

The Texas Commission on Environmental Quality (commission) adopts new §285.37 and the amendment to §285.39. Section 285.37 is adopted *with change* to the proposed text as published in the December 5, 2003 issue of the *Texas Register* (28 TexReg 10873), and will be republished. Section 285.39 is adopted *without change* and will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

On June 2, 2002, the commission received a petition for rulemaking from the Texas Water Quality Association. The petitioner requested that the commission review §285.39 and consider changing this rule to allow back flush from water softeners and reverse osmosis systems to enter an on-site sewage facility (OSSF) under certain conditions. The petition was based on rules the commission adopted in May 2001. On August 24, 2002, the commission approved the Texas Water Quality Association's petition for rulemaking. Action on this petition was put on hold because Senate Bill (SB) 1633 from the 78th Legislature, 2003 involved the same issue.

Texas Health and Safety Code, §366.013, was added by SB 1633 to give owners the ability to discharge back flush from water softeners or reverse osmosis systems into an OSSF provided that certain conditions are met. Water softeners must conserve water by design, regenerate using a demand-initiated regeneration (DIR) control device, and be clearly labeled as being equipped with a DIR device. Point-of-entry reverse osmosis systems must not cause hydraulic overloading or hydraulic loading must be adequately addressed in the design of the OSSF. Section 366.013 allows point-of-use reverse osmosis systems without any conditions and allows the continued use of water softeners installed before

September 1, 2003, that discharge into OSSFs unless the owner replaces the water softener or installs a new OSSF. SB 1633 requires rules to be adopted by June 1, 2004.

SECTION BY SECTION DISCUSSION

Adopted §285.37 provides a definition of water treatment equipment; requirements for installation and use of water softeners, reverse osmosis systems, and other water treatment equipment in facilities that use OSSFs for wastewater treatment and disposal; and the requirement for an airgap or airgap device between the water treatment equipment and the OSSF.

The adopted definition of water treatment equipment is consistent with 30 TAC §30.267(3).

Adopted §285.37(b) provides the requirements for use of water softeners, reverse osmosis systems, and other water treatment equipment discharging into a facility with an OSSF on or after September 1, 2003.

Adopted §285.37(b)(1)(A) adds language from SB 1633 that requires a water softener to regenerate using a DIR control device and that requires the water softener to be clearly labeled as being equipped with a DIR device. Clause (i) includes the language from SB 1633 that requires the label to be affixed to the outside of the water softener so that the label can be easily inspected and read. Clause (ii) requires that the label include the name of the company that installed the water softener. This provides the owner with a contact if there are problems with the unit.

Adopted §285.37(b)(1)(B) adds language from SB 1633 that specifies that a water softener may be connected to an OSSF with a nonstandard or proprietary treatment system only as described in 30 TAC §285.32(c) and (d), provided the water softener drain line is connected to specific parts of the OSSF system. Clause (i) includes language from SB 1633 that requires that the drain line bypass the treatment system. Clause (ii) includes language from SB 1633 that requires the drain line to connect directly to a pump tank or directly to the line between the treatment system and the disposal system. It also requires that the connection must be to the pump tank if the OSSF has a pump tank or to the pipe between the treatment system and the disposal system if no pump tank exists. This provides additional dilution to the water discharged from the water softener to prevent potential clogging of the disposal system.

Adopted §285.37(b)(1)(C) includes language from SB 1633 that allows an owner to continue to use a water softener that discharges to an OSSF and that does not meet the requirements of §285.37(b)(1)(A) if the water softener was installed before September 1, 2003. Subparagraph (C) also includes language from SB 1633 that requires an owner to replace a water softener installed before September 1, 2003, with a water softener that meets the requirements of subparagraph (A) if the specified criteria are met. Clause (i) includes language from SB 1633 that requires an owner to use a water softener that meets the requirements of subparagraph (A) if an owner replaces the existing water softener. Clause (ii) includes language from SB 1633 that requires an owner to replace an existing water softener with a water softener that meets the requirements of subparagraph (A) if an owner or installer installs, alters, constructs, or repairs an OSSF for the building or property served by the existing water softener.

Adopted §285.37(b)(2)(A) includes language from SB 1633 that allows an owner to install and use a point-of-use (under sink unit) reverse osmosis system with an OSSF without including calculations of the increased water volume for the OSSF system in the planning materials.

