The Texas Commission on Environmental Quality (commission) adopts amendments to §§285.2, 285.7, 285.33, 285.50, 285.61, 285.70, 285.71, and 285.90. The commission also adopts the repeal of §285.64 and new §285.64 and §285.65. The amendments to §§285.7, 285.33, and 285.61 and new §285.64 and §285.65 are adopted *with changes* to the proposed text as published in the February 24, 2006, issue of the *Texas Register* (31 TexReg 1173). The amendments to §§285.2, 285.50, 285.70, 285.71, and 285.90 and the repeal of §285.64 are adopted *without changes* and will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

The adopted rules implement requirements in House Bill (HB) 2510, 79th Legislature, 2005, relating to the regulation of on-site sewage disposal systems using aerobic treatment and the maintenance of those systems. The adopted rules also address enforcement for noncompliance. HB 2510 impacts two chapters within 30 TAC. These are Chapter 30, Occupational Licenses and Registrations, and Chapter 285, On-Site Sewage Facilities. This adoption addresses the revisions to Chapter 285. The changes to Chapter 30 have previously been addressed and adopted in a separate rulemaking (Rule Project Number 2005-039-030-CE).

This adopted rulemaking addresses the registration requirements for maintenance companies that provide service or maintenance of on-site sewage disposal systems using aerobic treatment. It also addresses requirements for a homeowner who wishes to maintain the aerobic system at the homeowner's residence without the necessity of a maintenance contract with a maintenance company. Additionally, there are three changes to Chapter 285 not related to HB 2510. The first relates to

revising the definition of subdivision, and the other two changes relate to more specific direction for design of mound and soil substitution disposal options.

The commission administers the On-Site Sewage Facility (OSSF) Program that currently includes executive director delegation of OSSF authority to counties, municipalities, and river authorities.

The adopted rules create requirements for maintenance companies, individuals who provide maintenance for compensation, and homeowners who perform their own maintenance. The adopted rules also clarify the definitions of maintenance company (to include the Chapter 30 definition of maintenance provider) and subdivision (to agree with the definition of subdivision within the Local Government Code). Finally, the adopted rules also clarify OSSF disposal options of mound drainfields and soil substitution drainfield design options.

The adopted 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. The purpose of the statute is to regulate maintenance companies and their ability to service and maintain on-site sewage disposal systems using aerobic treatment. The failure of an OSSF is the fundamental cause of OSSF-related public health hazards and provides a medium for the transmission of disease. The failure of an OSSF may be caused by a number of factors, including inadequate soil texture, improper construction, improper planning, improper installation, and inadequate maintenance. Approximately 25% of all homes in Texas use OSSFs because options for centralized collection, treatment, and

disposal systems are not available. In Fiscal Year 2004 alone, there were more than 41,000 newly permitted OSSFs in Texas. Of these, nearly 23,000 (53%) were aerobic systems.

The adopted rules specify requirements for maintenance companies to obtain an occupational registration to perform service and maintenance of on-site sewage disposal systems using aerobic treatment. The significant revisions in these rules include changes to the requirements for maintenance companies, installers, enforcement proceedings, and training for maintenance companies.

Finally, the adopted rules delineate the training requirements for homeowners, installers, and maintenance companies. Specifically, these rules require six hours of training for homeowners who perform their own maintenance and a minimum of 16 hours of training for registered maintenance companies.

SECTION BY SECTION DISCUSSION

The commission adopts administrative changes throughout these sections to be consistent with Texas Register requirements and other agency rules and guidelines and to conform to the drafting standards in the *Texas Legislative Council Drafting Manual*, November 2004.

Subchapter A - General Provisions

The adopted amendment to §285.2, Definitions, provides for consistency with the definition of Edwards Aquifer Recharge Zone, as provided in 30 TAC Chapter 213, Edwards Aquifer. The adopted amendment to §285.2 also provides additional scope to the definition for maintenance company to

include maintenance providers, as defined in §30.7, Definitions, and to include the new provisions from HB 2510 relating to maintenance provided for compensation. Additionally, the adopted amendment to §285.2 would provide an updated definition of subdivision to reflect the subdivision definition found in Local Government Code, §232.001(a-1).

The adopted amendment to §285.7, Maintenance Requirements, provides current rules for maintenance companies, which reflects changes to THSC, §366.0515(n), relating to certification, training, and registration for both maintenance companies and individuals employed by maintenance companies. The statute also eliminates the current acceptance of a wastewater Class D license as a prerequisite for performing maintenance. However, provisions have been added for wastewater Class D licensees to continue to provide maintenance until September 1, 2008, provided that they held a valid wastewater Class D license as of August 31, 2006. Finally, the current rules allow homeowner maintenance in counties with a population less than 40,000. The adopted amendment reflects the provisions of THSC, §366.051(g) - (k), and allows homeowners in every county to perform their own aerobic system maintenance if the homeowner has six hours of commission-approved training from either the manufacturer or installer, under specified time frames, and the county has not imposed more stringent standards. The adopted amendment also provides for routine inspections by the permitting authority, not to be greater than once every five years unless the owner has failed to properly maintain the aerobic system and requires a homeowner to obtain a maintenance contract if the aerobic system is not properly maintained.

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

The adopted amendment to §285.33, Criteria for Effluent Disposal System, provides the construction requirements for a mound drainfield in subsection (d)(3) and quantifies the positive allowances for slopes and the existing or new soil interface. The adopted amendment to §285.33 also provides clearer requirements for designing a soil substitution drainfield in subsection (d)(4) and does not allow for soil substitution using Class III soils, which generally tend to erratically treat and disperse effluent.

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

The adopted amendment to §285.50, General Requirements, provides for commission registration of maintenance companies.

The adopted amendment to §285.61, Duties and Responsibilities of Installers, provides for mandatory homeowner training by the installer of an aerobic system when requested by the homeowner.

The adopted repeal of §285.64, Suspension or Revocation of License or Registration, is replaced by new adopted §285.64, Duties and Responsibilities of Maintenance Companies. This section addresses the requirements in §285.7 for maintenance companies and assists in enforcement referrals by permitting authorities and the commission.

The adopted new §285.65, Suspension or Revocation of License or Registration, includes all of the provisions currently found in §285.64 and adds the revocation of a maintenance company's registration

for failure to either properly maintain an aerobic system or submit required reports. This section reflects the provisions of §285.7 for maintenance companies and will assist in enforcement referrals.

Subchapter G - OSSF Enforcement

The adopted amendment to §285.70, Duties of Owners With Malfunctioning OSSFs, includes specific language for homeowners who desire to maintain their own aerobic systems, as reflected in §285.7(c)(4).

The adopted amendment to §285.71, Authorized Agent Enforcement of OSSFs, adds provisions in the rules for complaints regarding the performance of the maintenance of an aerobic system by maintenance companies or homeowners.

Subchapter I - Appendices

The adopted amendment to §285.90, Figures, revises references in Figure 2, the model deed and affidavit, from the Texas Natural Resource Conservation Commission (TNRCC) to the Texas Commission on Environmental Quality (TCEQ). Additionally, the adopted amendment to §285.90 adds instructions in Figure 3, the sample testing and reporting record for homeowners providing their own maintenance. This also reflects the provisions within §285.7(d), Maintenance Requirements. The adopted amendment to §285.90 also deletes Class III soils as fill in Figure 4, soil substitution drainfields for the typical drainfields - sectional view diagram. This reflects the design changes in §285.33(d)(4), Criteria For Effluent Disposal Systems, relating to soil substitution drainfields.

FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed this rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to §2001.0225 because it does not meet the definition of a "major environmental rule" as defined in that statute. Major environmental rule means a rule, the specific intent of which, is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way 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. The intent of this adoption is to implement legislation that allows regulation of on-site sewage disposal systems using aerobic treatment and the maintenance of those systems. The adopted rules also address enforcement for noncompliance. The adopted rules are intended to establish procedures for regulation and do not adversely affect, in a material way, the economy, a section of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state.

In addition, the adopted rules are not subject to Texas Government Code, §2001.0225, because they do not meet the four criteria specified in §2001.0225(a). Section 2001.0225(a) applies to a rule adopted by a commission, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and a commission or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the commission instead of under a specific state law. The adopted rules do not meet any of these requirements. First, these

revisions do not exceed a standard set by federal law as there are no federal requirements for maintaining OSSFs. Second, these revisions do not exceed an express requirement of state law but are being adopted to implement state law. Therefore, the rulemaking does not exceed an express requirement of state law. Third, the commission is not a party to a delegation agreement with the federal government concerning a state and federal program that would be applicable to requirements set forth in these rules. Therefore, there are no delegation agreement requirements that could be exceeded by these rules. Fourth, this adopted rulemaking does not adopt a rule solely under the general powers of the commission. The requirements that would be implemented through these rules are specified in THSC, Chapter 366, which requires the commission to enact rules governing the installation of OSSFs. Therefore, the commission does not adopt these rules solely under the commission's general powers.

