

The Texas Commission on Environmental Quality (commission or TCEQ) proposes to amend §285.80 and §285.81.

#### BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

The legislature passed House Bill 346 in 1993 which required rules to be developed by the commission and the Texas State Board of Plumbing Examiners for graywater use in Texas. The commission adopted rules under this chapter in June 2001 that allow water from clothes-washing machines as the only graywater to be discharged without going through an on-site sewage facility (OSSF). Water from other sources in a residence was not included in the use of graywater.

In 2003, the 78th Legislature passed House Bill 2661 which amended Texas Water Code (TWC), §26.0311 and Texas Health and Safety Code (THSC), §341.039 and §366.012. These amendments modify the definition of graywater and require the commission to adopt and implement standards for the use of graywater and to address the separation of graywater in a residence served by an OSSF system.

To implement this legislation, the commission proposes to concurrently amend 30 TAC Chapter 210, Use of Reclaimed Water; Chapter 285; and 30 TAC Chapter 317; Design Criteria for Sewerage Systems. Proposed amendments to Chapter 210 and Chapter 317 are also published in the Proposed Rules section of this issue of the *Texas Register*.

## SECTION BY SECTION DISCUSSION

House Bill 2661 amended THSC, §341.039, Graywater Standards. THSC, §341.039(a), requires the commission to adopt and implement minimum standards for the use and reuse of graywater. Currently, the commission's rules regarding graywater use and on-site sewage systems are in Chapter 285, Subchapter H. The commission proposes to make changes to Subchapter H to incorporate the amendments made to the THSC by House Bill 2661.

The commission proposes to change the name of Subchapter H from "Treatment and Disposal of Greywater" to "Disposal of Graywater" to more accurately reflect the contents of the subchapter. Additionally, throughout the subchapter the commission proposes to change the spelling of the word graywater from "greywater" to "graywater" to be consistent with the statutory spelling in House Bill 2661.

Proposed §285.80, Treatment and Disposal of Greywater, would provide the general requirements for installing or using a graywater system. These criteria are incorporated from THSC, §341.039, as amended by House Bill 2661. The commission also proposes to change the name of the section from "Treatment and Disposal of Greywater" to "General Requirements" to more accurately reflect the contents of the section. The current language in §285.80 is proposed to be deleted because House Bill 2261 deleted the statutory provision that required the commission and the Texas State Board of Plumbing Examiners by rule to implement minimum standards for the use and reuse of graywater.

Proposed §285.80(a) would define graywater as wastewater from showers; bathtubs; hand washing lavatories; sinks that are not used for disposal of hazardous or toxic ingredients; sinks not used for food

preparation or disposal; and clothes-washing machines. This definition is from THSC, §341.039(e) and TWC, §26.0311(a), as amended by House Bill 2661.

Proposed §285.80(b) would exclude from the definition of graywater wastewater from the washing of material, including diapers, soiled with human excreta, or wastewater that has come into contact with toilet waste. This definition is from THSC, §341.039(e) and TWC, §26.0311(a), as amended by House Bill 2661.

Proposed §285.80(c) would require that construction of a graywater system, including the storage and disposal systems, comply with Chapter 285 and any requirements of the local permitting authority. THSC, §366.032, Order or Resolution; Requirements, states that if the local governmental entity's order or resolution adopts more stringent standards for on-site sewage disposal systems than this chapter or the commission's standards and provides greater public health and safety protection, the authorized agent's order or resolution prevails over this chapter or the standards. Subsection (b) would also specify that, for the purposes of this subchapter, a graywater system begins at the graywater stub-out of a single family dwelling. The commission proposes these amendments to be consistent with existing language in Chapter 285.

Proposed §285.81, Criteria for Discharge of Laundry Greywater, would provide the criteria for use of graywater. The criteria are incorporated from THSC, §341.039, as amended by House Bill 2661. The commission proposes to change the title of this section from "Criteria for Discharge of Laundry Greywater" to "Criteria for Disposal of Graywater" to more accurately reflect the contents of the section.

Proposed §285.81(a) would specify that an owner using less than 400 gallons of graywater each day does not need a permit or an inspection if the graywater originates from a single family dwelling and if the graywater system is designed so that 100% of the graywater can be diverted to the owner's OSSF system during periods of non-use of the graywater system. THSC, §341.039, as amended by House Bill 2661, refers to "private residence," not "single family dwelling." In the proposed rules, the commission proposes to use the term "single family dwelling" in place of the term "private residence." "Single-family dwelling" is defined in §285.2(66) as: "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." The commission proposes this change to make clear that graywater from all buildings located on the residential property may be used under this section.

