

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AGENDA ITEM REQUEST
for Proposed Rulemaking

AGENDA REQUESTED: July 6, 2016

DATE OF REQUEST: June 17, 2016

INDIVIDUAL TO CONTACT REGARDING CHANGES TO THIS REQUEST, IF NEEDED: Sherry Davis, (512) 239-2141

CAPTION: Docket No. 2016-0335-RUL. Consideration for publication of, and hearing on, amended Sections 210.81 - 210.85 of 30 TAC Chapter 210, Use of Reclaimed Water; and amended Section 285.80, repealed Section 285.81, and simultaneous proposal of new Section 285.81 of Chapter 285, On-Site Sewage Facilities.

The proposed rulemaking would implement House Bill 1902, 84th Texas Legislature, 2015, Regular Session, relating to the regulation and use of graywater and alternative onsite water. (Laurie Fleet, Michael Parr) (Rule Project No. 2015-028-210-OW)

L'Oreal Stepney, P.E.
Deputy Director

David W. Galindo
Division Director

Sherry L. Davis
Agenda Coordinator

Copy to CCC Secretary? NO YES X

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners **Date:** June 17, 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

Background and reason(s) for the rulemaking:

House Bill (HB or bill) 1902, 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 proposed rulemaking amends 30 Texas Administrative Code Chapters 210 and 285.

The proposed rules:

- allow for a reduction in the OSSF drainfield size if the OSSF is used in conjunction with a reuse system;
- move all graywater reuse to Chapter 210 by repealing Section 285.81;

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- authorize the reuse of alternative onsite water;
- 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;
- 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 proposed rulemaking retains the existing prohibition on the commission requiring a permit for the residential use of less than 400 gallons of graywater, and adds the use of less than 400 gallons of alternative onsite water to the prohibition.

Because the TCEQ does not issue permits for graywater and alternative onsite water reuse systems, the proposed rules do not include an inspection or testing program for these 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 proposed rules implement HB 1902.

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

None.

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;
- 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;

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- 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, industrial and commercial facilities, and agricultural facilities that reuse graywater and alternative onsite water. The proposed rules allow the regulated community to reuse additional sources of water and provide additional options for management of graywater and alternative onsite water, including toilet and urinal flushing which is not currently authorized by rule. The proposed rulemaking establishes treatment standards for toilet and urinal flushing that are consistent with the National Science Foundation/American National Standards Institute (NSF/ANSI) Standard 350-2014. By proposing nationally recognized standards, members of the regulated community can use commercially available products that are NSF/ANSI 350 certified.

Additionally, 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 proposed rules implement HB 1902 and the bill's intent by expanding the sources of water that are authorized for reuse, expanding the authorized uses of graywater and alternative onsite water, and encouraging the beneficial reuse of graywater and alternative onsite water by allowing a 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. If the agency chooses to develop rules for the inspection and annual testing of graywater and alternative onsite water systems, a new program will need to be created.

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. Although an

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official response to comments was not required, the proposed rules were revised in response to these informal comments.

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 proposed 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.

Will 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 proposal rulemaking schedule:

Anticipated proposal date: July 6, 2016

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

Anticipated public hearing date (if any): August 16, 2016

Anticipated public comment period: July 22, - August 22, 2016

Anticipated adoption date: December 7, 2016

Agency contacts:

Laurie Fleet, Rule Project Manager, Water Quality Division, (512) 239-5445

Michael Parr, Staff Attorney, (512) 239-0611

Sherry Davis, Texas Register Coordinator, (512) 239-2141

Attachments:

HB 1902

Letter, State Representative Donna Howard

Commissioners

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June 17, 2016

Re: Docket No. 2016-0335-RUL

cc: Chief Clerk, 2 copies
Executive Director's Office
Marshall Coover
Erin Chancellor
Stephen Tatum
Jim Rizk
Office of General Counsel
Yvonna Miramontes
Susan M. Jablonski
David W. Galindo
Laurie Fleet
James McCain
Sherry Davis

AN ACT

relating to the regulation and use of graywater and alternative onsite water.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Section 341.039, Health and Safety Code, is amended to read as follows:

Sec. 341.039. ~~[GRAYWATER]~~ STANDARDS FOR GRAYWATER AND ALTERNATIVE ONSITE WATER. (a) The commission by rule shall adopt and implement minimum standards for the indoor and outdoor use and reuse of treated graywater and alternative onsite water for:

- (1) irrigation and other agricultural purposes;
- (2) domestic use, to the extent consistent with

Subsection (c);

- (3) commercial purposes; and
- (4) industrial purposes.

(a-1) The standards adopted by the commission under Subsection (a)(2) must allow the use of graywater and alternative onsite water for toilet and urinal flushing.

(b) The standards adopted by the commission under Subsection (a) must assure that the use of graywater or alternative onsite water is not a nuisance and does not threaten human health or damage the quality of surface water and groundwater in this state.

(b-1) The commission by rule may adopt and implement rules providing for the inspection and annual testing of a graywater or alternative onsite water system by the commission.

(b-2) The commission shall develop and make available to the public a regulatory guidance manual to explain the rules adopted under this section.

(c) The commission may not require a permit for the domestic use of less than 400 gallons of graywater or alternative onsite water each day if the water ~~[graywater]~~:

- (1) originates from a private residence;
- (2) is used by the occupants of that residence for gardening, composting, ~~[or]~~ landscaping, or indoor use as allowed by rule, including toilet or urinal flushing, at the residence;
- (3) is collected using a system that may be diverted ~~[overflows]~~ into a sewage collection or on-site wastewater treatment and disposal system;
- (4) is, if required by rule, stored in surge tanks

that:

- (A) are clearly labeled as nonpotable water;
- (B) restrict access, especially to children; and
- (C) eliminate habitat for mosquitoes and other

vectors;

(5) uses piping clearly identified as a nonpotable water conduit, including identification through the use of purple pipe, purple tape, or similar markings;

(6) is generated without the formation of ponds or pools of graywater or alternative onsite water;

(7) does not create runoff across the property lines or onto any paved surface; and

(8) is distributed by a surface or subsurface system that does not spray into the air.

(d) Each builder is encouraged to:

(1) install plumbing in new housing in a manner that provides the capacity to collect graywater or alternative onsite

water from all allowable sources; and

(2) design and install a subsurface graywater or alternative onsite water system around the foundation of new housing in a way that minimizes foundation movement or cracking.

(e) In this section:

(1) "Alternative onsite water" means rainwater, air-conditioner 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.

(2) "Graywater" [~~,"graywater"~~] means wastewater from clothes-washing machines, showers, bathtubs, hand-washing lavatories, and sinks that are not used for disposal of hazardous or toxic ingredients. The term does not include wastewater:

(A) [~~(1)~~] that has come in contact with toilet waste;

(B) [~~(2)~~] from the washing of material, including diapers, soiled with human excreta; or

(C) [~~(3)~~] from sinks used for food preparation or disposal.

SECTION 2. Section 366.012(a), Health and Safety Code, is amended to read as follows:

(a) To assure the effective and efficient administration of this chapter, the commission shall:

(1) adopt rules governing the installation of on-site sewage disposal systems, including rules concerning the:

(A) review and approval of on-site sewage disposal systems; and

(B) temporary waiver of a permit for an emergency repair; and

(2) adopt rules under this chapter that:

(A) encourage the use of economically feasible alternative techniques and technologies for on-site sewage disposal systems that can be used in soils not suitable for conventional on-site sewage disposal;

(B) address the separation of graywater, as defined by Section 341.039, in a residence served by an on-site sewage disposal system; [~~and~~]

(C) allow for an adjustment in the size required of an on-site sewage disposal system if the system is used in conjunction with a graywater system that complies with the rules adopted under Section 341.039; and

(D) require on-site sewage disposal systems, including risers and covers, installed after September 1, 2012, to be designed to prevent access to the system by anyone other than:

(i) the owner of the system; or

(ii) a person described by Section

366.071(a) or (b).

