary treatment/ filter	S(5)	S	S	S(5)	1 foot	6 inches
Low Pressure Dosing Septic tank	U	S	S	U	2 feet	1 foot
Low Pressure Dosing Secondary treatment	S(5)	S	S	S(5)	2 feet	1 foot
Mound (4) Septic tank	S	S	S	S	2 feet	1.5 feet
Mound(4) Secondary treatment	S	S	S	S	2 feet	1.5 feet
Surface application Secondary treatment	S(6)	S(6)	S(6)	S(6)	N/A	N/A
Surface application Non-standard treatment	S(6)	S(6)	S(6)	S(6)	N/A	N/A
Soil Substitution(2) Septic tank	S	S	U	S	2 feet	2 feet
Soil Substitution(2) Secondary Treatment	S	S	U	S	2 feet	2 feet

S = Suitable U = Unsuitable

(1) An absorptive drainfield may be used, if a rock horizon is at least 6 inches above the bottom of the excavation, see §285.33(b)(1).

(2) If the slope in the drainfield area is greater than 30% or is complex, the area is unsuitable for the disposal method.

(3) Can only be installed in an area where the slope is less than or equal to 2.0%.

(4) Can only be installed in an area where the slope is less than 10%.

(5) Requires disinfection before disposal. A form of pressure distribution shall be used for effluent disposal in fractured or fissured rock.

(6) Requires vegetation cover and disinfection.

(7) When no media exists, measure from the bottom of the excavation or pipe, whichever is less.

(8) May require gravel analysis for further suitability analysis (see §285.30(b)(1)(B)).

(9) If OSSF is located within a Flood Hazard, see §285.31(c)(2) for special planning requirements.

(10) Includes fissured rock.

All OSSFs require surface drainage controls if slope is less than 2%.