Thus, a regulatory analysis is not required because the adopted rules do not meet the criteria of a major environmental rule contained in Texas Government Code, §2001.0225. The commission invited public comment but no comments were received on the draft regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission performed a preliminary assessment of these rules in accordance with Texas Government Code, §2007.043. The following is a summary of that assessment. The specific purpose of the rules is to regulate activities having the potential for causing pollution of the waters in Texas. The rules will substantially advance this specific purpose by the regulation of on-site sewage disposal systems using aerobic treatment as well as maintenance and enforcement of those systems. Promulgation and enforcement of the adopted rules would be neither a statutory nor a constitutional

taking because they do not adversely affect private real property. The rulemaking does not affect private property in a manner that restricts or limits an owner's right to the property that would otherwise exist in the absence of a governmental action. Texas Government Code, Chapter 2007, does not apply to this rulemaking because the promulgation and enforcement of these rules will not create a burden on private real property.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the adopted rulemaking and found that the adoption 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 adopted rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22, and found the adopted rulemaking is consistent with the applicable CMP goals and policies.

CMP goals applicable to the adopted rule(s) include: 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; and 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.

CMP policies applicable to the adopted rule(s) include that commission rules under THSC, Chapter 366, governing on-site sewage disposal systems require 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 adopted rules are consistent with the goals and policies because they require testing, sampling, and maintenance of aerobic systems sufficient to prevent releases of pollutants.

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

PUBLIC COMMENT

There was no public hearing held on this rulemaking.

RESPONSE TO COMMENTS

The commission received 29 written comments concerning the proposed rules. Comments were received from State Representative Dennis Bonnen and Dianne Helms of State Senator Craig Estes's Office, AAA Wastewater Installation & Maintenance Company, A.C.E. Wastewater Disposal System, Brazos Wastewater Systems LLC, Bell County Public Health District, Clearstream Wastewater Systems, Inc., Coleman Aerobic Septic, Environmental Construction Services, Fayette County, Harris

County Public Infrastructure Department, Meiners Construction Company, Myrtle Springs Septic Systems, Snowden Onsite Septic, Inc., South Texas Wastewater Treatment, Texas On-Site Wastewater Association, Travis County Transportation and Natural Resources, Whitt Septic Systems, and ten individuals. The commenters were opposed to a variety of portions within the rulemaking, whether related to this rule adoption or not.

One individual commented concerning HB 2510 in anticipation of the proposed rules which was received September 9, 2005, and Coleman Aerobic Septic System Inspection/Maintenance submitted comments on October 31, 2005. However, both sets of comments were received well in advance of the final version and release of the proposed rules to the public, which occurred in January 2006. As a result, these comments were excluded from response.

Finally, A.C.E. Wastewater Disposal System commented on the rules during the comment period and provided the commission with a similar letter addressed to TOWA. The letter addressed to TOWA was not included in the responses. However, the letter addressed to the commission was responded to in the preamble.

General

One individual commented that the commission has allowed the septic industry to: charge high fees for aerobic system maintenance, not always require permits, not address systems in need of repair in a timely manner, and not require inspections. This individual also recommended an inspection program for all home sites with septic systems which would establish: acquisition of a timely permit, proof of a

correctly functioning system, periodic inspections, and a local contact for homeowners to report overflowing systems. Another individual commented that there would be an increase in pollution due to homeowner inability to properly maintain an aerobic system.

These comments are beyond the scope of this rulemaking. However, the Chapter 285 rules address each of these comments and the commission's Web site also lists its authorized agents, their location, and contact information. No changes were made in response to this comment.

Clearstream Wastewater Systems, Inc. (Clearstream) commented that their installed systems may suffer from improper maintenance under the proposed rules and the proposed rules are excessive and impossible to comply with and contravene the specific language of HB 2510.

The commission agrees that any aerobic system may malfunction with improper maintenance. Clearstream's specific comments and the commission's responses follow in the next section, relating to specific comments. No changes were made in response to this comment.

Clearstream commented that the commission ". . . has chosen the limited statutory grant of authority in HB 2510 as a license to create an entirely new regulatory program . . . Rather than just satisfy the demands of the statute, the rule proposal takes the statute as a starting point and then creates a major new regulatory program out of whole cloth -- placing responsibilities and penalties upon wastewater system manufacturer's {*sic*} that are both in excess of what the statute requires and at times, in contravention with what the statute allows."

The commission responds that statutory authority to create a registration program was specific in Texas Health and Safety Code (THSC), §266.0515(n). Additionally, the statute specifies in §366.0515(h) that the responsibility for homeowner training go to either the manufacturer or installer. While the commission has proposed amendments to existing rules for installers with respect to homeowner training, there are no provisions for manufacturers who choose to decline to provide homeowner training for aerobic systems. However, the commission is not required to approve a manufacturer's product when the manufacturer has not satisfied conditions for review. For example, 30 TAC §285.32(c)(5) requires a review of a manufacturer's state-listed product every seven years. Manufacturers who fail to comply can have their product(s) removed (§285.32(c)(5)(D)). The commission views a manufacturer's failure to train a homeowner (when requested) as a failure to comply with the rules and the only available alternative is delisting the product(s). No changes were made in response to this comment.

Clearstream commented that while THSC, §366.0515(o), prohibits the commission from dictating to manufacturers who are to be certified as a maintenance provider, this prohibition implicitly extends to homeowner training as well.

While the commission agrees that the statute prohibits the commission from dictating to manufacturers who are to be certified, the commission disagrees that this extends equally to homeowners as it was neither stated nor included in §366.0515(h) and §366.0515(o). No changes were made in response to this comment.

Meiners Construction Company (Meiners) commented that counties should have the option of allowing homeowner maintenance.

Counties have the option of allowing or not allowing homeowner training. THSC, §366.032(b), allows authorized agents to adopt more stringent requirements when they provide greater public health and safety protection. Additionally, there are several authorized agents who have received approval to require maintenance contracts for all aerobic systems. No changes were made in response to this comment.

AAA Wastewater Installation & Maintenance Company (AAA) commented that the TCEQ is not doing its job in regulating local permitting authorities and that half of the local permitting authorities neither have the tools nor ability to accurately inspect installation work. Additionally, the TCEQ should be fining these authorized agents for not enforcing the rules.

While the comments are not part of the rulemaking, there are provisions in Subchapter B of Chapter 285 concerning delegation to local authorities and revocation of this delegation. Revocation of an order and charge-back fees could be part of an enforcement action against an authorized agent who fails to properly carry out its duty related to OSSF. No changes were made in response to this comment.

Dianne Helms of State Senator Craig Estes's office commented that the fiscal note, under PUBLIC BENEFITS AND COSTS, stated that installers and manufacturers would be tracking and reporting to

permitting authorities which homeowners have been trained to perform their own aerobic system maintenance.

The commission's proposed rules require manufacturers and installers who train homeowners to provide only a written certificate or letter to the local permitting authority, as found in §285.7(d)(4)(A)(ii). No changes were made in response to this comment.

Ms. Helms also commented that the limitation to provide aerobic system maintenance to counties of 40,000 persons was in the commission's proposed rules.

The commission could not find where the limitation was still in effect in the proposed rules. No changes were made in response to this comment.

The Harris County Public Infrastructure Department (Harris County) commented that the TCEQ's estimate of $100,000 costs to state and local governments does not include costs to the TCEQ's regional offices and that Harris County's costs would be closer to $185,000. Harris County recommended that the definition of "Maintenance" is currently overly broad, exceeds the legislative intent in the statute, and should be revised per their recommendation.

The fiscal note did not include data from Harris County regarding enforcement and additional staff costs. However, the fiscal note does say that costs would depend upon how many aerobic facilities are in the jurisdiction of the local permitting authority and the necessity for personnel

and equipment upgrades as well as their ability to provide enforcement. The estimated upward cost of $100,000 may have been low for Harris County, but was based upon the best information program staff had at that time. No changes were made in response to this comment.

Environmental Construction Services (Environmental) commented that Mr. Horvath's estimate for the cost per employee was not reasonable and that $500 for the basic training cost per employee should be considered in addition to employee registration.

In the section titled SMALL AND MICRO-BUSINESS ASSESSMENT, the training class was estimated to cost between $200 and $400 at the time the fiscal note was written. Costs for training from each manufacturer was unknown at the time. The assessment incorrectly assumed a $70 per year cost for registration. Therefore, the assessment should have read "training and registration costs are estimated to be between $270 and $470" per employee performing aerobic system maintenance.

TOWA commented that there were no provisions in the proposed rules relating to continuing education requirements for maintenance providers and suggested that the commission consider doing so with an emphasis on advance maintenance provider training.

These comments are beyond the scope of this rulemaking but could be addressed in any future rulemaking for 30 TAC Chapter 30.

TOWA commented that the commission's current policy for course approval for the basic maintenance provider course is insufficient because other continuing education providers may not be sufficiently familiar with the provisions of HB 2510. TOWA encouraged the commission to ". . . follow the national standards in selecting only those with University affiliations or State/National Associations who develop training materials and provide education programs to the onsite wastewater industry."