SECTION 3. Section 26.0311, Water Code, is amended by amending Subsection (a) and adding Subsection (b-1) to read as follows:

(a) In this section, "graywater" has the meaning provided by Section 341.039, Health and Safety Code [~~means wastewater from clothes washing machines, showers, bathtubs, handwashing lavatories, and sinks that are not used for disposal of hazardous or toxic ingredients. The term does not include wastewater:~~

~~[(1) that has come in contact with toilet waste;~~

~~[(2) -- from the washing of material, including diapers, soiled with human excreta; or
[(3) -- from sinks used for food preparation or disposal].~~

(b-1) The standards adopted by the commission under Subsection (b)(2) must allow the use of graywater for toilet and urinal flushing.

SECTION 4. The Texas Commission on Environmental Quality shall adopt the standards required by Sections 341.039 and 366.012, Health and Safety Code, as amended by this Act, and Section 26.0311, Water Code, as amended by this Act, not later than January 1, 2017.

SECTION 5. This Act takes effect immediately if it receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this Act takes effect September 1, 2015.

President of the Senate

Speaker of the House

I certify that H.B. No. 1902 was passed by the House on April 28, 2015, by the following vote: Yeas 143, Nays 0, 2 present, not voting; and that the House concurred in Senate amendments to H.B. No. 1902 on May 21, 2015, by the following vote: Yeas 144, Nays 0, 2 present, not voting.

Chief Clerk of the House

I certify that H.B. No. 1902 was passed by the Senate, with amendments, on May 20, 2015, by the following vote: Yeas 31, Nays 0.

Secretary of the Senate

APPROVED: _____
Date

Governor



DONNA HOWARD
STATE REPRESENTATIVE
DISTRICT 48

May 18, 2016

Texas Commission on Environmental Quality
Chairman Bryan Shaw, Ph.D.
Commissioner Toby Baker
Commissioner Jon Niermann
P. O. Box 13087, MC 100
Austin, TX 78711-3087

RECEIVED

MAY 20 2016

Texas Commission on Environmental Quality
Commissioners' Offices

Re: Project No. 2015-028-210-OW (HB 1902, 84R)

Dear Texas Commission on Environmental Quality Commissioners:

We are writing you today regarding rulemaking on Project No. 2015-028-210-OW, initiated by HB 1902 (Howard-Isaac-Workman-Lucio III), approved by the 84th Legislature and signed into law. A foundational purpose of HB 1902 is to expand the uses of graywater and alternative onsite water at a private residence.

As an outgrowth for months of stakeholder input, the rule reflects necessary, common-sense changes that will lead to enhanced water conservation while reducing the need for resource-intensive consolidated wastewater treatment. Given the increase in Texas' population, this rulemaking is a cost effective way to manage growing demand for limited water resources.

However, we would like to reiterate some of the suggested rule changes from the City of Austin, which would make the goals of onsite alternative water reuse more effective to implement.

More specifically, we encourage TCEQ to take the following action:

1. Do not prescribe "reductions" in size of on-site septic systems (OSSF) if a graywater system is also going to be used. Section 2 of HB 1902 allows TCEQ to "adjust" the size of an OSSF, since the OSSF might actually need to be larger, not smaller, if a graywater system will also be used (given the higher concentration of the effluent reaching the OSSF system).
2. Do not require graywater systems to overflow to OSSF systems. The current authority that designated agents have over permitting OSSF systems should be maintained so that decisions such as whether to connect graywater and OSSF systems are left to the discretion of the designated agent.
3. We encourage any specific details (such as the percent reduction chart on page 9 of the Chapter 285 rules) be included in TCEQ's guidance document only and not in the rules themselves. The reductions in this chart are too prescriptive and could lead to inappropriate sizing of OSSF systems. Suggested scenarios in

a guidance document would be more appropriate, with latitude for permitting authorities to make appropriate sizing determinations as noted in the comments above.

With the changes noted above, the rule will greatly aid Texas to meet the goals of the State Water Plan, in a sound, cost-effective manner without imposing a further burden to taxpayers. The proposed rule will ensure that logical regulations achieve environmental goals without endangering public health or our quality of water.

Thank you very much for your time and consideration. We urge you to support these recommendations.

Respectfully submitted,



Paul D. Workman
House District 47



Donna Howard
House District 48

The Texas Commission on Environmental Quality (TCEQ, agency, or commission) proposes amendments to §§210.81 - 210.85.

Background and Summary of the Factual Basis for the Proposed Rules

House Bill (HB or bill) 1902, 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 TCEQ 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.

The bill requires amendments to Chapter 210 and 30 TAC Chapter 285, On-Site Sewage Facilities. The proposed rules allow for a reduction in the OSSF drainfield size if the OSSF is used in conjunction with a graywater reuse system, move all graywater reuse to Chapter 210, authorize toilet and urinal flushing as an additional reuse of graywater, authorize the reuse of alternative onsite water, establish uses of and treatment standards for alternative onsite water similar to graywater, incorporate nationally recognized treatment standards for graywater and alternative onsite water when used for toilet and urinal flushing, and revise bacteria limits from fecal coliform to *Escherichia coli* (*E. coli*).

HB 1902 retains the existing prohibition on the commission requiring a permit for the residential use of less than 400 gallons of graywater and adds alternative onsite water to the permit prohibition.

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

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

A corresponding rulemaking is published in this issue of the *Texas Register* concerning

Chapter 285, Subchapter H, Disposal of Graywater.

Section by Section Discussion

§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). 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 private residences and agriculture facilities may be reused in accordance with the requirements of the proposed rule.

The definitions for "Alternative water reuse system," "Combined reuse system," and "Graywater reuse system," in §210.82(a)(2), (3), and (5) respectively, are necessary because

the requirements, especially as they relate to design and functionality of the system when it nears maximum capacity, are different depending on the source of water routed to each system. The differences are discussed later in this preamble.

Proposed §210.82(b) establishes requirements for alternative water reuse systems used at a private residence, industrial facility, commercial facility, institution, or agriculture facility. Proposed §210.82(b)(1) establishes examples of beneficial reuses of water from alternative water reuse systems. Providing examples rather than specified uses ensures that the rule allows other uses that the commission may not consider during this rulemaking. The proposed rule also allows for the reuse of an unlimited volume of water from alternative water reuse system.

Proposed §210.82(b)(2) reiterates that reverse osmosis reject water generated at an industrial facility, commercial facility, or institution is not allowed to be stored or used in an alternative water reuse system. If an industrial facility, commercial facility, or institution wants to reuse reverse osmosis reject water or a combination of reverse osmosis reject water and other sources of alternative onsite water, it must comply with the requirements of Chapter 210, Subchapter E.

Proposed §210.82(b)(3) allows for the reuse of water from an alternative water reuse system without an authorization from the commission. Property owners are responsible for compliance with the requirements of the proposed rule.

Proposed §210.82(b)(4) - (6) limits the application rate and disposal method of water from an alternative water 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) - (8).

Proposed §210.82(b)(7) prohibits the reuse of swimming pool backwash and drain water within five days of adding chemicals for shock or acid treatment. This five-day waiting period allows for the chemicals to volatilize to the air prior to reuse.

Proposed §210.82(b)(8) requires water from an alternative water reuse system that is used for toilet or urinal flushing to meet *E. coli* limits, total suspended solids limits, and requires color specific pipes for distribution. The *E. coli* and total suspended solids limits are consistent with the NSF International/American National Standards Institute (NSF/ANSI) Standard 350-2014: *On-site Residential and Commercial Water Reuse Treatment Systems*. The colored pipe complies with plumbing codes and 30 TAC Chapter 217, Subchapter M. An alternative water reuse system that stores rainwater only and the rainwater meets the potable requirements in 30 TAC §290.44 does not require the purple pipe.