Proposed subsection (a) would also specify that a graywater system may only be connected to the OSSF system if the connection is in the line between the house stub-out for the OSSF and the OSSF treatment tank and the discharge from the graywater system enters the OSSF system through two backflow preventers. The commission proposes the inclusion of backflow preventers to prevent contamination of the graywater system by the OSSF system. This will help ensure that toilet waste or other types of wastewater that are not defined as graywater in TWC, §26.0311(a), do not commingle with the graywater system. Additionally, the graywater must be stored in tanks and the tanks must be clearly labeled as nonpotable water; must restrict access, especially to children; and must eliminate habitat for mosquitoes and other vectors. These requirements are from THSC, §341.039(c).

While THSC, §341.039(c)(4), does require tanks, the statute is silent with regard to any tank specifications. However, THSC, §341.039(a), requires the commission to adopt and implement minimum standards for the use and reuse of graywater. THSC, §341.039(b) and TWC, §26.0311(c) require that the domestic use of graywater not be a nuisance and not damage the quality of surface water or groundwater in the state. Additionally, THSC, §341.039(c)(6) and (7) require that the graywater be used without the formation of ponds or pools and that graywater does not create surface runoff across the property lines or onto any paved surface. Thus, the commission is proposing two requirements that are not specifically enumerated in the statute to implement these statutory provisions. These requirements are: 1) the tanks are able to be cleaned; and 2) the tanks meet certain structural requirements.

If the tanks cannot be cleaned, solid materials could clog the lines or increase the biomat buildup at the end of the line if graywater is discharged directly onto the ground. A clogged line could lead to a backup or overflow of the system, and a buildup of biomat could cause odor and prevent the graywater from soaking into the ground, causing ponding, pooling, or runoff. Furthermore, the commission proposes that the tanks must meet the structural integrity requirements of current American Water Works Association (AWWA) standards to ensure the structural integrity of the tanks. These provisions will help to ensure that graywater use is not a nuisance and does not damage the quality of surface water or groundwater in the state as required by THSC, §341.039(b).

Finally, proposed subsection (a) would require that a graywater system use piping clearly identified as a nonpotable water conduit, including identification through the use of painted purple pipe, purple pipe, pipe taped with purple metallic tape, or other methods approved by the executive director; that the

graywater be applied at a rate that will not result in ponding or pooling or will not cause runoff; and that the graywater disposal system not be used as a spray distribution system. These provisions are from THSC, §341.039.

Proposed §285.81(b) would specify that no reduction in the size of the OSSF system will be allowed when using a graywater system. THSC, §341.039(c)(3), requires that graywater be collected using a system that overflows into an on-site wastewater treatment and disposal system. To meet this requirement, a full-sized OSSF system must be installed to contain the entire wastewater flow for the house; thus, no reduction in the size of an OSSF system is allowed under these proposed rules.

Proposed §285.81(c) would encourage builders of single family dwellings to install plumbing in new housing to collect graywater from allowable sources, and design and install a subsurface graywater system around the foundation of new housing to minimize foundation movement or cracking. This provision is from THSC, §341.039(d).

Proposed §285.81(d) would include the allowable uses for graywater. This subsection proposes that the graywater system may only be used around the foundation of new housing to minimize foundation movement or cracking; for gardening, except that it may not be used such that the edible parts of crops intended for human consumption come in direct contact with the graywater; for composting; or for landscaping at a single family dwelling. These requirements are from THSC, §341.039. In §285.81(d)(2), the commission proposes to add the provision “that it may not be used such that edible parts of the crops intended for human consumption come into direct contact with graywater.” Existing §285.33(d)(2)(A) does not allow land that is used for growing food, gardens, orchards, or crops that

may be used for human consumption to come into contact with effluent using surface application. The commission added this exception to be consistent with the existing rules in Chapter 285.

Proposed §285.81(e) would require all aspects of the permitting, planning, construction, operation, and maintenance for any proposed graywater system that does not meet the requirements of subsection (a) of this section to meet the requirements of Chapter 285. The commission proposes this requirement because there are potentially graywater systems that will not be able to meet the requirements outlined in subsection (a); therefore, this provision provides notice that these graywater systems must meet the applicable requirement of Chapter 285.