These comments are beyond the scope of this rulemaking. No changes were made in response to this comment.

Travis County Transportation and Natural Resources Onsite Wastewater Program (Travis County) recommended revisions to other portions of the rules, such as: requiring the five-foot setback for all disposal systems (including surface application and drip irrigation), revising the requirement that any system which needs component replacement (such as replacement of a broken pipe or pump tank) not be required to meet current standards when the system does not have a history of operational problems or failure, addition of soil/material specifications for bedding pipe, adding a requirement that all non-residential OSSFs have a grease interceptor as well as a method for sizing them, such as in the Florida standards, and Table III be amended to include wastewater usage rates for businesses such as barber and beauty shops, dentist and doctor offices, churches, funeral homes, fitness gyms, self storage warehouses, carry-out food outlets, and convenience stores with fast food restaurant attachments.

These comments are beyond the scope of this rulemaking but can be addressed in future revisions to Chapter 285. No changes were made in response to this comment.

Two individuals commented that the new $70 maintenance provider registration fee was not equitable to those currently providing maintenance.

Registration fees are specified in 30 TAC Chapter 30 and are not within the scope of the Chapter 285 rules. No changes were made in response to this comment.

The Bell County Public Health District (Bell County) commented that the cost associated with homeowner training will not be reasonable for the homeowner. Meiners asked who will be paying the cost associated with training homeowners. Additionally, Bell County asked 17 questions concerning implementation of the rules. These questions were addressed in the commission's written response to Bell County, dated April 24, 2006.

The commission agrees with Bell County that the cost for homeowner training may be perceived as unreasonable but neither the statute nor the rules limit the trainer's fees and assumes that the trainer will charge the homeowner for the training. No changes were made in response to this comment.

Meiners commented that the cost of installing an aerobic system will increase.

The commission agrees that this is a possibility. No changes were made in response to this comment.

Fayette County commented that there were currently no courses available for training maintenance providers and therefore no one can comply with the proposed rules. Fayette County also commented that designated representatives (DRs) should be given the authority to issue spot citations for OSSF violations, DRs should be trained and certified to take OSSF effluent samples, conditionally legalize outhouses, eliminate the ten-acre rule, provide state-mandated pay equity for all DRs, and to rewrite the graywater rules because they are confusing. Finally, Fayette County asked 19 questions concerning implementation of the rules.

At the time of Fayette County's letter, while there were no approved maintenance training courses, the commission had received a proposal for a maintenance provider training course which is under review. Fayette County's recommendations are beyond the scope of this rulemaking but can be considered in a future rulemaking. Finally, the commission responded to Fayette County's 19 questions concerning implementation of the rules in a letter, dated April 24, 2006. No changes were made in response to this comment.

Harris County commented that the requirement for the permitting authority to have a valid maintenance contract, as a condition to construct, should be changed to be as a condition to operate. Harris County cites doing so gives the homeowner an opportunity to solicit bids from different aerobic system manufacturers.

This statement is beyond the scope of this rulemaking. No changes to the rules were made in response to this comment.

South Texas Wastewater Treatment requested rule changes for the minimum dosing volume for spray systems, smaller minimum pump tank size, new requirements for an equalization basin to regulate effluent flow, and additional flexibility for a qualified designer in designing an on-site sewage facility.

These comments are beyond the scope of this rulemaking which is only to address the provisions of HB 2510, definitions for maintenance and subdivision, mound disposal, and soil substitution design. These comments may be addressed in a future revision of Chapter 285. No changes were made in response to this comment.

Specific

State Representative Dennis Bonnen commented that the commission redefine "Maintenance" to exclude replacement of major parts and alterations of the system. He also commented that the legislation was intended to leave major repairs to licensed professionals. Additionally, Harris County, Snowden Onsite Septic, Inc. (Snowden), and TOWA offered modifications to the existing definition for maintenance relating to the delineation of responsibility of homeowners performing their own aerobic system maintenance versus certified maintenance personnel. Harris County also recommended a new definition for "Maintenance findings."

The revised maintenance definitions recommended by the commenters propose to limit the scope of homeowners' ability to maintain their aerobic treatment unit. The 30 TAC Chapter 285 rules do not allow any change to a permitted system without the permitting authority's prior review and approval. In reviewing the proposed revised definitions and current practices in counties

with a population less than 40,000, the commission envisions empowering homeowners in counties above 40,000 population with the option for all aspects of aerobic system maintenance as the smaller counties. The definition for "Alter" also requires prior review and approval from the permitting authority. Finally, Chapter 30 allows homeowner maintenance which specifically includes repairs to their own aerobic systems. No changes were made in response to this comment.

Two individuals questioned the need to license professionals who have been providing maintenance services in the past.

The statute requires all maintenance providers to be registered with the commission. No changes were made in response to this comment.

One individual asked why was maintenance limited to only those certified by the manufacturer of the commenter's aerobic system.

Section 285.7(b)(1)(A) of the proposed rules requires that maintenance be provided by an individual certified by the manufacturer of the OSSF. This is consistent with current rules in §285.7(b)(1)(A). No changes were made in response to this comment.

One individual asked why six hours of training were required for a procedure that doesn't take 45 minutes to complete.

HB 2510 specifically states that up to six hours training for homeowner maintenance is required. In this requirement, the commission is charged with developing training which includes instruction regarding public health and safety of proper maintenance of the system and a demonstration of the procedure for performing a scheduled maintenance. No changes were made in response to this comment.

Travis County commented that there is no justification for a maintenance provider to have an Installer II license and that current maintenance providers without an Installer II license may find existing maintenance contracts to be at risk for fulfilling maintenance obligations.

The commission understands Travis County's point but disagrees because the requirement was included in HB 2510 and those individuals performing maintenance without an Installer II license may continue to perform maintenance as long as they: 1) are employed in a company which employs an Installer II; 2) satisfactorily complete a 16-hour, commission-approved basic maintenance course; 3) have a business relationship with the manufacturer; and 4) complete any other reasonable requirements established by the manufacturer. Finally, the maintenance person must be certified by the manufacturer and registered with the commission. No changes were made in response to this comment.

AAA, A.C.E. Wastewater Disposal System (A.C.E.), Environmental, Meiners, Travis County, and one individual commented that there was a significant disparity between the amount of time required for a professional maintenance provider and homeowners. The disparity is between the requirement

for up to six hours' training required for homeowners and a minimum of 16 hours' training for professionals. Environmental and Meiners also recommended that homeowners take the same course as maintenance providers to alleviate this disparity. Travis County recommended 12 hours' training for homeowners. Additionally, Whitt Septic Services (Whitt) commented that a 16-hour course in basic maintenance ". . . is a joke . . ." for those already performing maintenance and Meiners commented that six hours would not be a sufficient amount of time, resulting in more homeowner-maintained aerobic systems which would fail, resulting in more enforcement action for permitting authorities.

These requirements are from the statute which specify training times. No changes were made in response to this comment.

TOWA commented that 16 hours of intensive training is insufficient time for training maintenance providers but agrees with the commission's limitation of this training to classroom training.

The commission acknowledges TOWA's comment concerning the classroom-only training. The commission responds that the basic course is intended to provide only basic information for maintenance providers, not manufacturer-specific training. No changes were made in response to this comment.

TOWA commented that they support the commission's position that the commission will not require re-certification for maintenance providers who are currently certified by a manufacturer.

The commission acknowledges TOWA's support. The commission reiterates that although a maintenance provider has a manufacturer's certification, successful completion of the basic maintenance course is still required for registration. No changes were made in response to this comment.

Two individuals commented that they are currently Installer II licensees who provide maintenance and should not be required to take a class in which they are already trained. Another individual requested an exemption for any installer who currently performs maintenance on aerobic systems.

The statute created a registration for all maintenance providers and in doing so, requires the commission to develop course work for certification by the manufacturer and registration with the commission. No changes were made in response to this comment.

Snowden commented that the statute requires an Installer II license and did not give leeway for Wastewater D licensees.

The commission proposed a two-year phaseout of the Wastewater D licensee as an option in order for all Wastewater D licensees to obtain Installer II certification or affiliate with a maintenance company that employs an Installer II. Immediate disallowance of the Wastewater D option could also jeopardize thousands of existing maintenance contracts performed by Wastewater D licensees. No changes were made in response to this comment.

One individual requested that maintenance providers with a Wastewater D license be permitted to maintain systems in perpetuity as long as all other provisions for maintenance registration are met. This individual commented that if a homeowner can be trained in six hours that the maintenance provider could be trained in the same amount of time as well.

HB 2510 states that an Installer II license must be held by at least one person in the company. Additionally, the commission proposed a two-year phaseout of the Wastewater D licensee as an option in order for all Wastewater D licensees to obtain Installer II certification or affiliate with a maintenance company that employs an Installer II. The statute also makes a distinction between homeowners and those who provide maintenance for compensation. Homeowner training is not the same for those who provide maintenance service and receive compensation. No changes were made in response to this comment.