Adopted §285.37(b)(2)(B) includes language from SB 1633 that allows back flush from a point-of-entry (whole house unit) reverse osmosis system to be discharged into an OSSF if certain conditions are met. Clauses (i) and (ii) include the language from SB 1633 that requires the owner to either demonstrate that the point-of-entry reverse osmosis system does not cause hydraulic overloading of the OSSF or to address the increased water volume from the system in the wastewater usage rates in 30 TAC §285.91(3) and include the increased volume in the planning materials for the OSSF.

Adopted §285.37(b)(3) allows owners who use water treatment equipment other than water softeners or reverse osmosis systems to discharge back flush from this equipment, provided that the increased water volume is added to the OSSF wastewater usage rates in 30 TAC §285.91(3), and that the water volume calculation is included in the planning materials for the OSSF. Other types of water treatment equipment besides water softeners and reverse osmosis systems are currently available. These could also result in a back flush of large volumes of water into the OSSF, creating a hydraulic overload of the OSSF system. The adopted language will require that any increase in water volume from other water treatment equipment be included in the wastewater usage rates for the OSSF. This allows the OSSF to be designed for the increase in flow to help prevent system failure.

Adopted §285.37(c) requires that discharges from all water treatment equipment enter the OSSF system through an airgap or airgap device as required in the Uniform Plumbing Code (2000). This prevents sewage from the OSSF from backing up and contaminating the water supply system.

Existing §285.39(d) is deleted. It is inconsistent with SB 1633, which allows for the installation and use of water softeners and reverse osmosis systems in facilities that have an OSSF.

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 adopted rulemaking is to implement legislation which allows back flush from water softener, reverse osmosis, and other water treatment equipment to enter an OSSF under certain conditions, and to repeal existing language which prohibits these activities. This adopted rulemaking does 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 an agency, 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 an agency 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 agency 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 the use of water treatment equipment with OSSFs. As a result, there are no applicable standards set by federal law that could be exceeded by these rules. Second, these adopted rules 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 Texas Health and Safety Code, 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.

TAKINGS IMPACT ASSESSMENT

The commission performed an assessment of these rules in accordance with Texas Government Code, §2007.043. The purpose of this rulemaking is to delete existing §285.39(d), which prohibits owners from allowing water softener and reverse osmosis back flush from entering into any portion of the OSSF and replace it with adopted new §285.37, which will allow back flush from water treatment equipment to enter an OSSF under certain conditions. Promulgation and enforcement of these 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 adopted rules are subject to the 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 prepared a preliminary consistency determination for the adopted rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22, and found that the adopted rulemaking is consistent with the applicable CMP goals and policies.

The generally applicable goals of the CMP are: to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas; to ensure sound management

of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone; to ensure and enhance planned public access to and enjoyment of the coastal zone in a manner that is compatible with private property rights and other uses of the coastal zone; and to balance these competing interests. This rulemaking, applicable to all areas of the state, will comply with these goals of the CMP.

The applicable CMP policy states that rules governing OSSFs require those systems to be located, designed, operated, inspected, and maintained so as to prevent a release of pollutants that may adversely affect coastal waters. Promulgation and enforcement of these adopted rules will not violate any standards identified in the applicable CMP policy because the adopted rules only allow owners of OSSFs to allow back flush from water treatment equipment to enter their OSSF under certain specified conditions that are intended to be protective.

PUBLIC COMMENT

A public hearing was held in Austin, Texas on January 8, 2004. Two oral comments were received at the public hearing, one from the Texas Water Quality Association (TWQA) and one from an individual. Each person who spoke at the hearing also submitted written comments.

The comment period ended January 12, 2004. Two additional written comments were received during the comment period. Culligan of San Antonio, Texas (Culligan), and an individual also submitted written comments.

One individual commented in opposition to the rulemaking. The TWQA, Culligan, and an individual commented in support of the rulemaking.

RESPONSE TO COMMENTS

Culligan commented in favor of the rules.

The commission notes this comment in support of the rulemaking.