Proposed §285.81(f) would require the installer of the graywater system to advise the owner of basic operating and maintenance procedures including any effects on the OSSF system. Providing information to the owner about operating and maintenance procedures will help the owner prevent the graywater system and the OSSF system from failing or causing a nuisance. The commission proposes this requirement to implement THSC, §366.012(b).

Proposed §285.81(g) would prohibit graywater use from creating a nuisance or damaging surface water or groundwater. Additionally, this subsection would allow the permitting authority to take action under §285.71 if graywater use creates a nuisance or damages surface water or groundwater. The commission proposes this provision to implement THSC, §341.039(b), and to be consistent with the existing rule language in Chapter 285.

Proposed §285.81(h) would modify the language of the current §285.81 to allow homeowners who discharge wastewater from residential clothes-washing machines before the effective date of the proposed rules to continue to discharge directly onto the ground surface as long as the homeowners meet certain conditions. The commission proposes this provision to limit the impact the proposed rules will have on homeowners who currently discharge laundry graywater.

Proposed §285.81(i) would specify that graywater systems that are altered, create a nuisance, or discharge graywater from any source other than clothes-washing machines will not be authorized to discharge graywater under subsection (h) of this section. The commission proposes this provision to provide notice to homeowners that if they alter their system, allow their system to create a nuisance, or add an additional source of graywater to their system's discharge that they are no longer eligible to discharge graywater under subsection (h) of this section.

#### FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

Jan Washburn, program specialist in the Strategic Planning and Appropriations Section, determined that for the first five years the proposed amendments are in effect, there will be no significant fiscal implications for the agency or any other unit of state government. Ms. Washburn also determined that there will be no significant fiscal impact to units of local government as a result of these proposed rules.

The proposed rules will allow the use of graywater from clothes-washing machines, showers, bathtubs, handwashing lavatories, sinks not used in the disposal of hazardous or toxic ingredients, and sinks not used for food preparation or disposal for on-site irrigation or outside use at the single family residence.

#### PUBLIC BENEFITS AND COSTS

Ms. Washburn also determined that, for each year of the first five years the proposed amendments are in effect, the public benefit anticipated from the proposed amendments is water conservation by allowing the use of residential graywater for irrigation purposes. The reduction in the use of potable water for irrigation or outside use could decrease the demand on public drinking water systems as well as reduce homeowners' water bills. Demands on wastewater systems could also decline as a result of these proposed rules.

The use of these systems is purely voluntary. To meet the standards in the proposed rules, the cost for a graywater system in a new home can range from \$500 to \$4,000. For those residences with on-site septic systems, there could be an impact resulting from the reduced flow of water to those systems.

#### SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

Ms. Washburn also determined that there will be no adverse fiscal implications to small or micro-businesses as a result of implementation of the proposed amendments. It is possible that small and micro-businesses may be able to decrease costs or increase revenue by installing graywater systems.

#### LOCAL EMPLOYMENT IMPACT STATEMENT

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

#### DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed this 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" 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 rule proposal is to implement legislative amendments that modify the definition of graywater and require the commission to adopt and implement standards for the use of graywater and to address the separation of graywater in a residence served by an OSSF system. The proposed amendments to §285.80 and §285.81 will set out both the general requirements that an individual must follow when voluntarily installing or using a graywater system and the criteria for using graywater. The proposed amendments in this rule proposal 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 amendments are not subject to Texas Government Code, §2001.0225, because they do not meet the four criteria specified in §2001.0225(a). Texas Government Code, §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 proposed amendments to Chapter 285 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 these rules. As a result, there are no applicable standards set by federal law that could be exceeded by these rules. Second, these revisions do not exceed an express requirement of state law, but are being proposed to implement state law, including the requirement that graywater use not be a nuisance and not damage the quality of surface water or groundwater in the state. 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, the proposed rules were not developed solely under the commission's general powers, but rather were developed to implement the specific requirements of House Bill 2661, amending TWC, §26.0311, and THSC, §341.039 and §366.012. Therefore, the commission does not propose these rules solely under the commission's general powers. Thus, the commission concludes that a regulatory analysis is not required in this instance because the proposed rules do not meet the criteria of a major environmental rule as defined by Texas Government Code, §2001.0225.