Proposed §210.82(b)(9) prohibits alternative water reuse systems from having a connection to an organized wastewater collection system or OSSF. Wastewater collection systems and their associated wastewater treatment plant are not designed for inflow from alternative onsite water. The proposed rule allows for alternative water reuse

systems to overflow onto the ground when the capacity of the system is exceeded; however, the authorized overflow must be induced by rainfall conditions. Failure to use the stored water in a timely manner is not an authorized overflow.

Proposed §210.82(b)(10) notes that an alternative water 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(c) has general requirements for graywater reuse systems and combined reuse systems used at a private residence, industrial facility, commercial facility, institution, or agriculture facility. These requirements are in addition to the requirements in §§210.83 - 210.85. Proposed §210.82(c)(1) requires graywater reuse systems and combined reuse systems to comply with the requirements of this subchapter and the local permitting authority. Per §210.82(c)(2), if the site is connected to an organized wastewater collection system, the property owner must notify the wastewater collection system owner and the wastewater treatment plant owner of their intent to construct the system prior to construction. This notification allows the collection system and treatment 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) 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

The proposed amendment to §210.83 changes the title from "Criteria for the Domestic Use of Graywater" to "Residential Use of Graywater and Alternative Onsite Water" to be more concise, to include alternative onsite water, and to use terminology common to the public.

Proposed §210.83(a) establishes requirements for graywater reuse systems and combined reuse systems used at a private residence. An authorization from the commission is not required for the residential use of graywater and alternative onsite water when the total combined average is less than 400 gallons per day. Proposed §210.83(b) notes that the graywater and alternative onsite water must be generated and used onsite. Proposed §210.83(c) retains the list of approved uses of graywater from the existing rule while adding toilet and urinal flushing and applying these uses to alternative onsite water.

Proposed §210.83(d) prohibits the overflow of graywater reuse systems and combined reuse systems onto the ground under any circumstances. Instead, in §210.83(d)(1) the rule requires that graywater reuse systems be designed so that the storage tank overflows into the wastewater collection system or OSSF. Proposed §210.83(d)(2) requires that combined reuse systems be designed so that the graywater can be diverted into the wastewater collection system or OSSF prior to entering the storage tank, and requires the graywater to be diverted during periods of non-use of the combined reuse system or when the storage tank reaches 80% capacity. Proposed §210.83(d)(3) requires combined reuse systems that store stormwater, rainwater, and/or foundation drain water to have an automatic shutoff system to stop the inflow of these sources of water when the system reaches 80% capacity. The 20% reserved volume in the tank is to accommodate inflows of other sources alternative onsite water.

Proposed §210.83(d)(1) and (2) prohibits graywater flows into an OSSF with a reduced effluent disposal system authorized under §285.81, as those OSSFs are not designed to

handle the inflow of graywater.

Proposed §210.83(e) and (f) continues the existing requirement for graywater to be stored in tanks and retains the existing tank and piping requirements, while applying these requirements to water from an alternative water reuse system.

Proposed §210.83(g) continues the existing prohibition of disposing of graywater by spray irrigation, while applying this prohibition to water from a combined reuse system. This prohibition is consistent with THSC, §341.039(c)(8).

Proposed §210.83(h) establishes minimum standards for graywater and alternative onsite water and directs property owners to the regulatory guidance document required by THSC, §341.039 for assistance in complying with the standards. Proposed §210.83(h)(1) requires graywater and alternative onsite water to be treated to remove debris by requiring a 50-mesh screen on the storage tank inflow. Removing this debris prevents clogs in the distribution pipes and reduces organic matter in the storage tank that can cause nuisance odors and vector attraction. Proposed §210.83(h)(2) prohibits swimming pool backwash and drain water from being reused within five days of adding chemicals for shock or acid treatment. This five-day waiting period allows for the chemicals to volatilize to the air prior to reuse. Lastly, proposed §210.83(h)(3) requires water from a graywater reuse system or a combined reuse system that is used for toilet or urinal flushing to meet *E. coli* limits, total suspended solids limits, and requires color specific pipes for distribution. The *E. coli* and total suspended solids limits in proposed

§210.83(h)(3)(A) and (B) are consistent with NSF/ANSI Standard 350-2014 for single-family residential dwellings (Class R). The colored pipe in proposed §210.83(h)(3)(C) complies with plumbing codes and Chapter 217, Subchapter M.

Proposed §210.83(i) adds alternative onsite water to the existing recommendations to residential builders.

Proposed §210.83(j) clarifies the existing requirements for laundry graywater by replacing the phrase "effective date of this rule" with the exact date that the existing rules were effective, and §210.83(j)(1) is replacing "must not create a public health nuisance" with "must not create a nuisance or threaten public health," and is correcting grammatical errors in §210.83(j)(6). Additionally, proposed §210.83(j)(8) adds a recommendation that the use of detergents with significant amounts of phosphorus, sodium, or boron should be avoided. This recommendation is consistent with existing §285.81, which is being repealed and combined with this proposed rule. Lastly, the proposed §210.83(j)(9) is revised to improve readability and adds a date for alterations. The date is the effective date of the existing rule.

§210.84, Criteria for Use of Graywater for Industrial, Commercial, or Institutional Purposes

The proposed amendment to §210.84 changes the title from "Criteria for Use of Graywater for Industrial, Commercial, or Institutional Purposes" to "Industrial, Commercial, or Institutional Use of Graywater and Alternative Onsite Water" to be more

concise and to include alternative onsite water.

Proposed §210.84(a) reiterates that reverse osmosis reject water generated at an industrial facility, commercial facility, or institution does not include reverse osmosis reject water, as this source of water is regulated by Chapter 210, Subchapter E.

Proposed §210.84(b) revises existing language regarding authorization from the commission for the use of graywater and alternative onsite water an industrial facility, commercial facility, or institution and moves existing §210.84(c)(1)(B) to proposed §210.84(b). These amendments improve readability.

Proposed §210.84(c) clarifies that the graywater and alternative onsite water must be generated and used onsite.

Proposed §210.84(d) prohibits the overflow of graywater reuse systems and combined reuse systems onto the ground under any circumstances. Instead, proposed §210.84(d)(1) requires that graywater reuse systems be designed and constructed so that the graywater can be diverted to a wastewater collection system, OSSF, authorized wastewater outfall, or authorized disposal area. The graywater must be diverted when the graywater reuse system is not being used or when the system reaches maximum capacity.

Proposed §210.84(d)(2) requires that combined reuse systems be designed and constructed so that the graywater can be diverted to a wastewater collection system,

OSSF, authorized wastewater outfall, or authorized disposal area prior to entering the combined reuse system. The graywater must be diverted when the combined reuse system is not being used or when the system reaches 80% capacity. Additionally, proposed §210.84(d)(3) notes that combined reuse systems that store stormwater, rainwater, and/or foundation drain water must have an automatic shutoff system to stop the inflow of these sources of water when the system reaches 80% capacity. The 20% reserved volume is to accommodate inflows of other sources of alternative onsite water.

Proposed §210.84(e) retains the list of approved uses of graywater from the existing rule while applying these uses to alternative onsite water. Proposed §210.84(e)(1) - (5) revises the bacterial limits from fecal coliform to *E. coli*; however, the limit values for all uses were not revised from the existing rule, except toilet or urinal flushing in §210.84(e)(4). Additionally, in §210.84(e)(2) the applicability of bacteria limits is revised based on whether there this is public access or restricted public access to the application area rather than whether there is public contact with the water or the public is present at the time of irrigation. Proposed §210.84(e)(4) revises the bacterial limits for toilet or urinal flushing from fecal coliform to *E. coli*, revises the limit values, and adds a limit for total suspended solids. The *E. coli* and total suspended solids limit values for toilet or urinal 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 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 systems, the graywater must be diverted when the graywater reuse system is not being used or when the system reaches maximum capacity.

