

# **Texas Commission on Environmental Quality**

## **Interoffice Memorandum**

**To:** Commissioners **Date:** June 29, 2016

**Thru:** Bridget C. Bohac, Chief Clerk  
Richard A. Hyde, P.E., Executive Director

**From:** L'Oreal W. Stepney, P.E., Deputy Director  
Office of Water

Ramiro Garcia, Jr., Deputy Director  
Office of Compliance and Enforcement

**Docket No.:** 2016-0335-RUL

**Subject:** Commission Approval for Proposed Rulemaking  
Chapter 210, Use of Reclaimed Water  
Chapter 285, On-Site Sewage Facilities  
HB 1902: Graywater and Alternative Onsite Water Reuse  
Rule Project Number: 2015-028-210-OW

The attached document contains revisions in highlight/double strikeout. Back-up material for this rulemaking project was filed on June 17, 2016.

### **Chapter 210**

#### CHANGES TO THE PREAMBLE

#### SECTION BY SECTION DISCUSSION

- On page 3 – Section by Section Discussion, added language noting that the subchapter name was changed.
- On page 4 – §210.82(a)(1), added language noting that the definition of "Alternative Onsite Water" does not include cooling tower blowdown.
- On page 8 – §210.82(b)(3) and (4), corrected the verb tense from "limits" to "limit".
- On page 14 – §210.85(a), corrected the verb tense from "improve" to "improves".

#### CHANGES TO THE PROPOSED RULE

- On page 30 – §210.81(c), added rule language specifying that the design, construction, and operation of on-site sewage facilities is subject to provisions in Chapter 285, Subchapter H.
- On page 30 – §210.82(a)(1) deleted cooling tower blowdown from the definition of "Alternative onsite water".
- On page 31 -§210.82(a)(1) added rule language to clarify that reverse osmosis reject water generated at private residences and agriculture facilities can be used in accordance with this subchapter.

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Re: Docket No. 2016-0335-RUL

## **Chapter 285**

CHANGES TO THE PREAMBLE

SECTION BY SECTION DISCUSSION

- On page 5 – §285.81(d), corrected grammar by deleting the word "to".

CHANGES TO THE PROPOSED RULE

- On page 22, - §285.80(b), corrected the title of Chapter 210, Subchapter F.
- On page 24 – §285.81(a), corrected the title of Chapter 210, Subchapter F.

### Attachments

Pages 3, 4, 8, and 14 of Chapter 210 Preamble

Page 30 of Chapter 210 Proposed Rule

Page 5 of Chapter 285 Preamble

Page 22 of Chapter 285 Proposed Rule

cc: Chief Clerk, 2 copies  
Executive Directors Office  
Marshall Coover  
Erin Chancellor  
Stephen Tatum  
Jim Rizk  
Office of General Counsel  
Laurie Fleet  
Sherry Davis

Chapter 285, Subchapter H, Disposal of Graywater.

### **Section by Section Discussion**

The proposed amendment to Chapter 210, Subchapter F changes the title from "Use of Graywater" to "Use of Graywater and Alternative Onsite Water" to reflect the inclusion of alternative onsite water in the subchapter.

#### *§210.81, Applicability*

Proposed §210.81(a) includes alternative onsite water, is clarified by noting that the graywater and alternative onsite water must be generated and used onsite, and revises the term "domestic use" to "private residence." Proposed §210.81(b) is revised to improve clarity and readability. Proposed §210.81(c) specifically notes that the rule does not apply to the design, construction, or operation of an OSSF, as these facilities are regulated by Chapter 285.

Proposed §210.81(d) includes a savings clause that retains the previous version of the rules in effect for facilities that were installed under that version of the rule. Existing facilities that were installed under the previous rule are not required to make changes to their facility to comply with the proposed rule, except as noted in proposed §210.83(j).

Lastly, proposed §210.81(e) specifically notes that the rule does not authorize the diversion or impoundment of state water. The diversion or impoundment of state water must be authorized under 30 TAC Chapter 297, relating to Water Rights, Substantive.

Alternative onsite water includes stormwater which must be impounded to collect and reuse under the proposed rule. A water right permit may be required to impound the stormwater.

*§210.82, General Requirements*

The proposed amendment to §210.82 changes the title from "General Requirements" to "Definitions and General Requirements" to include definitions in the title.