Harris County recommended that someone other than the designer of a nonstandard system be given the flexibility to train a homeowner, in the case when the designer cannot train the homeowner.

The commission does not agree that someone other than the designer of a nonstandard system be given the flexibility to train a homeowner because doing so allows someone not intimately involved in or possibly aware of particular design details to assume responsibility of its operational training of the homeowner. However, in the case when the original designer is unavailable to train the homeowner, the commission has no objection to a local permitting authority accepting an alternate trainer, as proposed by Harris County. This could be addressed

in a future revision to the Chapter 285 rules. No changes to the rules were made in response to this comment.

One individual asked what happens when the house is sold and who will be contacted to train the new homeowner(s). Finally, this individual asked if this information will be included in the sales contract.

The proposed rules provide that after a house sale, the new homeowner must obtain training from either the installer or manufacturer, as stated in §285.7(c)(3)(C). Finally, the commission neither has jurisdiction over a real estate sales contract provision nor can require this information to be part of a real estate sales contract. No changes were made in response to this comment.

One individual commented that the rules should not require homeowners who currently perform their own aerobic system maintenance from being retrained in aerobic system maintenance.

The commission agrees with this comment. Homeowners who currently perform their own aerobic system maintenance are not required to be retrained. No changes were made in response to this comment.

AAA, A.C.E., Clearstream, Meiners, Whitt, and two individuals commented that homeowners are not qualified to provide maintenance or will not provide adequate maintenance of their systems.

This requirement is the crux of this rulemaking package which allows homeowners to provide their own aerobic system maintenance. No changes were made in response to this comment.

A.C.E., Brazos, Meiners, and one individual commented that there would be a degradation in ground and surface water quality by homeowners who maintain their own systems.

The statute allows homeowners to provide their own aerobic system maintenance with training. No changes were made in response to this comment.

Harris County commented that maintenance contracts should be amended to allow electronic maintenance monitoring software as confirmation that the maintenance contract was renewed.

This comment is beyond the scope of this rulemaking. No changes to the rules were made in response to this comment.

Environmental commented that manufacturers and installers will incur liability when training a homeowner to maintain an aerobic treatment system. Environmental also provided a statement from their insurance company stating that they would not be protected under their general liability policy.

The commission cannot control if someone decides to pursue litigation. Any company or individual can be sued at any time by any party without regard to legal accuracy or sufficiency.

The rules require the manufacturer or installer to train a homeowner when requested by the homeowner. No changes were made in response to this comment.

On individual agreed with the requirement that either the manufacturer or the installer train the homeowner.

The commission acknowledges this comment. No changes were made in response to this comment.

Environmental commented that there is a disparity between the need for a certification of those who train maintenance providers while there is no certification requirement for those who train homeowners.

The commission agrees that there appears to be a disparity for training maintenance providers and homeowners. However, HB 2510 specifically states that the basic maintenance provider course be approved by the commission but did not state the same for homeowner training. As a result, the commission does not require review/approval of the homeowner training and requires review/approval of the basic maintenance provider course. Additionally, for the basic maintenance course, instructors are not certified by the commission but must meet certain qualifications, per commission Regulatory Guidance Number 373. No changes were made in response to this comment.

Clearstream, Harris County, and one individual commented that the commission's proposed rules go beyond the statutory requirement for training homeowners within the initial two-year period by requiring training when requested by the homeowner.

The commission disagrees with this comment. Limiting the rules to only new systems and those currently within the initial two-year period potentially deprives over 100,000 homeowners with aerobic systems the opportunity to perform their own maintenance. Additionally, the wording in the statute to which Clearstream and Harris County refer is followed by the words "if applicable." The commission interprets this portion of the statute to mean that homeowner training can be obtained at any time, including the initial two-year period in anticipation of the homeowner maintaining the system after the initial maintenance term has expired. No changes were made in response to this comment.

Meiners and one individual commented that third-party training for homeowners would be preferential to requiring installers and manufacturers.

The commission agrees in principle and such training would promote consistency in training for homeowners. However, training on an owner's aerobic treatment unit would necessitate the third party's approval to do so by each manufacturer, along with manufacturer-specific unit details. No changes were made in response to this comment.

One individual asked to be responsible for the required reporting to the local permitting authority and if homeowner training could be sufficient by attending an installer's training class.

An installer's training class (21 hours) is longer than the proposed six hours of homeowner training and does not sufficiently cover maintenance and reporting requirements for specific aerobic treatment units. No changes were made in response to this comment.

Clearstream commented that the commission had no authority to delist a manufacturer who refused a homeowner training when requested.

While the commission understands Clearstream's arguments, the proposed rules do not prevent any manufacturer from outsourcing training, either through its agents, installers, or training in large groups. Manufacturers must be held accountable for violating the rules in regard to homeowner training. Since the commission approves the product because it meets TCEQ requirements, the commission may also not approve the product when statute violations occur. No changes were made in response to this comment.

State Representative Dennis Bonnen commented that a 30-day training period will be burdensome to firms that have a large number of clients spread over a large area. Clearstream commented that they could not accommodate training 5,000 homeowners per month in training at their residences. Additionally, Harris County, TOWA, and one individual commented that the 30-day time frame to train a homeowner is inadequate due to logistics relating to scheduling, locations, facilities, and

manpower for training. Commenters cited that this may be especially pertinent in the initial period after the rule adoption. TOWA recommended training four times per year for homeowners while Clearstream and Harris County cited the training only be offered during the initial two-year period after installation.

The statute, in §366.0515(h), states that a homeowner who purchases a residence with an aerobic treatment system has 30 days after taking possession to obtain maintenance training or else the homeowner must obtain a maintenance contract. The commission applied this same time frame to existing homeowners who wish to maintain their own aerobic system. As a result, extending the 30-day period would not be consistent with the statute. No changes were made in response to these comments.

TOWA commented that homeowner training responsibility should rest solely with the manufacturer in classes held on a quarterly basis. TOWA also commented that only the manufacturer be required to provide the permitting authority and homeowner with a written certificate or letter stating that the owner received and completed the required training.

TOWA's recommendation is well taken but HB 2510 requires either the manufacturer or installer train the homeowner. No additional changes were made in response to this comment.

Clearstream, Environmental, Harris County, and Snowden commented that installers should not be required to train homeowners in aerobic system maintenance. Additionally, A.C.E., Environmental,

Meiners, Snowden, TOWA, and Whitt commented that installers are not qualified to train homeowners in aerobic system maintenance.

HB 2510 specifies that the manufacturer or installer is responsible for training a homeowner desiring aerobic system training. No changes were made in response to this comment.

Snowden commented that homeowner training should be no less than six hours.

The commission agrees and has revised §285.7(c)(4)(A)(i)(III)(-b-) to require six hours of homeowner training.

Myrtle Springs Septic Systems commented that the rules should require proof that the homeowner actually received six hours of aerobic system training in maintenance.

The rules require a letter from the trainer (manufacturer or installer) be sent to the permitting authority that the homeowner received and completed the required (six hours) training. No changes were made in response to this comment.

Environmental made a recommendation that homeowners be registered with the commission in the same manner as maintenance providers. Additionally, this registration would be used to track homeowner compliance with maintenance requirements.

Local permitting authorities will be tracking homeowners who have successfully completed training. This will be documented though the required letter provided to the permitting authority from either the manufacturer or installer who trained the homeowner. No changes were made in response to this comment.

Clearstream commented the statute requires that a homeowner has 30 days to receive training from a certified installer after the purchase of a residence with an aerobic system maintained by the previous owner. Otherwise, the new homeowner must have a maintenance contract. Conversely, TOWA and Whitt commented that the requirement for both the installer and manufacturer to train the homeowner be amended to only require that the manufacturer train the homeowner within the 30-day period.

The commission acknowledges the language in the statute. A homeowner's ability to receive training after taking possession of a residence with an existing aerobic system is the same as any other homeowner with an aerobic system. No changes were made in response to this comment.

Whitt suggested that the commission require homeowners to have auto dialers which also alert the permitting authority of system malfunctions.

Section 285.7(d)(3) allows electronic monitoring and automatic telephone or radio access which notifies the maintenance company of system or component failure, including the amount of system disinfection. In doing so, the number of maintenance inspections may be reduced from

three to two per year. This remains an option and no changes were made in response to this comment.

Harris County and Snowden commented that the commission was not given statutory authority to require manufacturers and installers to provide parts to homeowners who maintain their own aerobic system. Conversely, Whitt commented that homeowners be required to provide proof that parts within an aerobic treatment unit were replaced with the correct parts.

