

# Texas Commission on Environmental Quality

## Interoffice Memorandum

**To:** Commissioners **Date:** November 18, 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 Rulemaking Adoption  
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

### **Background and reason(s) for the rulemaking:**

House Bill 1902 (HB 1902 or bill), 84th Texas Legislature (2015), amended Texas Health and Safety Code (THSC), Chapters 341 and 366 and Texas Water Code (TWC), Chapter 26 in relation to the use of graywater and alternative onsite water. The bill requires the Texas Commission on Environmental Quality (TCEQ, agency, or commission) to develop standards to allow the reuse of graywater for toilet and urinal flushing.

Additionally, the bill creates a new regulatory classification for "alternative onsite water" which the bill defines as "rainwater, air-conditioning condensate, foundation drain water, storm water, cooling tower blowdown, swimming pool backwash and drain water, reverse osmosis reject water, or any other source of water considered appropriate by the commission". The bill directs TCEQ to develop similar standards for the reuse of this new source of water similar to graywater.

The bill provides authority to TCEQ to adopt and implement rules for the inspection and annual testing of graywater and alternative onsite water systems.

The bill allows an adjustment in the drainfield size of an on-site sewage facility (OSSF) if used in conjunction with a graywater reuse system.

Lastly, the bill requires TCEQ to develop a regulatory guidance manual to explain the graywater and alternative onsite water regulations.

### **Scope of the rulemaking:**

#### **A.) Summary of what the rulemaking will do:**

The adopted rulemaking amends 30 Texas Administrative Code Chapters 210 and 285.

The adopted rules:

- allow for a potential reduction in the OSSF drainfield size if the OSSF is used in conjunction with a reuse system;
- move all graywater reuse to Chapter 210;

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- authorize the reuse of alternative onsite water;
- authorize by rule the reuse of 400 gallons per day or more of graywater and alternative onsite water, unless directed by the executive director to obtain an authorization;
- add toilet and urinal flushing as an authorized use of graywater and alternative onsite water;
- establish uses of and treatment standards for alternative onsite water similar to graywater;
- allow spray irrigation at private residences under certain conditions;
- incorporate nationally recognized treatment levels for total suspended solids and *Escherichia coli* (*E. coli*) for graywater and alternative onsite water when used for toilet and urinal flushing; and
- revise bacteria limits from fecal coliform to *E. coli* throughout the rule.

The adopted rules do not include an inspection or testing program for these systems because the TCEQ does not issue permits for graywater and alternative onsite water reuse systems.

A regulatory guidance manual to explain the graywater and alternative onsite water regulations will be developed after adoption of this rulemaking.

**B.) Scope required by federal regulations or state statutes:**

The adopted rules implement HB 1902.

**C.) Additional staff recommendations that are not required by federal rule or state statute:**

In response to comments, the adopted rule was revised to authorize by rule the reuse of 400 gallons per day or more of graywater and alternative onsite water, unless directed by the executive director to obtain an authorization, and to allow spray irrigation at private residences under certain conditions.

**Statutory authority:**

- 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 authorizes the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013;
- TWC, §5.120, which requires the commission to administer the law so as to promote judicious use and maximum conservation and protection of the environment and the natural resources of the state;
- TWC, §26.011, which provides the commission with the authority to establish the level of quality to be maintained in, and to control the quality of, the water in the state by subjecting waste discharges or impending waste discharges to reasonable rules or orders adopted or issued by the TCEQ in the public interest;

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- TWC, §26.0311, which establishes the commission's authority to adopt standards for the use and control of graywater;
- THSC, §341.039, which establishes the commission's authority to adopt standards for the use and reuse of graywater;
- THSC, §366.011, which establishes the commission's authority over the location, design, construction, installation, and proper functioning of on-site sewage disposal systems; and
- THSC, §366.012, which establishes the commission's authority to adopt rules concerning on-site sewage disposal systems.