The proposed rule adds definitions to §210.82(a) for "Alternative onsite water," "Alternative water reuse system," "Combined reuse system," and "Graywater reuse system."

The definition of "Alternative onsite water" in §210.82(a)(1) includes the same sources of water that are in the definition provided in THSC, §341.039(e), **except cooling tower blowdown.** ~~The~~ However, the proposed rule has specific limitations on two sources of water that were included in THSC, §341.039(e): cooling tower blowdown and reverse osmosis reject water. The definition of "Alternative onsite water" specifically excludes cooling tower blowdown for the purposes of this subchapter, as that source of water must be reused in accordance with the requirements of Chapter 210, Subchapter E. Additionally, the definition of "Alternative onsite water" excludes reverse osmosis reject water generated at industrial facilities, commercial facilities, and institutions, as that source of water generated at those facilities must be reused in accordance with the requirements of Chapter 210, Subchapter E. Reverse osmosis reject water generated at

plant owners to make any necessary adjustments to their system for the increased wastewater strength and reduced flows. If the site is connected to an OSSF, the property owner must notify the OSSF permitting authority of their intent to construct the system prior to construction. This notification allows the OSSF permitting authority to ensure that the OSSF is designed for the increased wastewater strength.

Proposed §210.82(b)(3) and (4) **limit** ~~limits~~ the application rate of water from a graywater reuse system or a combined reuse system and includes a requirement that the system not create a nuisance, threaten human health, or damage the quality of surface water or groundwater. These requirements comply with THSC, §§341.039(b) and (c)(6) - (7).

Proposed §210.82(b)(5) notes that a graywater reuse system or combined reuse system may be subject to backflow prevention requirements in §290.44 to protect the public water supply from cross-contamination. It is the responsibility of the property owner to determine if the system is subject to §290.44 and to comply with the applicable requirements of that rule.

Proposed §210.82(b)(6) requires a combined reuse system to be designed so that alternative onsite water does not enter an organized wastewater collection system or an OSSF. Alternative onsite water, especially rainwater and stormwater, can overload the OSSF or wastewater treatment facility.

*§210.83, Criteria for the Domestic Use of Graywater*

flushing are consistent with NSF/ANSI Standard 350-2014 for commercial facilities (Class C). Proposed §210.84(e)(4)(C) revises the color of the warning on exposed pipes carrying graywater and/or alternative onsite water to be consistent with Chapter 217, Subchapter M.

Proposed §210.84(f) was revised to improve readability.

*§210.85, Criteria for Use of Graywater for Irrigation and for Other Agricultural Purposes*

The proposed amendment to §210.85 changes the title from "Criteria for Use of Graywater for Irrigation and for Other Agricultural Purposes" to "Agricultural Use of Graywater and Alternative Onsite Water" to be more concise and to include alternative onsite water.

Proposed §210.85(a) revises existing language regarding authorization from the commission for agricultural use of graywater and moves existing §210.85(d)(1)(B) to proposed §210.85(a). The amendment adds alternative onsite water and **improves** ~~improve~~ readability. Proposed §210.85(b) clarifies that the graywater and alternative onsite water must be generated and used onsite.

Proposed §210.85(c) prohibits the overflow of graywater reuse systems and combined reuse systems onto the ground under any circumstances. Instead, proposed §210.85(c)(1) requires that graywater reuse systems be designed and constructed so that the graywater can be diverted to a wastewater collection system or an OSSF. For graywater reuse

that may be located at a site that uses an OSSF. The design, construction, and operation of OSSFs are regulated by Chapter 285 of this title (relating to On-Site Sewage Facilities).

[For the purpose of this subchapter, the term "Site" has the same meaning as defined in Chapter 305, Subchapter A of this title (relating to General Provisions).]

(d) An existing graywater system shall comply with the requirements of this subchapter as they existed on the date installation was completed. The previous version of this subchapter is continued in effect for this purpose.

(e) This subchapter does not authorize the diversion or impoundment of state water, as defined in Chapter 297 of this title (relating to Water Rights, Substantive).

#### **§210.82. Definitions and General Requirements.**

(a) Definitions. For the purposes of this subchapter, the following terms have the following meanings.