The commission agrees with this statement on face value. However, requiring the availability of replacement parts allows the homeowner to maintain the aerobic system with components which were certified during the National Sanitation Foundation (NSF) testing process and under which state approval was granted. The proposed rules, in §285.7(d)(4), stated that the manufacturer shall make replacement parts available and has been changed to state that both the manufacturer and installer shall make replacement parts available. Additionally, these requirements are reflected in §285.61 (relating to Duties and Responsibilities of Installers) and §285.65 (relating to Suspension or Revocation of License or Registration). No other changes were made in response to this comment.

Brazos Wastewater, TOWA, Travis County, Whitt, and one individual commented that inspections of homeowner-maintained aerobic systems should be more frequent than once every five years.

This requirement is part of the statute and states that a routine inspection cannot be made more than once every five years. However, both the current and proposed rules state that a permitting authority can inspect any OSSF if there is a complaint or a nuisance condition exists. No changes were made in response to this comment.

TOWA recommended an inspection within the initial 12 months of a system maintained by a homeowner.

The commission responds that both the current and proposed rules state that a permitting authority can inspect any OSSF if there is a complaint or a nuisance condition exists. No changes were made in response to this comment.

Travis County recommended adding the word “minimum” to §285.33 where disposal area is calculated.

The commission agrees and has modifed the wording for area calculations within the sections open for revision.

Snowden recommended that the commission exclude drip irrigation from mound systems and not allow soil substitution systems when there are untested, unproven standards.

The commission disagrees because no evidence was provided which defines and supports this comment. No changes were made in response to this comment.

Travis County commented that 18 inches of soil is insufficient for the soil's filtering ability.

The commission disagrees with this comment. The combination of 12 inches of soil with less than 30% gravel, and a minimum of six inches of imported soil, combined with a pressure distribution system is already as stringent as current requirements for similar systems, such as low-pressure dosing systems. No changes were made in response to this comment.

Travis County commented that the length of the distribution calculation will encourage designs which extend into the side slopes.

The commission agrees and §285.33(d)(3)(E) has been revised to exclude the pipe within 12 inches of the side slopes.

Travis County commented that the words "covered piping" are unnecessary in §285.33(d)(3)(E)(ii)(II).

The commission agrees with the comment and has revised §285.33(d)(3)(E)(ii)(II).

Travis County commented that §285.33(d)(3)(E)(iii) requires a 7:1 side slope length to width ratio which is excessive and recommends a ratio of 4:1.

The commission agrees that a smaller length to width ratio is acceptable for certain sites. Section 285.33(d)(3)(E)(iii) is revised to define situations where the 4:1 ratio is allowed.

Travis County commented that while §285.33(d)(3)(E)(vi) requires dosing holes no more than four feet apart, three feet distance would be more appropriate.

The commission agrees with the comment and §285.33(d)(3)(E)(vi) has been revised to reflect a three-foot spacing.

Travis County commented that §285.33(d)(3)(F)(ii) requires an area credited toward a basal area must include all areas below the distribution system. Travis County recommends "may" instead of "must" in order to guide the designer into using only the portion of the mound footprint that the designer has determined as appropriate.

The commission generally agrees with this comment and has removed the word "must" from the proposed rules.

Travis County recommended low-pressure dosing of soil substitution drainfields due to the inability of gravity flow to provide a uniform loading.

The commission disagrees with the comment. The requirement of two feet of imported soil combined with gravity distribution is consistent with existing requirements for standard subsurface disposal systems.

Travis County commented that soil substitution in certain soil strata is an incorrect use of the design.

The commission agrees and has changed §285.33(4) to include "highly permeable" before "fractured rock" and before "fissured rock." Additionally, §285.33(4)(E) was amended where it states "permeable fractured and fissured rock" to "highly permeable fractured and fissured rock."

Environmental and Whitt commented that the potential exists for installers to sell certificates to homeowners without adequately training the homeowner. Additionally, Meiners commented that homeowners may falsify reporting data to permitting authorities.

The commission agrees that the potential exists, but there are a number of requirements in both the existing and proposed rules to enforce against individuals who falsify documents and provide inadequate training. No changes were made in response to this comment.

TOWA commented that a sole proprietorship may have more than one employee and recommended §285.64(2) be amended to better reflect the statute.

The commission agrees with TOWA that regardless of the number of employees in a sole proprietorship, there must be at least one Installer II who is certified by the manufacturer to perform maintenance and registered by the commission. The revision to §285.64(2) has been made.

State Representative Dennis Bonnen commented that revoking an installer's license if they fail to meet the deadline in training a homeowner even once is ". . . overly harsh and will only decrease the number of people providing this service."

The commission responds that the proposed rules state, in §285.65(b), that ". . . revocation *may* . . ." (italics added) be considered for an installer's license for failing to provide proper maintenance training to an owner of an aerobic OSSF in a timely manner. The commission responds that this is an enforcement-related process subject to discovery and evidence which does not automatically revoke an installer's license. No changes were made in response to this comment.

TOWA commented that the commission consider requiring maintenance providers have proof of liability insurance as well as stocking approved parts and supplies for aerobic systems which they maintain in order to repair a noncompliant system within 48 hours.

The commission responds that liability insurance and what constitutes a sufficient amount of parts and supplies is a business decision to be made by the maintenance company's owner and is not part of the Chapter 285 rules. No changes were made in response to this comment.

AAA and one individual commented that the commission should impose fines for homeowners who do not properly maintain their own aerobic systems.

THSC, §366.0515(j), was amended in HB 2510 to include the requirement for an owner to have a maintenance contract if the owner's system is a nuisance or has failed a periodic inspection. The rules reflect this in §285.70. However, no fines are proposed for homeowners. No changes were made in response to this comment.

A.C.E., Brazos, and one individual commented that authorized agents will not be able to adequately inspect and enforce homeowners who maintain their own aerobic systems. Additionally, A.C.E., Meiners, and one individual commented that systems maintained by homeowners will result in an increase in complaints for authorized agents to investigate.

This rulemaking does not change the authorized agent's responsibilities in enforcing its permitting function. Additionally, provisions for enforcement against homeowners who violate the regulations are provided in §285.70 and §285.71. No changes were made in response to this comment.

Travis County recommended that Figure 4, in §285.90, be revised to include both a soil substitution bed section using gravel media and one or two mound cross sections.

The commission anticipates revising and adding significantly more information to Figure 4 during the next revision to Chapter 285. No changes were made in response to this comment.

Snowden recommended that the commission revise Table XII, in §285.91, to include septic drip systems.

A revision to Table XII is beyond the scope of this rulemaking. No changes were made in response to this comment.

SUBCHAPTER A: GENERAL PROVISIONS

§285.2, §285.7

STATUTORY AUTHORITY

The amendments are adopted under the authority granted to the commission by the Texas Legislature in Texas Water Code (TWC), Chapter 37, and THSC, Chapter 366. The amendments are also adopted under the general authority granted in TWC, §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state; TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction; TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC.

The adopted amendments implement TWC, §37.002, which requires the commission to adopt rules to establish registration requirements for maintenance providers that will service and maintain on-site sewage disposal systems using aerobic treatment under THSC, §366.0515, and to impose administrative and criminal penalties under TWC, §§7.173 - 7.175.

§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 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.

(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 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 findings**--The results of a required performance check or component examination on a specific on-site sewage facility.

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

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

(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.

(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.

(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.

(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.

(44) **On-site sewage facility (OSSF)**--An on-site sewage disposal system.

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

(46) **Operate**--To use an on-site sewage facility.

(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.

(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.

(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.

(50) **Permitting authority**--The executive director or an authorized agent.

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

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

(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.

(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.

(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.

(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.

(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.

(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.

(59) **Regional office**--A regional office of the agency.

(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.

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

(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).

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

(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.

(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.

(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.

(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.

(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.

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

(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.

(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.

(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).

§285.7. 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 D: PLANNING, CONSTRUCTION, AND INSTALLATION STANDARDS FOR OSSFS

§285.33

STATUTORY AUTHORITY

The amendment is adopted under the authority granted to the commission by the Texas Legislature in TWC, Chapter 37, and THSC, Chapter 366. The amendment is also adopted under the general authority granted in TWC, §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state; TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction; TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC.

The adopted amendment implements TWC, §37.002, which requires the commission to adopt rules to establish registration requirements for maintenance providers that will service and maintain on-site sewage disposal systems using aerobic treatment under THSC, §366.0515, and to impose administrative and criminal penalties under TWC, §§7.173 - 7.175.

§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.

(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. 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. 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)

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)

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.

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

§§285.50, 285.61, 285.64, 285.65

STATUTORY AUTHORITY

The amendments and new sections are adopted under the authority granted to the commission by the Texas Legislature in TWC, Chapter 37, and THSC, Chapter 366. The amendments and new sections are also adopted under the general authority granted in TWC, §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state; TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction; TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC.

The adopted amendments and new sections implement TWC, §37.002, which requires the commission to adopt rules to establish registration requirements for maintenance providers that will service and maintain on-site sewage disposal systems using aerobic treatment under THSC, §366.0515, and to impose administrative and criminal penalties under TWC, §§7.173 - 7.175.