Proposed §210.85(c)(2) requires that combined reuse systems be designed and constructed so that the graywater can be diverted to a wastewater collection system or an

OSSF prior to entering the combined reuse system. The graywater must be diverted when the combined reuse system is not being used or when the system reaches 80% capacity. Additionally, proposed §210.85(c)(3) requires combined reuse systems that store stormwater, rainwater, and/or foundation drain water to have an automatic shutoff system to stop the inflow of these sources of water when the system reaches 80% capacity. The 20% reserved volume is to accommodate inflows of other sources of alternative onsite water.

Proposed §210.85(c)(1) and (2) also prohibits graywater flows into an OSSF with a reduced effluent disposal system authorized under §285.81, as those OSSFs are not designed to handle the inflow of graywater.

Proposed §210.85(d) retains the list of approved uses of graywater from the existing rule while adding toilet and urinal flushing and applying these uses to alternative onsite water. Proposed §210.85(d)(1) - (4) and (6) revises the bacterial limits from fecal coliform to *E. coli*; however, the limit values for all uses were not revised from the existing rule. Additionally, proposed §210.85(d)(2) notes the applicability of bacteria limits is revised based on whether there this is public access or restricted public access to the application area rather than whether there is public contact with the water or the public is present at the time of irrigation. Proposed §210.85(d)(4) clarifies that bacteria limits do not apply to the irrigation of fields that are not used for edible crops or grazing milking animals.

Proposed §210.85(d)(5) adds toilet or urinal flushing as an additional use of graywater

and alternative onsite water at agricultural facilities. Proposed §210.85(d)(5)(A) - (C) requires water from a graywater reuse system or a combined reuse system that is used for toilet or urinal flushing to meet *E. coli* limits, total suspended solids limits, and requires color specific pipes for distribution. The *E. coli* and total suspended solids limits are consistent with NSF/ANSI Standard 350-2014 for commercial facilities (Class C). The colored pipe complies with plumbing codes and Chapter 217, Subchapter M.

Proposed §210.85(e) was revised to improve readability.

Fiscal Note: Costs to State and Local Government

Jeffrey Horvath, Analyst in the Chief Financial Officer Division, determined that for the first five-year period the proposed rules are in effect, no significant fiscal implications are anticipated for the agency and for other units of state or local government as a result of the administration or enforcement of the proposed rules.

The proposed rules would implement HB 1902, 84th Texas Legislature, 2015. The bill requires TCEQ to develop standards to allow the reuse of graywater for toilet and urinal flushing. The bill also creates a new regulatory classification for "alternative onsite water" which is defined as "rainwater, air-conditioning condensate, foundation drain water, stormwater, 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 allows an adjustment in the drainfield size of an OSSF if used in conjunction with a graywater reuse system and requires TCEQ to develop a regulatory guidance manual to explain the graywater and alternative onsite water regulations.

The proposed rules would: allow for a reduction in the OSSF drainfield size if the OSSF is used in conjunction with a graywater reuse system, move all graywater reuse to Chapter 210, authorize toilet and urinal flushing as an additional reuse of graywater, authorize the reuse of alternative onsite water, establish uses of and treatment standards for alternative onsite water similar to graywater, and establish treatment standards for graywater and alternative onsite water when used for toilet and urinal flushing.

HB 1902 retains the existing prohibition on the commission requiring a permit for the residential use of less than 400 gallons of graywater and adds alternative onsite water to the permit prohibition.

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

No significant fiscal implications are anticipated for the agency or for any other unit of state or local government. The proposed rules add alternative onsite water as an additional source of water that can be reused at private residences, industrial facilities, commercial facilities, institutions, and agriculture facilities. The proposed rules also add

toilet flushing as an approved reuse of graywater and alternative onsite water. The rules include treatment requirements for alternative onsite water and graywater used for toilet flushing.

Persons that want to reuse graywater or alternative onsite water for any of the approved uses must comply with the requirements of this rulemaking. Because TCEQ does not issue permits for graywater and alternative onsite water reuse systems, the proposed rules do not include an inspection or testing program for these systems.

Public Benefits and Costs

Mr. Horvath also determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rulemaking will be compliance with state law and the potential for a reduction in the demand for potable water that could assist the state in meeting future water supply needs.

No fiscal implications are anticipated for businesses and individuals as a result of the administration and enforcement of the proposed rules. The proposed rules do not require anything new for businesses or individuals since reusing graywater or alternative onsite water is optional. However, if a business or individual wants to reuse alternative onsite water or graywater for toilet flushing they would be required to comply with the requirements in the proposed rule. The requirements are necessary to protect human health and the environment, and to prevent damage to plumbing fixtures. The costs of

complying with the rules vary depending on the type of system installed and whether the system is installed at a new construction or if retrofitting. There would also be the potential for cost savings due to the reuse of water used for landscape irrigation, toilet flushing, composting, gardening, foundation stabilization, industrial process water, dust control, and agricultural irrigation.

Small Business and Micro-Business Assessment

No adverse fiscal implications are anticipated for small or micro-businesses as a result of the proposed rules. The proposed rules do not impose any new requirements for any business or individual. Reusing graywater or alternative onsite water is optional. If a business or individual wants to reuse alternative onsite water or graywater for toilet flushing they would be required to comply with the requirements in the proposed rules.

Small Business Regulatory Flexibility Analysis

The commission reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules are necessary in order to comply with state law and are not expected to result in adverse fiscal implications for small or micro-businesses.

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

TCEQ reviewed the proposed rulemaking in consideration of the regulatory analysis of major environmental rules required by Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to Texas Government Code, §2001.0225(a) because it does not meet the definition of a "major environmental rule" as defined in Texas Government Code, §2001.0225(g)(3). The following is a summary of that review.

Texas Government Code, §2001.0225 applies to a "major environmental rule" adopted by a state agency, the result of which is to exceed standards set by federal law, exceed express requirements of state law, exceed requirements of delegation agreements between the state and the federal government to implement a state and federal program, or adopt a rule solely under the general powers of the agency instead of under a specific state law. A "major environmental rule" is 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.

As the Author's/Sponsor's Statement of Intent makes clear, the 84th Texas Legislature, 2015, 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.

By updating decades-old statutory provisions governing graywater disposal and reuse with new technologies and systems that expand the possibilities for safe reuse of graywater on commercial, industrial, and domestic properties, the statutory changes from HB 1902 would ideally result in less demand for freshwater resources for water needs that do not require freshwater standards. More specifically, the Statement of Intent articulates that "by clarifying the existing {Texas Health and Safety Code (THSC)} standards and expanding the scope and uses of graywater and alternative onsite water {and ensuring that the Texas Water Code conforms to these changes}, C.S.H.B. 1902 could act as another part of the solution to Texas' water challenges."

To expand the possibilities for safe reuse of graywater, HB 1902 brings current law and regulations up to date by directing TCEQ to, by rule, expand the sources of usable non-potable water to include "alternative onsite water" by defining and including it in relevant rule language governing graywater. HB 1902 furthers the use of graywater and alternative onsite water by allowing the indoor use of graywater for toilet and urinal flushing. Specifically, HB 1902 amends the THSC to specify that the minimum standards adopted and implemented by TCEQ rule for the use and reuse of graywater are for the indoor and outdoor use and reuse of treated graywater and alternative onsite water. HB 1902 promotes the use of graywater and alternative onsite water as viable, sustainable resources as a way to avoid or prevent a lack of water for drinking and other essential purposes, which would be a health and safety crisis.