TWQA commented that with the adopted rules rural and suburban homeowners will be able to use water softeners to combat hard water. Both TWQA and an individual commented that hard water is a nuisance to homeowners and that softening water extends the life of plumbing fixtures and prevents problems with water heaters and thereby saves consumers money. TWQA commented that hard water requires homeowners to use excess clothes washing detergent which introduces phosphates and total dissolved solids to the environment and that softening water prevents this problem.

There are advantages to using a water softener; the rules will now provide a disposal option for the back flush or discharge created by water softeners. Specifically, §285.37(b) allows homeowners to discharge back flush or discharge from water treatment equipment, including water softeners, into an OSSF provided certain conditions are met. No change has been made in response to these comments.

An individual commented that it is important to protect both septic systems and the consumer's right to choose how they treat their water.

The adopted rules address each type of water treatment equipment and its relationship to the septic system. The rules also provide a disposal option for the back flush or discharge created by water treatment equipment and leaves the system choice to the consumer. No change has been made in response to the comment.

TWQA and an individual commented that the old rules outlawed water softener use without an alternative and without a scientific basis to support the ban. TWQA commented that water softeners do not introduce large flows of wastewater to septic systems, nor do they discharge in rapid, surge type inflow like other water-using appliances do. TWQA and an individual commented that DIR systems introduce water less frequently into the septic system and use less water than do the older time-clock models. TWQA also commented that DIR systems use less salt than the older systems.

Section 285.39(d) prohibited discharge of back flush into OSSFs and specified no disposal option for back flush. The commission originally disallowed water softener discharge into OSSFs because of concerns about additional hydraulic loading not being considered in the sizing of the OSSF system.

The revised rulemaking requires all new systems except for DIR systems to account for increased hydraulic load in order to address this issue. DIR systems are expected to contribute smaller

flows to OSSFs and therefore will have a smaller impact on an OSSF system. The rule language implements a specific statutory requirement in SB 1633. No change has been made in response to these comments.

An individual commented that the commission “had it right the first time” and that §285.39(d) should stay as it is currently written.

The rule language implements a specific statutory requirement in SB 1633. No change has been made in response to this comment.

An individual cited concerns about water softener back flush by stating that calcium, magnesium, and sodium, which are neither organic nor biodegradable, will be deposited into the drain field which will plug the drain field over the life of the system. The commenter mentioned lined “E.T. beds” specifically, saying that more sodium, calcium, and magnesium will limit the bed’s life-span and the proposed changes may be the “final blow” to this kind of system. The individual also expressed concern over the oxygen demand that may result from the additional inputs of water from water softeners and recommended that the oxygen demand of the discharge be determined.

TWQA and an individual mentioned that studies have shown that discharging water to septic systems is not harmful and in some cases it is helpful. Specifically, TWQA mentioned studies done at the University of Wisconsin and the National Sanitation Foundation in Michigan. TWQA and an individual

also commented that DIR systems introduce less salt and water and that the slow water introduction means that there is minimal effect to the total loading factors of the system.

No change has been made to the adopted rule because SB 1633 specifies that water softener back flush and back flush from other water treatment equipment may be discharged into an on-site sewage disposal system, provided certain conditions specified in the statute are met.

An individual commented that increased sodium in his drinking water from a water softener unit caused him to have high blood pressure. He also stated that people are getting water treatment systems that they do not need or that are improperly sized.

This comment is beyond the scope of this rulemaking. No change has been made in response to the comment.

An individual stated that there is a lack of knowledge about what the back flush from water treatment equipment contains. He also stated that the numerous contaminants that reverse osmosis systems remove from water, like methyl-tertiary-butyl ether, petroleum by-products, heavy metals, nitrates, pesticides, herbicides, complex compounds, minerals, organic matter, coliform bacteria, viruses, and metals, should not be sprayed into the air, put on the ground, or put into a septic system without adequate treatment. He suggests that the discharge would plug a septic system drain field and should be put on the grass, if it is good enough to put on the grass.

The volume of contaminants found in the water source will not be increased by water treatment equipment, including reverse osmosis systems. Therefore, the volume of contaminants going into the OSSF will be the same with or without the use of water treatment equipment. Further, the rule language implements a specific statutory requirement for disposal in SB 1633. No change has been made in response to the comments.

An individual cited a lack of addressing cross connections and back flow prevention as one of the reasons he opposes the rulemaking.