§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 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) 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 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 performs maintenance of aerobic OSSFs under §285.64 of this title (relating to Duties and Responsibilities of Maintenance Companies) shall possess a current maintenance registration with the commission.

§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) 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) 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.

§285.64. Duties and Responsibilities of Maintenance Companies.

A maintenance company shall:

(1) possess a current 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;

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

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

(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;

(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.

§285.65. Suspension or Revocation of License or Registration.

(a) Suspension. In addition to the items listed in §30.33 of this title (relating to License or Registration Denial, Warning, Suspension, or Revocation), the executive director may suspend the following licenses for the following reasons.

(1) 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;

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

(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 items listed in §30.33 of this title, the 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 company's registration 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;

(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 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 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, 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 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.

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

[§285.64]

STATUTORY AUTHORITY

The repeal is adopted under the authority granted to the commission by the Texas Legislature in TWC, Chapter 37, and THSC, Chapter 366. The repeal is also adopted under the general authority granted in TWC, §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state; TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction; TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC.

The adopted repeal implements TWC, §37.002, which requires the commission to adopt rules to establish registration requirements for maintenance providers that will service and maintain on-site sewage disposal systems using aerobic treatment under THSC, §366.0515, and to impose administrative and criminal penalties under TWC, §§7.173 - 7.175.

§285.64. Suspension or Revocation of License or Registration

SUBCHAPTER G: OSSF ENFORCEMENT

§285.70, §285.71

STATUTORY AUTHORITY

The amendments are adopted under the authority granted to the commission by the Texas Legislature in TWC, Chapter 37, and THSC, Chapter 366. The amendments are also adopted under the general authority granted in TWC, §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state; TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction; TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC.

The adopted amendments implement TWC, §37.002, which requires the commission to adopt rules to establish registration requirements for maintenance providers that will service and maintain on-site sewage disposal systems using aerobic treatment under THSC, §366.0515, and to impose administrative and criminal penalties under TWC, §§7.173 - 7.175.

§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) With the exception of §285.7(c)(4) of this title (relating to Maintenance Requirements), an authorized agent or the commission may 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:

(1) the authorized agent or commission determines that the system is a nuisance or has failed a periodic inspection under §285.7(d)(4) of this title;

(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 §285.71(d)(1) of this title (relating to Authorized Agent Enforcement of OSSFs), an authorized agent or the commission conditions approval of a permit for an on-site sewage disposal system using aerobic treatment on the system's owner contracting for the maintenance of the system, the order, resolution, or rule may require the maintenance 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 and licensed installers, site evaluators, and designated representatives;

(2) individuals performing the duties 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

STATUTORY AUTHORITY

The amendment is adopted under the authority granted to the commission by the Texas Legislature in TWC, Chapter 37, and THSC, Chapter 366. The amendment is also adopted under the general authority granted in TWC, §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state; TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction; TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013; and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC.

The adopted amendment implements TWC, §37.002, which requires the commission to adopt rules to establish registration requirements for maintenance providers that will service and maintain on-site sewage disposal systems using aerobic treatment under THSC, §366.0515, and to impose administrative and criminal penalties under TWC, §§7.173 - 7.175.

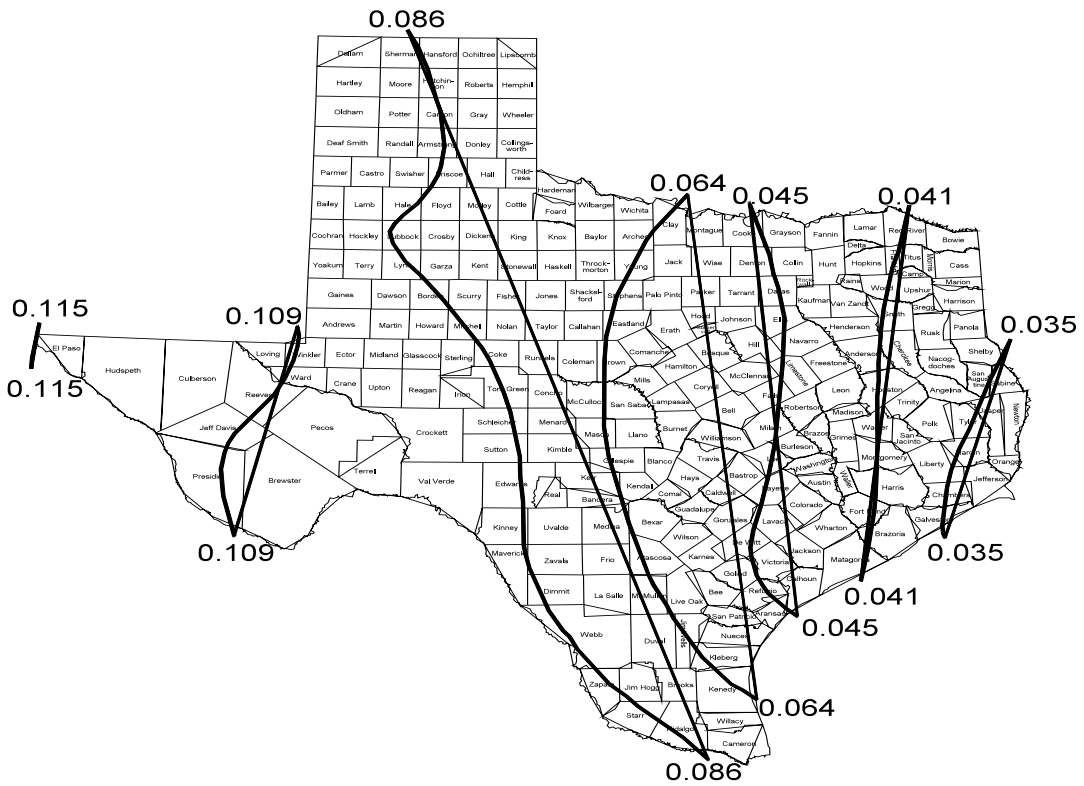
§285.90. Figures.

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.)

Figure 1. Maximum Application Rates for Surface Application of Treated Effluent in Texas (Gallons/Square Foot/Day).



Note: To obtain the application rate for any particular area, refer to the isopleth line to the left of the area.

(2) Figure 2. Model Deed and Affidavit Language.

Figure: 30 TAC §285.90(2)

Figure 2. Model Deed and Affidavit Language.

THE COUNTY OF (insert county name)
STATE OF TEXAS

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

According to Texas Commission on Environmental Quality Rules for On-Site Sewage 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 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 deed recording. Additionally, the owner must provide proof of the recording to the OSSF permitting authority. This 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 must be covered by a continuous maintenance contract. 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.

The owner will, upon any sale or transfer of the above-described property, request a transfer of the permit for the OSSF to the buyer or new owner. A copy of the planning materials for the OSSF 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 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 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		
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

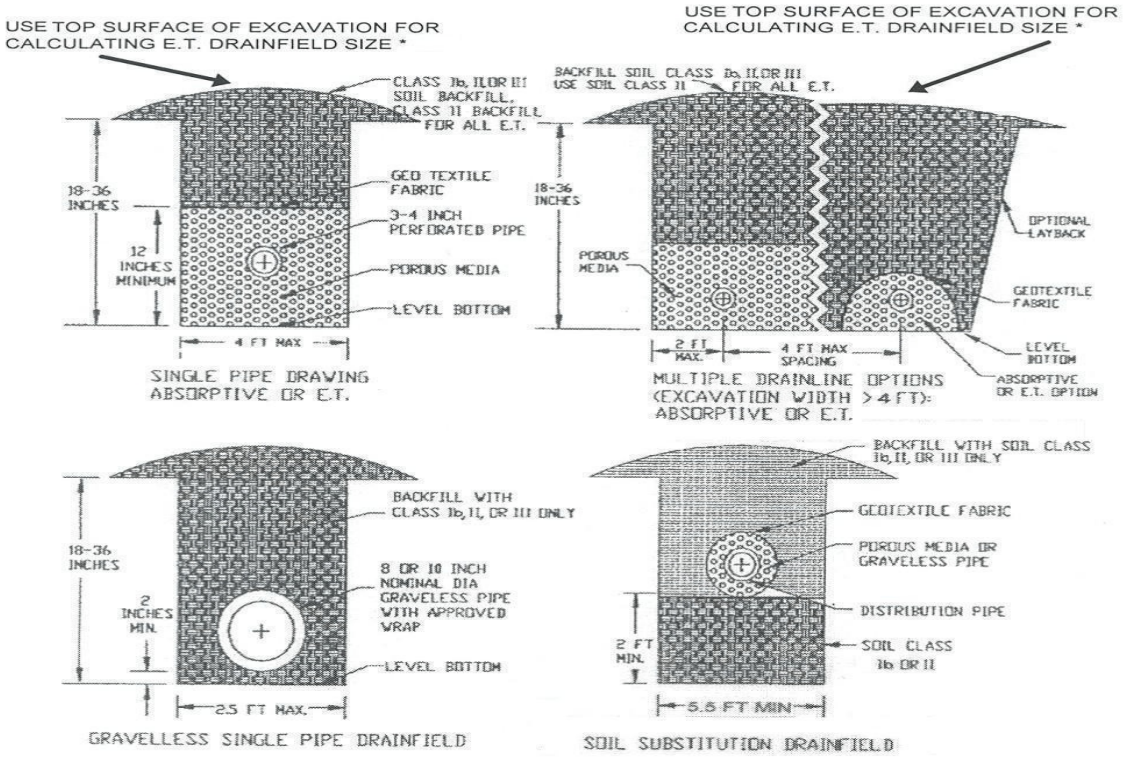
5. Date(s) responded to owner complaints during reporting period (attach copy of complaint and findings):
_____

6. General comments or recommendations: _____
_____
_____

(4) Figure 4. Typical Drainfields - Sectional View.