Therefore, the specific intent of the proposed rulemaking is to lessen demand for

freshwater resources for water needs that do not require freshwater standards by adopting and implementing minimum standards for the indoor and outdoor use and reuse of treated graywater and alternative onsite water for irrigation, certain domestic uses, and agricultural, commercial, and industrial uses. All of which help to prevent a health and safety crisis due to a lack of water for drinking and other essential purposes. By promoting the use and reuse of treated graywater and alternative onsite water, which helps to avoid a lack of water for drinking and other essential purposes, the proposed rules protect human health and safety, as well as water quality; however, the proposed rules will not adversely affect the economy, a sector of the economy, productivity, competition, or jobs within the state or a sector of the state. Accordingly, the commission concludes that the proposed rulemaking does not meet the definition of a "major environmental rule."

Even if this rulemaking was a "major environmental rule," this rulemaking meets none of the criteria in Texas Government Code, §2001.0225, for the requirement to prepare a full regulatory impact analysis. First, this rulemaking is not governed by federal law. Second, it does not exceed state law but rather creates new minimum standards and corresponding processes under state law to ensure efficient regulatory oversight, while comprehensively protecting the state's natural resources. Third, it does not come under a delegation agreement or contract with a federal program; and finally, it is not being proposed under the TCEQ's general rulemaking authority. This rulemaking is being proposed under a specific piece of State legislation from HB 1902, Texas Legislature, 2015, which amends the THSC to direct TCEQ to adopt and implement minimum

standards for the indoor and outdoor use and reuse of treated graywater and alternative onsite water, while not threatening human health.

Therefore, the commission does not adopt the rule solely under the commission's general powers. The commission invites public comment on the Draft Regulatory Impact Analysis Determination.

Written comments on the Draft Regulatory Impact Analysis Determination may be submitted to the contact person at the address listed under the Submittal of Comments section of this preamble.

Takings Impact Assessment

TCEQ evaluated the proposed rulemaking and performed an analysis of whether it constitutes a taking under Texas Government Code, Chapter 2007. The following is a summary of that analysis.

The specific purpose of the proposed rulemaking is to lessen demand for freshwater resources for water needs that do not require freshwater standards by adopting and implementing minimum standards for the indoor and outdoor use and reuse of treated graywater and alternative onsite water for irrigation, certain domestic uses, and agricultural, commercial, and industrial uses. All of which help to prevent a health and safety crisis due to a lack of water for drinking and other essential purposes. The proposed rulemaking substantially advances this stated purpose by proposing language

in amended Chapter 210 that expands the sources of water that can be reused by defining "alternative onsite water" and expands the allowable use and reuse of treated graywater and alternative onsite water to include toilet and urinal flushing.

Promulgation and enforcement of the proposed rules will not be a statutory or constitutional taking of private real property because, as the commission's analysis indicates, Texas Government Code, Chapter 2007 does not apply to these proposed rules because these rules do not impact private real property. In HB 1902, the legislature expressed that as Texans strive to more efficiently use increasingly scarce water resources, clarifying the existing standards and expanding the scope and uses of graywater and alternative onsite water, coupled with the new technologies and systems that have been created, expanding the possibilities for safe reuse of graywater on commercial, industrial, and domestic properties, graywater reuse can contribute to meeting state water needs and helping to prevent a lack of water for drinking and other essential purposes. The public has access to vast quantities of graywater as the public themselves are the producers of their own graywater. Specifically, the proposed rulemaking does not apply to or affect any landowner's rights in any private real property because it does not burden (constitutionally), restrict, or limit any landowner's right to real property or reduce any property's value by 25% or more beyond that which would otherwise exist in the absence of the regulations. For graywater, there are no real property rights that have been granted for use of an individual's own graywater. These actions will not affect or burden private real property rights because the graywater and alternative onsite water are generated onsite and used onsite by the same individual.

Even if there were real property rights issued for graywater produced by the public, the commission's analysis indicates that Texas Government Code, Chapter 2007, does not apply to these proposed rules because this is an action that is taken in response to a real and substantial threat to public health and safety; is designed to significantly advance the health and safety purpose; and does not impose a greater burden than is necessary to achieve the health and safety purpose. Thus, this action is exempt under Texas Government Code, §2007.003(b)(13). Lack of water for drinking and other essential purposes would be a health and safety crisis. This rulemaking could help to lessen the demand for freshwater resources for water needs that do not require freshwater standards, resulting in more drinking water and water for essential purposes.

Consistency with the Coastal Management Program

The commission reviewed the proposed rules and found that they are neither identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11(b)(2) or (4), nor will they affect any action/authorization identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11(a)(6). Therefore, the proposed rules are not subject to the Texas Coastal Management Program.

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

The commission will hold a public hearing on this proposal in Austin on August 16, 2016, at 2:00 p.m. in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Sandy Wong, Office of Legal Services, at (512) 239-1802 or 1-800-RELAY-TX (TDD). Requests should be made as far in advance as possible.

Submittal of Comments

Written comments may be submitted to Ms. Sherry Davis, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: <http://www1.tceq.texas.gov/rules/ecomments/>. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2015-028-210-OW. The comment period closes on August 22, 2016. Copies of the proposed rulemaking can be obtained from the commission's website at http://www.tceq.texas.gov/rules/propose_adopt.html. For further information, please

contact Laurie Fleet, Wastewater Permitting Section, (512) 239-5445.

SUBCHAPTER F: USE OF GRAYWATER AND ALTERNATIVE ONSITE WATER [SYSTEMS]

§§210.81 - 210.85

Statutory Authority

The amended sections are proposed under Texas Water Code (TWC), §5.013 and §5.102, which establish the commission's general jurisdiction and provides general powers of the commission over other areas of responsibility as assigned to the commission under the TWC; TWC, §5.103 and §5.105, require the commission to adopt any rule or policy necessary to carry out its powers and duties under the TWC and other laws of the state; TWC, §5.120, 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; and TWC, §26.011, 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 Texas Commission on Environmental Quality in the public interest. Lastly, Texas Health and Safety Code (THSC), §341.039, specifically directs the commission to adopt and implement rules related to the expanded use of graywater and alternative onsite water; specifically directs the commission to adopt and implement minimum standards for the indoor and outdoor use and reuse of treated graywater and alternative onsite water for irrigation, certain domestic uses, and agricultural, commercial, and industrial uses; and requires the commission to adopt rules relating to standards for control of graywater, graywater standards, and standards for alternative onsite water. Specific statutory authorization derives from House Bill (HB)

1902, which amended TWC, §26.0311, and THSC, §341.039 and §366.012(a), relating to Standards for Control of Graywater, Graywater Standards, and Rules Concerning On-Site Disposal Systems.

The amendments implement the statutory amendments of HB 1902.

§210.81. Applicability.

(a) This subchapter applies to graywater and alternative onsite water generated and used at a private residence, commercial facility, industrial facility, institution, or agriculture facility regardless of the disposal method for other wastewater [for irrigation and other agricultural purposes; for domestic use; for commercial purposes; for industrial purposes; and for institutional purposes].

(b) This subchapter does not apply to reclaimed [Reclaimed] water which [use] is regulated by Subchapters A - E of this chapter (relating to General Provisions; General Requirements for the Production, Conveyance, and Use of Reclaimed Water; Quality Criteria and Specific Uses for Reclaimed Water; Alternative and Pre-Existing Reclaimed Water Systems; and Special Requirements for Use of Industrial Reclaimed Water).

(c) This subchapter does not regulate the design, construction, or operation of on-site sewage facilities (OSSFs) but instead regulates the design, construction, and operation of alternative water reuse systems, combined reuse systems, and graywater reuse systems

that may be located at a site that uses an OSSE. [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.

(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, [;]

[(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 into contact with toilet waste.

(5) Graywater reuse system--a system designed and constructed to store and distribute graywater only. A graywater reuse system shall not contain, store, or distribute any source of alternative onsite water.

(b) Alternative water reuse systems. The following requirements apply to alternative water reuse systems used at a private residence, industrial facility, commercial facility, institution, or agriculture facility.