#### TAKINGS IMPACT ASSESSMENT

The commission performed a preliminary assessment of these rules in accordance with Texas Government Code, §2007.043. The specific purpose of this rulemaking is to implement House Bill 2661 which amended TWC, §26.0311 and THSC, §341.039 and §366.012. These amendments modify the definition of graywater and require the commission to adopt and implement standards for the use of graywater and to address the separation of graywater in a residence served by an OSSF system. The

proposed graywater rules are voluntary. Thus, the commission's preliminary assessment indicates that 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 proposed rulemaking and found that the proposal is 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 conducted a preliminary consistency determination for the proposed rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22 and found the proposed rulemaking is consistent with the applicable CMP goals and policies.

The CMP goals applicable to the proposed rules 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; to ensure and enhance planned public access to and enjoyment of the coastal zone in a manner that is compatible with private property rights and other uses of the coastal zone; and to balance these competing interests.

The specific CMP policy applicable to the proposed rules requires that rules governing OSSFs shall require those systems to be located, designed, operated, inspected, and maintained so as to prevent release of pollutants that may adversely affect coastal waters.

These proposed rules will protect coastal areas by setting minimum standards for graywater use and addressing the separation of graywater in residences served by an on-site sewage disposal system.

These proposed rules define graywater as wastewater from clothes-washing machines, showers, bathtubs, handwashing lavatories, and sinks that are not used for the disposal of hazardous or toxic ingredients. The term “graywater” does not include wastewater that has come in contact with toilet waste; wastewater from the washing of material, including diapers, soiled with human excreta; or wastewater from sinks used for food preparation or disposal. These proposed rules are developed to reduce the possibility of contamination into coastal waters by ensuring that graywater use in all areas of the state, including coastal areas, does not create a nuisance and does not damage the quality of surface water or groundwater in this state.

Promulgation and enforcement of these rules will not violate or exceed any standards identified in the applicable CMP goals and policies because the proposed rules are consistent with these CMP goals and policies, because these rules do not create or have a direct or significant adverse effect on any coastal natural resource areas, and because the standards specified in the rules are intended to set uniform standards for the use of graywater regardless of location.

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

#### ANNOUNCEMENT OF HEARING

A public hearing on this proposal will be held in Austin on September 8, 2004, at 2:00 p.m., 12100 Park 35 Circle, Building E, Room 254S. Individuals may present oral or written statements when

called upon in order of registration. There will be no open discussion during the hearing; however, an agency staff member will be available to discuss the proposal 30 minutes prior to the hearing and will answer questions before and after the hearing.

Persons with disabilities who have special communication or other accommodation needs who are planning to attend the hearing, should contact the Office of Environmental Policy, Analysis, and Assessment at (512) 239-4900. Requests should be made as far in advance as possible.

#### SUBMITTAL OF COMMENTS

Comments may be submitted to Joyce Spencer, MC 205, Office of Environmental Policy, Analysis, and Assessment, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. All comments should reference Rule Project Number 2003-056-317-WT. Comments must be received by 5:00 p.m., September 13, 2004. For further information, please contact Kathy Ramirez, Regulation Development Section, at (512) 239-6757.

**SUBCHAPTER H: [TREATMENT AND] DISPOSAL OF GRAYWATER [GREYWATER]**

**§285.80 and §285.81**

**STATUTORY AUTHORITY**

The amended sections are proposed under the authority granted to the commission by the Texas Legislature in THSC, Chapter 366. The amended sections implement THSC, §366.012(a)(1), which requires the commission to adopt rules consistent with the policy defined in TWC, §26.0311 and THSC, §341.039 and §366.012, relating to Standards for Control of Graywater, Graywater Standards, and Rules Concerning On-Site Disposal Systems. Specific statutory authorization derives from House Bill 2661, 78th Legislature, 2003, which amended TWC, §26.0311 and THSC, §341.039 and §366.012. The amendments are also proposed 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; §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(14)(b); and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC and the THSC.

The proposed amendments implement TWC, §26.0311 and THSC, §341.039 and §366.012.

**§285.80. General Requirements [Treatment and Disposal of Greywater].**

(a) Graywater is defined as wastewater from:

(1) showers;

(2) bathtubs;

(3) handwashing lavatories;

(4) sinks that are not used for disposal of hazardous or toxic ingredients;

(5) sinks that are not used for food preparation or disposal; and

(6) clothes-washing machines.