Figure: 30 TAC §285.90(4)

Figure 4. Typical Drainfields - Sectional View.

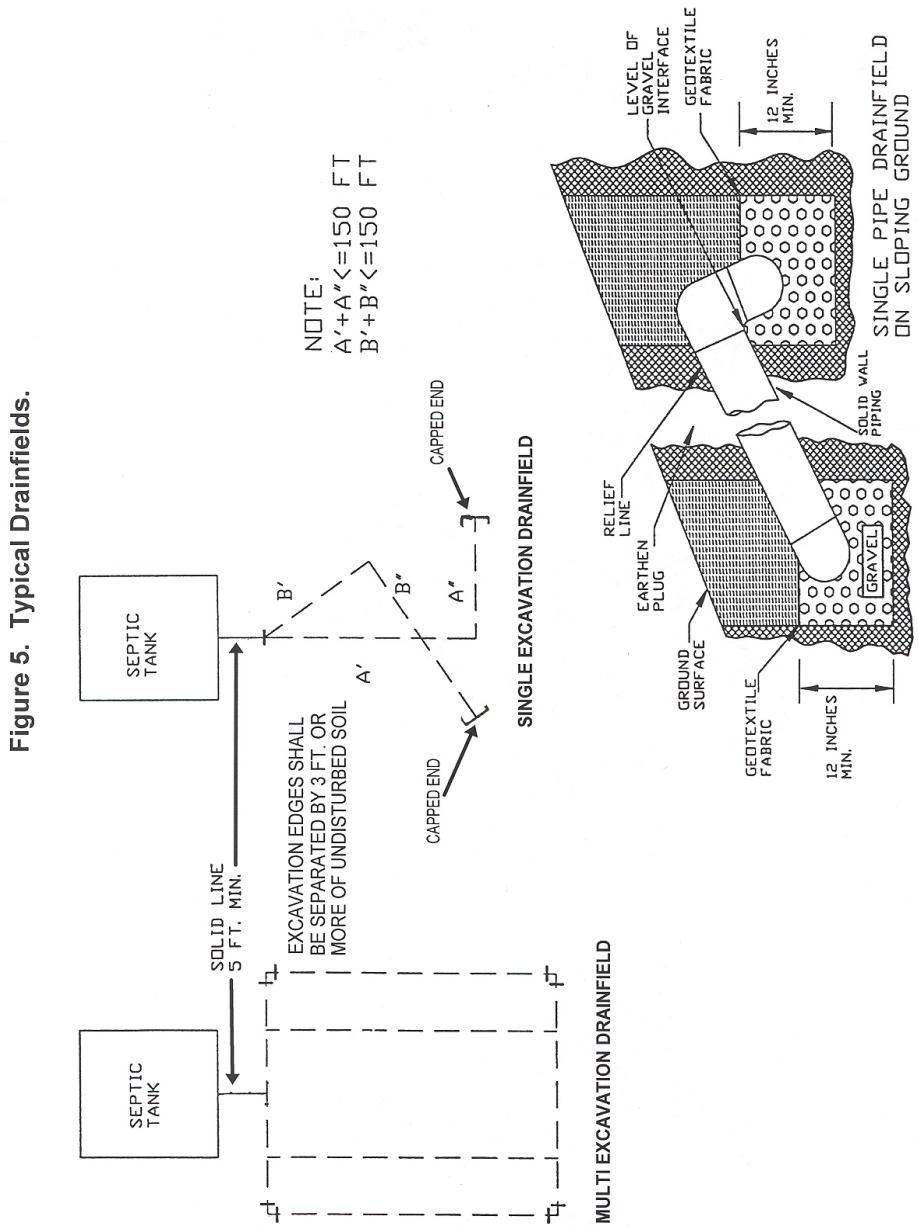


* Credit for top surface area shall be limited to 2 feet past outside drainline.

(5) Figure 5. Typical Drainfields.

Figure: 30 TAC §285.90(5) (No change.)

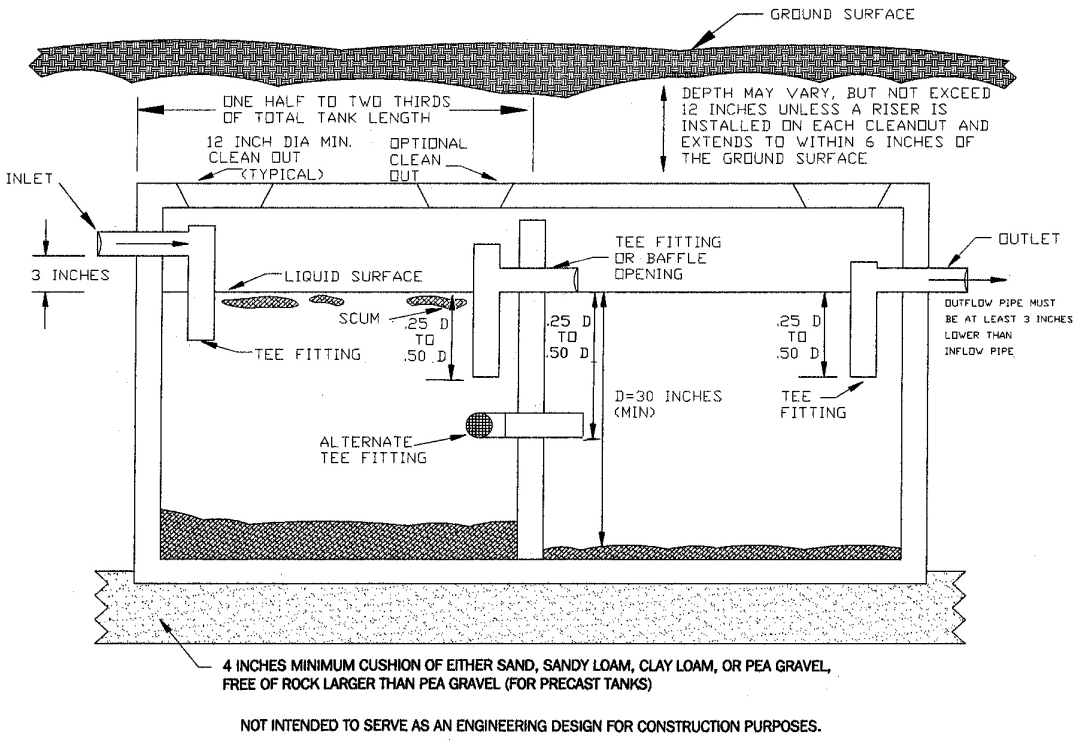
Figure 5. Typical Drainfields.



(6) Figure 6. Two Compartment Septic Tank.

Figure: 30 TAC §285.90(6) (No change.)

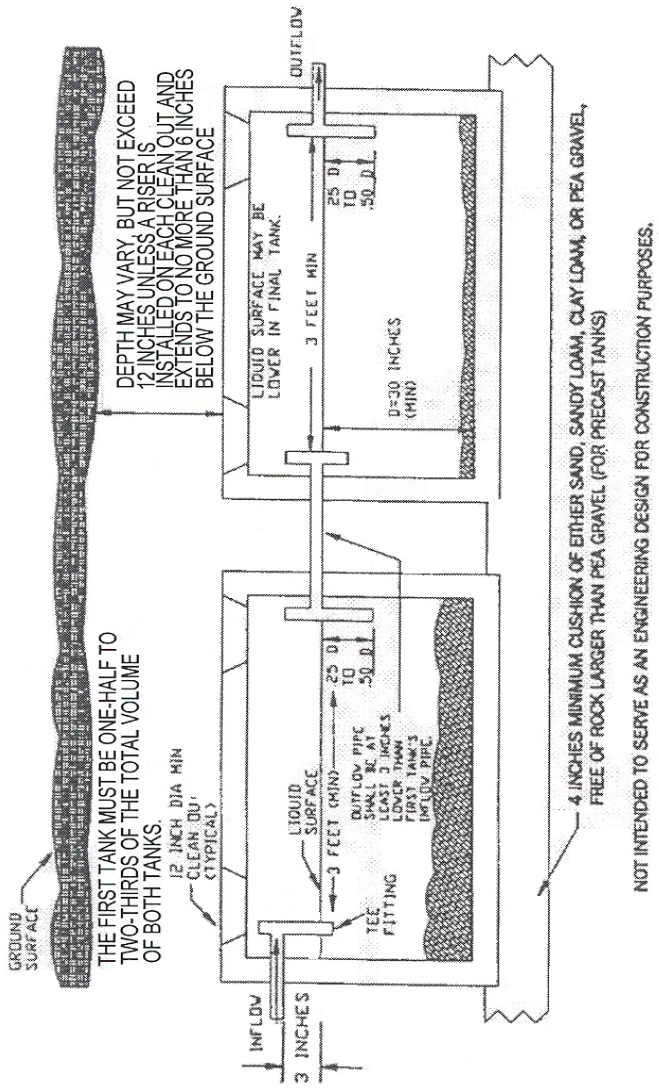
Figure 6. Two Compartment Septic Tank.