(1) Water from an alternative water reuse system may be reused for beneficial purposes including but not limited to landscape irrigation, gardening, composting, foundation stabilization, and toilet and urinal flushing. An alternative water reuse system may store and use either a single source or a combination of sources of alternative onsite water, and in any volume.

(2) Reverse osmosis reject water generated at an industrial facility, commercial facility, or an institution is prohibited from being stored and used in an

alternative water reuse system. Reverse osmosis reject water generated by an industrial facility, commercial facility, or an institution is regulated by Subchapter E of this chapter.

(3) Reuse of water from an alternative water reuse system does not require authorization from the commission if used in accordance with this subchapter. The property owner is responsible for ensuring that the alternative water reuse system is properly operated and maintained to comply with the requirements of this subchapter.

(4) Water from an alternative water reuse system must be applied at a rate that will not result in ponding or pooling, or cause runoff across the property lines or onto any paved surface.

(5) Water from an alternative onsite reuse system shall not be disposed of using a spray distribution system.

(6) The storage and use of water from an alternative water reuse system must not create a nuisance, threaten human health, or damage the quality of surface water or groundwater.

(7) Swimming pool backwash and drain water cannot be used within five days of adding chemicals for shock or acid treatment.

(8) Water from an alternative water reuse system that is used for toilet or urinal flushing must meet the following requirements. Property owners may refer to the regulatory guidance document that is required by the Texas Health and Safety Code, §341.039, for assistance in complying with these requirements.

(A) For residential toilet or urinal flushing, *Escherichia coli* (*E. coli*) must be less than 14 most probable number (MPN) per 100 milliliters for 30-day geometric mean and less than 240 MPN per 100 milliliters maximum single grab sample. For industrial, commercial, industrial, or agricultural toilet or urinal flushing, *E. coli* must be less than 2.2 MPN per 100 milliliters for 30-day geometric mean and less than 200 MPN per 100 milliliters maximum single grab sample.

(B) Total suspended solids must be less than 10.0 milligrams per liter for 30-day geometric mean and less than 30.0 milligrams per liter maximum single grab sample.

(C) All exposed piping and piping carrying alternative onsite water within a building must be either purple pipe or painted purple; all buried piping must be either manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple; and all exposed piping must be stenciled in yellow with a warning reading "NON-POTABLE WATER." An alternative water reuse system that stores only rainwater, commonly referred to as a rainwater harvesting system, and uses the water for potable

purposes in accordance with §290.44 of this title (relating to Water Distribution) is exempt from this subparagraph.

(9) An alternative water reuse system cannot have a physical connection to an organized wastewater collection system an on-site sewage facility (OSSF). When the system reaches capacity, it is allowed to overflow onto the ground only if the overflow is caused by inflow of rainwater. Overflow under these conditions is exempt from the requirement of paragraph (4) of this subsection.

(10) An alternative water reuse system may be subject to backflow prevention requirements in §290.44 of this title to protect public water supply systems from cross-contamination.

(c) Graywater reuse systems and combined reuse systems. The following requirements apply to graywater reuse systems and combined reuse systems used at a private residence, industrial facility, commercial facility, institution, or agriculture facility.

(1) [(c)] Construction of a graywater reuse system or a combined reuse system, including storage and distribution [disposal] systems, must comply with this subchapter [chapter] and any requirements of the local permitting authority.

(2) Prior to construction of a graywater reuse system or a combined reuse system, the property owner must either notify the collection system owner and the wastewater treatment plant owner if the site is connected to an organized wastewater collection system or notify the OSSF permitting authority if the site uses an OSSF of their intent to construct such a system.

(3) Water from a graywater reuse system or a combined reuse system must be applied at a rate that will not result in ponding or pooling and will not cause runoff across the property lines or onto any paved surface.

(4) The storage and use of water from a graywater reuse system or a combined reuse system must not create a nuisance, threaten human health, or damage the quality of surface water or groundwater.

(5) A graywater reuse system or combined reuse system may be subject to backflow prevention requirements in §290.44 of this title to protect public water supply systems from cross-contamination.

(6) A combined reuse system must be designed so that alternative onsite water is not allowed to enter an organized wastewater collection system or an OSSF.

§210.83. Residential [Criteria for the Domestic] Use of Graywater and Alternative Onsite Water.

(a) An authorization from the commission is not required for the residential [domestic] use of graywater and alternative onsite water from a graywater reuse system or a combined reuse system when the total combined average is less than 400 gallons per day and the water is used in accordance with this subchapter. [of graywater each day if:]

(b) [(1)] The [the] graywater and alternative onsite water must originate [originates] from a private residence. [;]

(c) Water from a graywater reuse system or a combined reuse system may only be used at the private residence for the following purposes:

(1) to minimize foundation movement and cracking;

(2) for gardening;

(3) for composting;

(4) for landscaping; or

(5) for toilet or urinal flushing.

(d) Graywater reuse systems and combined reuse systems are not authorized to overflow onto the ground under any circumstance.

(1) [(2)] Graywater reuse systems must be [the graywater system is] designed and constructed so that the storage tank required by subsection (e) of this section overflows [100% of the graywater can be diverted] to an organized wastewater collection system or an on-site sewage facility (OSSF) that does not have a reduced effluent disposal system under §285.81 of this title (relating to Criteria for Disposal of Graywater). The graywater [during periods of non-use of the graywater system and the discharge from the graywater system] must enter the organized wastewater collection system or OSSF through two backflow [backwater] valves or backflow [backwater] preventers. [;]

(2) Combined reuse systems must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system or an OSSF that does not have a reduced effluent disposal system under §285.81 of this title, prior to entering the storage tank required by subsection (e) of this section. Graywater must be diverted to the organized wastewater collection system or OSSF during periods of non-use of the system or if the storage tank required by subsection (e) of this section reaches 80% capacity. The graywater must enter the organized wastewater collection system or the OSSF through two backflow valves or backflow preventers.

(3) Combined reuse systems that store stormwater, rainwater, and/or foundation drain water must have an automatic shutoff system to stop the inflow of

stormwater, rainwater, and foundation drain water into the combined reuse system. The automatic shutoff system must activate when the storage tank required by subsection (d) of this section reaches 80% capacity. [the graywater is stored in tanks and the tanks:]

(e) Except as authorized by subsection (j) of this section, graywater reuse systems and combined reuse systems must store the water in tanks and the tanks must:

(1) [(A)] be [are] clearly labeled as non-potable [nonpotable] water;

(2) [(B)] [must] restrict access, especially to children;

(3) [(C)] eliminate habitat for mosquitoes and other vectors;

(4) [(D)] be [are] able to be cleaned; and

(5) [(E)] meet the structural requirements of §210.25(i) of this title (relating to Special Design Criteria for Reclaimed Water Systems), [;]

(f) [(4)] Graywater reuse systems and combined reuse systems must use [the graywater system uses] piping that meets the piping requirement of §210.25 of this title, [;]

[(5) the graywater is applied at a rate that:]

[(A) will not result in ponding or pooling; or]

[(B) will not cause runoff across the property lines or onto any paved surface; and]

(g) [(6)] Water from a graywater reuse system or a combined reuse system shall not be [the graywater is not] disposed of using a spray distribution system.

(h) The property owner is responsible for ensuring that the graywater reuse system or combined reuse system is properly operated and maintained to achieve the following requirements. Property owners may refer to the regulatory guidance document that is required by the Texas Health and Safety Code, §341.039, for assistance in complying with these requirements.

(1) Graywater and alternative onsite water shall be treated to remove debris such as lint, leaves, twigs, and branches prior to entering the storage tank by use of a 50 mesh screen.

(2) Swimming pool backwash and drain water cannot be used within five days after adding chemicals for shock or acid treatment.