(1) Alternative onsite water--rainwater, air-conditioner condensate, foundation drain water, stormwater, ~~cooling tower blowdown~~, swimming pool backwash and drain water, or reverse osmosis reject water. Cooling tower blowdown is regulated by Subchapter E of this chapter (relating to Special Requirements for Use of Industrial Reclaimed Water); therefore, for the purposes of this subchapter, all references to alternative onsite water do not include cooling tower blowdown. Reverse osmosis reject

water generated at industrial facilities, commercial facilities, and institutions is regulated by Subchapter E of this chapter; therefore, for the purposes of this subchapter, all references to alternative onsite water do not include reverse osmosis reject water generated at industrial facilities, commercial facilities, and institutions. Reverse osmosis reject water generated at private residences and agriculture facilities may be used in accordance with this subchapter.

(2) Alternative water reuse system--a system designed and constructed to store and distribute one or more sources of alternative onsite water. An alternative water reuse system shall not contain, store, or distribute any graywater.

(3) Combined reuse system--a system designed and constructed to store and distribute graywater and one or more sources of alternative onsite water.

(4) Graywater-- [is defined as] wastewater from [:]

[ (1) showers, [;]

[ (2) bathtubs, [;]

[ (3) handwashing lavatories, [;]

Proposed new §285.81(a) clarifies that graywater and combined reuse systems are authorized without a permit. However, OSSFs which are reduced based on the presence of a graywater or combined reuse system require a permit and submission of planning materials.

Proposed new §285.81(b) provides the allowable sizing reduction to the OSSF disposal field. The reductions outlined in Figure: 30 TAC §285.841(b) were estimated using data contained in Table 4.2 of *Design Manual, On-Site Wastewater Treatment and Disposal Systems (EPA/625/1-80/012) October 1980*.

Proposed new §285.81(c) provides that a qualified professional plumber is responsible for documenting which sewage sources will be entering the OSSF.

Proposed new §285.81(d) and Figure: 30 TAC §285.81(d) ~~to~~ provide the design organic strength of the wastewater entering the OSSF. The numbers are based on the assumptions that sewage containing all blackwater and graywater sources within a residence will be 300 milligrams per liter five-day bio chemical oxygen demand (mg/l BOD<sub>5</sub>) and all graywater sources have no BOD<sub>5</sub> concentration.

Proposed new §285.81(e) and (f) establish the qualifications needed to design OSSFs in this section and the BOD<sub>5</sub> effluent quality that must be achieved by the reduced OSSF. The requirements are consistent with previously adopted sections of Chapter 285.

[(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.

[(b)] [(c)] Construction of a graywater reuse system, including storage and disposal systems, must comply with this chapter; Chapter 210, Subchapter F of this title (relating to Use of Graywater and Alternative Onsite Water Systems); and any more stringent requirements of the local permitting authority. For the purposes of this subchapter, a graywater reuse system begins at the graywater stub-out of a single family dwelling.

[(c)] A graywater reuse system must not create a nuisance or damage the quality of surface water or groundwater. If a graywater reuse system creates a nuisance, threatens human health, 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).

**§285.81. OSSF Reduction for Single Family Residences with a Graywater Reuse System or a Combined Reuse System.**

(a) Graywater reuse systems and combined reuse systems are authorized in Chapter 210, Subchapter F of this title (relating to **Use of Graywater and Alternative Onsite Water** ~~Licensing and Registration Requirements for Installers, Apprentices, Designated Representatives, Site Evaluators, Maintenance Providers, and Maintenance Technicians~~) without a permit or the submission of planning materials. However, on-site sewage facilities (OSSFs) described in this subsection require a permit and the submission of planning materials.

(b) Effluent disposal system sizing. If the graywater reuse system or combined reuse system serving the single family residence is in compliance with Chapter 210, Subchapter F of this title, the effluent disposal system required in §285.33 of this title (relating to Criteria for Effluent Disposal Systems) may be reduced in accordance with Table I in Figure: 30 TAC §285.81(b) of this section.

Figure: 30 TAC §285.81(b)

**Table I. Percent Reduction**

<b><u>Sewage sources entering the graywater reuse system or combined reuse system</u></b>	<b><u>Percent reduction to effluent disposal system required in §285.33 of this title</u></b>
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