(7) Figure 7. Two Septic Tanks in Series.

Figure: 30 TAC §285.90(7) (No change.)

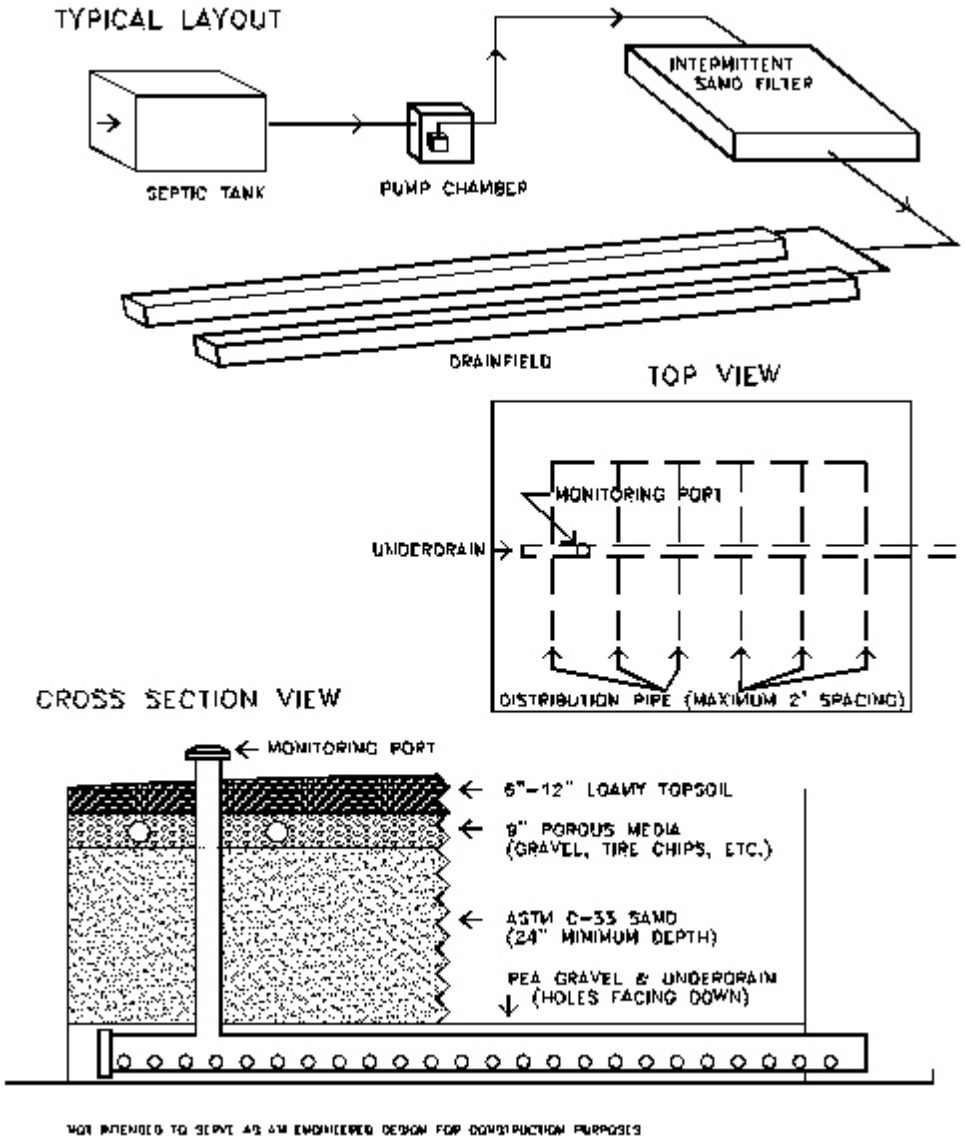
Figure 7. Two Septic Tanks in Series.



(8) Figure 8. Intermittent Sand Filters.

Figure: 30 TAC §285.90(8) (No change.)

Figure 8. Intermittent Sand Filters.



(9) Figure 9. Intermittent Sand Filter Underdrain and Pumpwell.

Figure: 30 TAC §285.90(9) (No change.)

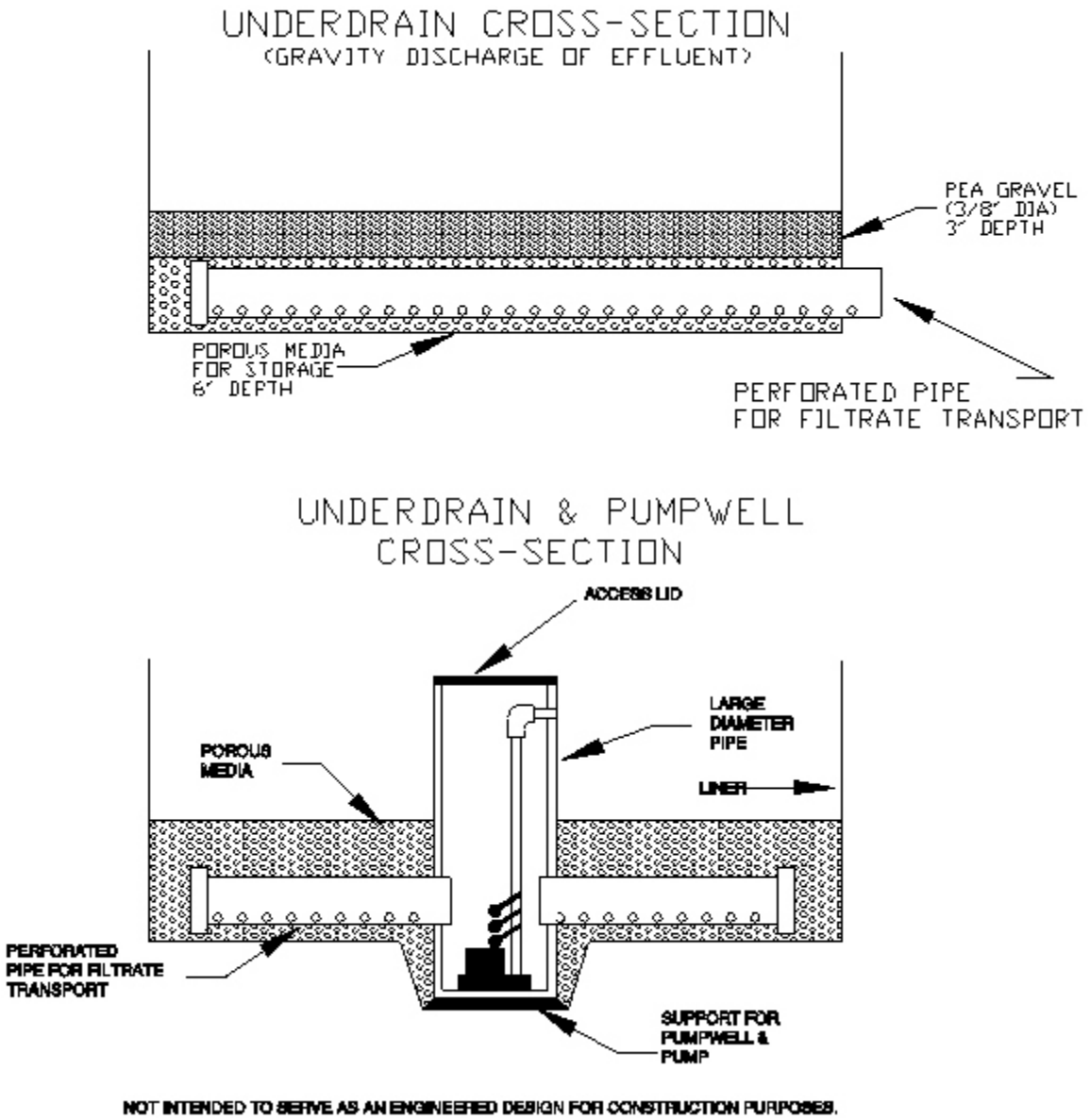



Figure 9. Intermittent Sand Filter Underdrain and Pumpwell.