(3) Water from a graywater reuse system or a combined reuse system that is used for toilet or urinal flushing must meet the following requirements.

(A) *Escherichia coli* must be less than 14 most probable number (MPN) per 100 milliliters for 30-day geometric mean and less than 240 MPN per 100 milliliters maximum single grab sample.

(B) Total suspended solids must be less than 10.0 milligrams per liter for 30-day geometric mean and less than 30.0 milligrams per liter maximum single grab sample.

(C) All exposed piping and piping carrying graywater and/or alternative onsite water within a building must be either purple pipe or painted purple; all buried piping must be either manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple; and all exposed piping must be stenciled in yellow with a warning reading "NON-POTABLE WATER."

(i) [(b)] Builders of private residences are encouraged to:

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

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

[(c) 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;]

[(3) for composting; or]

[(4) for landscaping at the private residence.]

[(d) The graywater system must not create a nuisance or damage the quality of surface water or groundwater.]

[(j) [(e)] Property owners [Homeowners] who have been disposing of wastewater from residential clothes-washing machines, otherwise known as laundry graywater, directly onto the ground prior to January 6, 2005. [before the effective date of this rule] may continue disposing of laundry graywater under the following conditions.

(1) The disposal area must not create a [public health] nuisance or threaten human health.

(2) Surface ponding must not occur in the disposal area.

(3) The disposal area must support plant growth or be sodded with vegetative cover.

(4) The disposal area must have limited access and use by residents and pets.

(5) Laundry graywater that has been in contact with human or animal waste must not be disposed onto the ground surface.

(6) Laundry graywater must not be disposed onto [to] an area where the soil is wet.

(7) A lint trap must be affixed to the end of the discharge line.

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

(9) [(f)] The system has not been [Graywater systems that are] altered after January 6, 2005, has not created a nuisance, and does not [create a nuisance, or] discharge graywater from any source other than clothes-washing machines [are not authorized to discharge graywater under subsection (e) of this section].

§210.84. [Criteria for Use of Graywater for] Industrial, Commercial, or Institutional Use of Graywater and Alternative Onsite Water [Purposes].

(a) For the purposes of this section, alternative onsite water does not include reverse osmosis reject water, as this source of water is regulated by Subchapter E of this chapter (relating to Special Requirements for Use of Industrial Reclaimed Water).

(b) [(a)] An authorization from the commission is not required for the use of graywater and alternative onsite water from a graywater reuse system or a combined reuse system at an industrial facility, commercial facility, or institution. Treatment required by this section does not require authorization from the commission.
[Authorization. If used in accordance with this subchapter, graywater used for an industrial, commercial, or institutional purpose does not require authorization from the commission.]

(c) The graywater and alternative onsite water must be generated and used onsite.

(d) Graywater reuse systems and combined reuse systems are not authorized to overflow onto the ground under any circumstances.

(1) [(b)] Graywater reuse systems [used for industrial, commercial, or institutional purposes] must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system, on-site sewage facility (OSSF), authorized outfall in a wastewater discharge permit, or authorized disposal area in a Texas Land Application Permit (TLAP). The graywater must be diverted to the organized wastewater collection system, OSSF, authorized outfall in a wastewater discharge permit, or authorized disposal area in a TLAP during periods of non-use of the graywater reuse system or if the system reaches maximum capacity. The [discharge from the] graywater [system] must enter the organized wastewater system or OSSF through two backflow [backwater] valves or backflow [backwater] preventers.

(2) Combined reuse systems must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system, OSSF, authorized outfall in a wastewater discharge permit, or authorized disposal area in a TLAP prior to entering the combined reuse system. Graywater must be diverted to the organized wastewater collection system, OSSF, authorized outfall in a wastewater discharge permit, or authorized disposal area in a TLAP during periods of non-use of the system or if the combined reuse system reaches 80% capacity. The graywater must enter the organized wastewater collection system or the OSSF through two backflow valves or backflow preventers.

(3) Combined reuse systems that store stormwater, rainwater, and/or foundation drain water must have an automatic shutoff system to stop the inflow of stormwater, rainwater, and foundation drain water into the combined reuse system. The automatic shutoff system must activate when the combined reuse system reaches 80% capacity.

(e) [(c)] Water from a graywater reuse system or a combined reuse system [Graywater, as defined in §210.82(a) of this title (relating to General Requirements),] may be used onsite for the following activities.

(1) Process water.

[(A)] Water from a graywater reuse system or a combined reuse system that is used for process water [Graywater used for industrial, commercial, or institutional purposes] must be treated to a standard that allows the water [graywater] to be used in operational processes.

[(B)] Treatment described in subparagraph (A) of this paragraph does not require an authorization from the agency.]

(2) Landscape maintenance. Water from a graywater reuse system or a combined reuse system that [If graywater] is used for landscape maintenance [, the graywater] must meet the following limits [standards].

(A) If the water [graywater] will be applied in areas with public access [where the public may come into contact with the graywater], the water [graywater] must meet the following limits [standards]:

(i) *Escherichia coli* (*E. coli*) [Fecal coliform], 20 colony forming units (CFU)/100 milliliters [milliliters] (ml), geometric mean; or

(ii) *E. coli* [Fecal coliform] (not to exceed), 75 CFU/100 ml, single grab sample.

(B) If the water [graywater] will be applied in areas with restricted access to the public [where the public is not present during the time when irrigation activities occur or disposed of for other uses where the public would not come into contact with the graywater], the water [graywater] must meet the following limits [standards]:

(i) *E. coli* [Fecal coliform], 200 CFU/100 ml, geometric mean; or

(ii) *E. coli* [Fecal coliform] (not to exceed), 800 CFU/100 ml, single grab sample.

(3) Dust control. Water from a graywater reuse system or a combined reuse system that [If graywater] is used for dust control [, the graywater] must meet the *E. coli* limits [standards] in paragraph (2)(B) of this subsection.

(4) Toilet or urinal flushing. Water from a graywater reuse system or a combined reuse system that [If graywater] is used for toilet or urinal flushing must meet the following requirements. [:]

(A) *E. coli* must be less than 2.2 most probable number (MPN) per 100 ml for 30-day geometric mean and less than 200 MPN per 100 ml maximum single grab sample. [the fecal coliform levels must meet the limits in paragraph (2)(A) of this subsection; and]

(B) Total suspended solids must be less than 10.0 milligrams per liter for 30-day geometric mean and less than 30.0 milligrams per liter maximum single grab sample.

(C) (B) All [all] exposed piping and piping carrying graywater and/or alternative onsite water within a building must be either purple pipe or painted purple; all buried piping installed after January 6, 2005, [the effective date of these rules] must be

either manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple; and all exposed piping must be stenciled in yellow [white] with a warning reading "NON-POTABLE WATER."

(5) Other uses. Water from a graywater reuse system or a combined reuse system that [If graywater] is used for other similar activities [where the potential for unintentional human exposure may occur, the graywater] must:

(A) meet the *E. coli* [fecal coliform] limits in paragraph (2)(A) of this subsection if used in a way that the public may come into contact with the water; or [.]

(B) meet the *E. coli* limits in paragraph (2)(B) of this subsection if used in a way that the public will not come into contact with the water.

(f) [(d)] Water from a graywater reuse system or a combined reuse system that is required to meet the *E. coli* limits in subsection (d)(2)(A) of this section [Graywater used for commercial, industrial, or institutional purposes] must be monitored for *E. coli* [fecal coliform] at least monthly. [in areas where the public may come into contact with graywater and these] These records must be maintained at the site and [. These records must] be readily available for inspection by the commission for a minimum of five years.

§210.85. Agricultural [Criteria for] Use of Graywater and Alternative Onsite Water [for Irrigation and for Other Agricultural Purposes].