**Effect on the:**

**A.) Regulated community:**

The regulated community consists of homeowners and industrial, commercial, and agricultural facilities that reuse graywater and alternative onsite water. The adopted rules allow the regulated community to reuse additional sources of water, allow graywater and alternative onsite water to be used for toilet and urinal flushing, allow 400 gallons or more to be reused without a permit, and allow spray irrigation at private residences. Additionally, the adopted rulemaking establishes treatment standards for toilet and urinal flushing at all facilities and spray irrigation at private residences that are consistent with the National Science Foundation/American National Standards Institute (NSF/ANSI) Standard 350-2014. By adopting nationally recognized standards, members of the regulated community can use commercially available products that are NSF/ANSI 350 certified.

Lastly, members of the regulated community that dispose of wastewater by use of an OSSF will have the option of reducing the size of the OSSF drainfield when used in conjunction with a reuse system. The cost savings from the reduced drainfield may offset the costs of installing the reuse system.

**B.) Public:**

As the Author's/Sponsor's Statement of Intent makes clear, the 84th Texas Legislature enacted HB 1902 with the aim of lessening Texas' demand for freshwater resources by encouraging and expanding the allowable uses of graywater and other recycled water as a part of the solution to Texas' water challenges.

The adopted rules implement HB 1902 and the bill's intent by expanding the sources of water and the authorized uses of graywater and alternative onsite water, and encouraging the beneficial reuse by allowing spray irrigation and reuse of 400 gallons per day or more without a permit, and allowing a potential reduction in the size of OSSF drainfields when used in conjunction with a reuse system.

**C.) Agency programs:**

Outside of the rulemaking and regulatory guidance manual, no additional impacts are anticipated for agency programs as these rules are self-implementing.

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**Stakeholder meetings:**

The executive director held a stakeholder meeting on August 26, 2015, which had approximately 53 attendees. Additionally, the executive director published a draft version of the rules from January 25 through February 29, 2016, for informal stakeholder review and comment. Comments were received from 13 individuals and entities. These informal comments were used to develop the proposed rules. A public hearing was held on August 16, 2016, to allow oral comments on the proposed rulemaking.

**Public comment:**

The public comment period closed on August 22, 2016. The commission received comments from: the City of Austin; City of Irving; Harris County; League of Women Voters of Texas; Biggerstaff Homes, Inc., Sunbelt Construction, LLC, Lipan Development, LLC; Lower Colorado River Authority; Representative Donna Howard; Representative Paul D. Workman; Septic Systems Express; Texas Association of Builders; Texas On-Site Wastewater Association; Texas Septic Systems Council; and Water ReNu LLC. The majority of the commenters requested that the rules include additional requirements or clarifications.

Comments on Chapter 210 related to allowing air-conditioner condensate and reverse osmosis reject water to enter the wastewater system, authorizing the reuse of reverse osmosis reject water at industrial facilities in this subchapter, prohibiting graywater systems from overflowing to the wastewater system, keeping the rule requirements cost effective by allowing off-the-shelf systems, clarification of whether gardening includes edible and/or non-edible vegetation, revising "does not damage the quality of surface water.." to "does not impact quality of surface water," revising the notification to the OSSF permitting authority or wastewater collection system and treatment plant owner, clarification on the 400-gallon per day limit for reuse at a private residence, removing the backflow prevention between the reuse system and the wastewater system, removing the requirement for a 50-mesh inflow screen on the storage tank, allowing spray irrigation at private residences, clarification on the recommendation to reuse all allowable sources, adding a prohibition from disposing of laundry graywater on an OSSF drainfield, clarification on the "significant amounts" of certain laundry detergent ingredients, replacing *E. coli* limits on irrigation with water management techniques, regulating multi-family developments similar to private residences regarding treatment, and requiring all systems that have *E. coli* limits to monitor for *E. coli*.