(b) Graywater does not include wastewater from the washing of material, including diapers, soiled with human excreta or wastewater that has come in contact with toilet waste.

(c) Construction of a graywater system, including storage and disposal systems, must comply with this chapter and any more stringent requirements of the local permitting authority. For the purposes of this subchapter, a graywater system begins at the graywater stub-out of a single family dwelling.

[New construction or alteration to an existing greywater conveyance, treatment, storage or disposal system outside of a structure or building must comply with this chapter and any established requirements of the permitting authority. Any new construction or alteration to an existing greywater reuse or reuse conveyance system associated with a structure or building must comply with requirements of the State Board of Plumbing Examiners.]

**§285.81. Criteria for Disposal of Graywater [Discharge of Laundry Greywater].**

(a) Permits and inspections are not required for the domestic use of less than 400 gallons of graywater each day if:

(1) the graywater originates from a single family dwelling;

(2) the graywater system is designed so that 100% of the graywater can be diverted to the owner's on-site sewage facility (OSSF) system during periods of non-use of the graywater system.

A graywater system may only be connected to the OSSF system if the following requirements are met.

(A) The connection must be in the line between the house stub-out for the OSSF and the OSSF treatment tank.

(B) The discharge from the graywater system must enter the OSSF system through two backflow preventers;

(3) the graywater is stored in tanks and the tanks:

(A) are clearly labeled as nonpotable water;

(B) restrict access, especially to children;

(C) eliminate habitat for mosquitoes and other vectors;

(D) are able to be cleaned; and

(E) meet the structural requirements of the 2004 American Water Works

Association standards;

(4) the graywater system uses piping clearly identified as a nonpotable water conduit, including identification through the use of painted purple pipe, purple pipe, pipe taped with purple metallic tape, or other methods approved by the commission;

(5) the graywater is applied at a rate that will not result in ponding or pooling or will not cause runoff across the property lines or onto any paved surface; and

(6) the graywater is not disposed of using a spray distribution system.

(b) No reduction in the size of the OSSF system will be allowed when using a graywater system.

(c) Builders of single family dwellings are encouraged to:

(1) install plumbing in new housing to collect graywater from all allowable sources;

and

(2) design and install a subsurface graywater system around the foundation of new housing to minimize foundation movement or cracking.

(d) Graywater from a graywater system as described in subsection (a) of this section may only be used:

(1) around the foundation of new housing to minimize foundation movement or cracking;

(2) for gardening, except that it may not be used such that the edible parts of crops intended for human consumption come in direct contact with the graywater;

(3) for composting; or

(4) for landscaping at a single family dwelling.

(e) All aspects of the permitting, planning, construction, operation, and maintenance for any proposed graywater system that does not meet the requirements of subsection (a) of this section shall meet the requirements of the remainder of this chapter.

(f) The installer of the graywater system must advise the owner of basic operating and maintenance procedures including any effects on the OSSF system.

(g) Graywater use must not create a nuisance or damage the quality of surface water or groundwater. If graywater use creates a nuisance or damages the quality of surface water or groundwater, the permitting authority may take action under §285.71 of this title (relating to Authorized Agent Enforcement of OSSFs).

(h) Homeowners who have been discharging wastewater [Wastewater] from residential clothes-washing [clothes washing] machines, otherwise known as laundry graywater, directly onto the ground [greywater] prior to the effective date of this rule, may continue this discharge [be discharged directly onto the ground surface] under the following conditions.

- (1) The disposal area shall not create a public health nuisance.
- (2) Surface ponding shall not occur in the disposal area.
- (3) The disposal area shall support plant growth or be sodded with vegetative cover.
- (4) The disposal area shall have limited access and use by residents and pets.

(5) Laundry graywater [greywater] that has been in contact with human or animal waste shall not be discharged on the ground surface and shall be treated and disposed of according to §285.32 and §285.33 of this title (relating to Criteria for Sewage Treatment Systems and Criteria for Effluent Disposal Systems, respectively).

(6) Laundry graywater [greywater] shall not be discharged to an [the] area where [if] the soil is wet.

(7) The use of detergents that contain a significant amount of phosphorus, sodium, or boron should be avoided.

(8) A lint trap shall be required at the end of the discharge line.

(i) Graywater systems that are altered, create a nuisance, or discharge graywater from any source other than clothes-washing machines are not authorized to discharge graywater under subsection (h) of this section.