Adopted §285.37(c) requires an air gap device to prevent a cross connection. No change has been made in response to the comment.

SUBCHAPTER D: PLANNING, CONSTRUCTION, AND INSTALLATION

STANDARDS FOR OSSFS

§285.37, §285.39

STATUTORY AUTHORITY

The new and amended sections are adopted under the authority granted to the commission by the Texas Legislature in Texas Health and Safety Code, §366.001 and §366.011. Specific statutory authorization derives from Texas Health and Safety Code, §366.013 as added by SB 1633, 78th Legislature, 2003.

The new and amended section are also adopted under the general authority granted in Texas Water Code, §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the Texas Water Code and other laws of the state; and Texas Water Code, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under Texas Water Code, §5.013(14)(b).

§285.37. On-Site Sewage Facilities and Water Treatment Equipment and Appliances.

(a) Water treatment equipment is defined as an appliance, which includes water softeners and reverse osmosis systems, used to:

- (1) alter the mineral content of water;
- (2) alter the microbiological content of water;

(3) alter other substances found in water; or

(4) purify water.

(b) Back flush or discharge from water treatment equipment installed on or after September 1, 2003, may be discharged into an on-site sewage facility (OSSF) as provided in this subsection.

(1) Water softener.

(A) The water softener must regenerate using a demand-initiated regeneration (DIR) control device. The water softener must be clearly labeled as being equipped with a DIR control device as follows:

(i) the label shall be affixed to the outside of the water softener so the label can be easily inspected and read; and

(ii) the label shall provide the name of the company that installed the water softener.

(B) A water softener may be connected to an OSSF with a non-standard or proprietary treatment system only as described in §285.32(c) and (d) of this title (relating to Criteria for Sewage Treatment Systems) if the water softener drain line:

(i) bypasses the treatment system; and

(ii) connects directly to a pump tank if the OSSF has a pump tank or directly to the pipe between the treatment system and the disposal system if no pump tank exists.

(C) An owner may continue to use a water softener that discharges to an OSSF and does not meet the requirements of subparagraph (A) of this paragraph if the water softener was installed before September 1, 2003. An owner must replace any water softener installed before September 1, 2003, with a water softener that meets the requirements of subparagraphs (A) and (B) of this paragraph at such time as:

(i) an owner replaces the existing water softener; or

(ii) an owner or installer installs, alters, constructs, or repairs an OSSF for the structure or property served by the existing water softener.

(2) Reverse osmosis system.

(A) Point-of-use (under sink unit) reverse osmosis systems. The back flush from a point-of-use reverse osmosis system may be discharged into an OSSF without including calculations of the back flush water volume in the OSSF planning materials.

(B) Point-of-entry (whole house unit) reverse osmosis systems. The back flush from a point-of-entry reverse osmosis system may be discharged into an OSSF if:

(i) the owner can demonstrate that the point-of-entry reverse osmosis system does not cause hydraulic overloading of the OSSF; or

(ii) the water volume from the point-of-entry reverse osmosis system is accounted for (added to the usage rate in §285.91(3) of this title (relating to Tables)) by providing calculations of the increase in wastewater volume with the OSSF planning materials.

(3) Water treatment equipment other than water softeners and reverse osmosis systems. If an owner uses water treatment equipment other than water softeners or reverse osmosis systems, the back flush from the water treatment equipment may be discharged into an OSSF if the water volume is added to the OSSF usage rate in §285.91(3) of this title. This water volume calculation must be provided with the OSSF planning materials.

(c) Discharges from all water treatment equipment shall enter the OSSF system through an airgap or an airgap device as required in the Uniform Plumbing Code (2000).

§285.39. On-Site Sewage Facilities Maintenance and Management Practices.

(a) An installer shall provide the owner of an on-site sewage facility (OSSF) with written information regarding maintenance and management practices and water conservation measures related to the OSSF installed, repaired, or maintained by the installer.

(b) Owners shall have the treatment tanks pumped on a regular basis in order to prevent sludge accumulation from spilling over to the next tank or the outlet device. Owners of treatment tanks shall engage only persons registered with the executive director to transport the treatment tank contents.

(c) Owners shall not allow driveways, storage buildings, or other structures to be constructed over the treatment or disposal systems.