Comments on Chapter 285 related to clarifying that all of the conditions and requirements contained in the proposal must be met in order to reduce the size of an OSSF, requiring that only a professional engineer can submit planning materials when secondary treatment is required for a reduced OSSF effluent disposal when used in conjunction with a graywater reuse system, allowing non residences using graywater reuse systems to reduce the size of their OSSF, requiring a metes and bounds description to describe the area needed for future OSSF expansion, specifying training and licensing requirements for individuals testing graywater systems if a testing program is developed at a later date, requiring the testing of graywater plumbing sources entering an OSSF by a master plumber after the plumbing is installed, requiring a model affidavit for properties

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with reduced OSSFs, and requiring an Authorized Agent to demonstrate that a graywater system is improperly operating in addition to obtaining a conviction under a statute related to graywater.

**Significant changes from proposal:**

Chapter 210 was revised to add a statement that an authorization is not required for reuse of 400 gallons per day or more unless directed by the executive director, allow a single air gap in lieu of two backflow preventers, remove the notification requirement, allow spray irrigation at private residences under certain conditions, add a statement that monitoring and recordkeeping are not required for private residences, clarify that residential builders should consider end uses and maintaining sufficient blackwater waste flow when determining allowable sources for reuse, removed the recommendation concerning laundry detergent ingredients, and require *E. coli* monitoring for all reuse systems that have *E. coli* limits, except reuse systems at private residences.

Chapter 285 was revised to clarify that all of the requirements and conditions of §285.81 must be met in order to qualify for a potential OSSF size reduction, to clarify that the potential OSSF size reduction only applies to single family residences, to clarify that wastewater from domestic use sinks is graywater, to clarify that the OSSF sizing reduction is only a potential sizing reduction, to clarify how a professional engineer and professional sanitarian will demonstrate the effectiveness of the proposed treatment system, to clarify that the graywater plumbing evaluation will be performed after the plumbing is installed, and to clarify that the plumber does not need to seal, date or sign the evaluation and to clarify that being convicted or found in violation of any statute related to graywater and not repairing the graywater system in a timely manner is sufficient for an Authorized Agent to require the property owner of a reduced OSSF to expand their OSSF and have the expansion permitted by the Authorized Agent.

**Potential controversial concerns and legislative interest:**

There was significant discussion at the stakeholder meeting related to the drainfield size adjustment. Some stakeholders supported a reduction in size as a financial incentive to install a graywater system while others recommended no decrease in size due to the increased wastewater strength that the OSSF would receive and treat.

There was also significant discussion on the definition of alternative onsite water, specifically "any other source of water considered appropriate by the commission." Stakeholders wanted to expand the definition to include domestic wastewater and carwash water.

The adopted rules allow for a reduction in the OSSF drainfield size but do not expand the definition of alternative onsite water to include domestic wastewater or carwash water. These sources of water are more appropriately regulated under a permit authorization rather than a permit by rule.

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**Does this rulemaking affect any current policies or require development of new policies?**

No.

**What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?**

THSC, §341.039 directs the commission to adopt rules for the indoor and outdoor reuse of graywater and alternative onsite water. THSC, §366.012 directs the commission to adopt rules governing the installation of OSSFs. This rulemaking implements HB 1902 amendments to the statutes and any alternative course of action would not be in compliance with the statutes.

**Key points in the adoption rulemaking schedule:**

***Texas Register* proposal publication date:** July 22, 2016

**Anticipated *Texas Register* adoption publication date:** December 23, 2016

**Anticipated effective date:** December 29, 2016

**Six-month *Texas Register* filing deadline:** January 22, 2016

**Agency contacts:**

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**Attachments:**

HB 1902

Letter, State Representatives Donna Howard and Paul Workman

cc: Chief Clerk, 2 copies  
Executive Director's Office  
Marshall Coover  
Erin Chancellor  
Stephen Tatum  
Jim Rizk  
Office of General Counsel  
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