(a) An authorization from the commission is not required for the use of graywater and alternative onsite water from a graywater reuse system or a combined reuse system for agricultural purposes. Treatment required by this section does not require authorization from the commission. [If used in accordance with this subchapter, graywater used for irrigation and other agricultural purposes does not require authorization from the commission.]

(b) The graywater and alternative onsite water must be generated and used onsite.

(c) Graywater reuse systems and combined reuse systems are not authorized to overflow onto the ground under any circumstances.

(1) [(b)] Graywater reuse systems [used for irrigation and other agricultural purposes] must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system or on-site sewage facility (OSSF) that does not have a reduced effluent disposal system under §285.81 of this title (relating to Criteria for Disposal of Graywater). The graywater must be diverted during periods of non-use of the graywater reuse system or if the system reaches maximum capacity. The [discharge from the] graywater [system] must enter the organized wastewater collection system or OSSF through two backflow [backwater] valves or backflow [backwater] preventers.

(2) Combined reuse systems must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system or OSSF that does not have a reduced effluent disposal system under §285.81 of this title prior to entering the combined reuse system. Graywater must be diverted to the organized wastewater collection system or OSSF during periods of non-use of the system or if the combined reuse system reaches 80% capacity. The graywater must enter the organized wastewater collection system or the OSSF through two backflow valves or backflow preventers.

(3) Combined reuse systems that store stormwater, rainwater, and/or foundation drain water must have an automatic shutoff system to stop the inflow of stormwater, rainwater, and foundation drain water into the combined reuse system. The automatic shutoff system must activate when the combined reuse system reaches 80% capacity.

(d) [(c)] Water from a graywater reuse system or a combined reuse system [Graywater, as defined in §210.82(a) of this title (relating to General Requirements),] may be used for the following activities.

(1) Process water.

[(A)] Water from a graywater reuse system or a combined reuse system that is [Graywater] used for irrigation and other agricultural purposes may be treated to a standard that allows the water [graywater] to be used in operational processes.

[(B)] Treatment described in subparagraph (A) of this paragraph does not require an authorization from the commission.]

(2) Landscape maintenance. Water from a graywater reuse system or a combined reuse system that [If graywater] is used for landscape maintenance [, the graywater] must meet the following limits [standards].

(A) If the water [graywater] will be applied in areas with public access [where the public may come into contact with the graywater], the water [graywater] must meet the following limits [standards]:

(i) Escherichia coli (E. coli) [Fecal coliform], 20 colony forming units (CFU)/100 milliliters [milliliters] (ml), geometric mean; or

(ii) E. coli [Fecal coliform] (not to exceed), 75 CFU/100 ml, single grab sample.

(B) If the water [graywater] will be applied in areas with restricted access to the public [where the public is not present during the time when irrigation

activities occur or disposed of for other uses where the public would not come into contact with the graywater], the water [graywater] must meet the following limits [standards]:

(i) *E. coli* [Fecal coliform], 200 CFU/100 ml, geometric mean; or

(ii) *E. coli* [Fecal coliform], 800 CFU/100 ml, single grab sample.

(3) Dust control. Water from a graywater reuse system or a combined reuse system that [If graywater] is used for dust control [, the graywater] must meet the *E. coli* limits [standards] in paragraph (2)(B) of this subsection.

(4) Irrigation of fields. Water from a graywater reuse system or a combined reuse system that [If graywater] is used to irrigate fields where edible crops are grown or fields that are pastures for milking animals, the water [graywater] must meet the *E. coli* limits [standards] in paragraph (2)(A) of this subsection. *E. coli* limits do not apply to graywater and alternative onsite water that is used to irrigate fields other than those where edible crops are grown or fields that are pastures for milking animals.

(5) Toilet or urinal flushing. Water from a graywater reuse system or a combined reuse system that is used for toilet or urinal flushing must meet the following requirements.

(A) *E. coli* must be less than 2.2 MPN per 100 ml for 30-day geometric mean and less than 200 MPN per 100 ml maximum single grab sample.

(B) Total suspended solids must be less than 10.0 milligrams per liter for 30-day geometric mean and less than 30.0 milligrams per liter maximum single grab sample.

(C) All exposed piping and piping carrying graywater and/or alternative onsite water within a building must be either purple pipe or painted purple; all buried piping must be either manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple; and all exposed piping must be stenciled in yellow with a warning reading "NON-POTABLE WATER."

(6) [(5)] Other uses. Water from a graywater reuse system or a combined reuse system that [If graywater] is used for other similar activities [where the potential for unintentional human exposure may occur, the graywater] must:

(A) meet the *E. coli* [fecal coliform] limits in paragraph (2)(A) of this subsection if used in a way that the public may come into contact with the water; or [.]

(B) meet the *E. coli* limits in paragraph (2)(B) of this subsection if used in a way that the public will not come into contact with the water.

(e) [(d)] Water from a graywater reuse system or a combined reuse system that is required to meet the *E. coli* limits in subsection (d)(2)(A) of this section [Graywater used for irrigation and for other agricultural purposes] must be monitored for *E. coli* [fecal coliform] at least monthly, [in areas where the public may come into contact with graywater and the] These records must be maintained at the site and [. These records must] be readily available for inspection by the commission for a minimum period of five years.

The Texas Commission on Environmental Quality (TCEQ, agency, or commission) proposes to amend §285.80; the repeal of §285.81; and new §285.81.

Background and Summary of the Factual Basis for the Proposed Rules

House Bill (HB or bill) 1902, 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 TCEQ 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.

The bill requires amendments to 30 TAC Chapter 210, Use of Reclaimed Water, and Chapter 285. The proposed rules allow for a reduction in the OSSF drainfield size if the OSSF is used in conjunction with a graywater reuse system, move all graywater reuse to Chapter 210, authorize toilet and urinal flushing as an additional reuse of graywater, authorize the reuse of alternative onsite water, establish uses of and treatment standards for alternative onsite water similar to graywater, incorporate nationally recognized treatment standards for graywater and alternative onsite water when used for toilet and urinal flushing, and revise bacteria limits from fecal coliform to *Escherichia coli* (*E. coli*).

HB 1902 retains the existing prohibition on the commission requiring a permit for the residential use of less than 400 gallons of graywater, and adds use of less than 400 gallons of alternative onsite water to the prohibition.

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

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

A corresponding rulemaking is published in this issue of the *Texas Register* concerning

Chapter 210, Subchapter F, Use of Graywater Systems.

Section by Section Discussion

§285.80, General Requirements

The proposed rule adds language to use terms for graywater reuse systems and combined reuse systems that are consistent with the proposed amendments to Chapter 210, Subchapter F, in a concurrent rulemaking.

Proposed §285.80(b) adds a requirement that a graywater reuse system must also comply with Chapter 210, Subchapter F since the rules for those systems have been moved to that chapter.

The proposed amendment moves existing §285.81(g) to §285.80(c).

Proposed §285.80(d) requires existing graywater systems to continue to comply with the rules as the rules existed when the graywater system installation was completed. Any alterations to existing graywater systems must meet the requirements of the current rules.

Proposed §285.80(e) prohibits a reduction to OSSFs when using graywater reuse systems unless the OSSF meets the requirements of §285.81.

Proposed §285.80(f) allows only OSSFs permitted for graywater to be connected to a

graywater or combined reuse system. The proposed rule allows a combined reuse system to be connected to an OSSF permitted for graywater only and requires the alternative onsite water to be diverted prior to the connection. The proposed rule prohibits an alternative water reuse system from being connected to an OSSF. The proposed rule provides the piping requirements for connecting graywater to an OSSF.

§285.81, Criteria for Disposal of Graywater

The commission proposes to repeal §285.81 and replace it with a proposed new §285.81. The requirements of the repealed section are being incorporated into Chapter 210, Subchapter F, in a concurrent rulemaking.

Proposed new §285.81 is titled, "OSSF Reduction for Single Family Residences with a Graywater Reuse System or Combined Reuse System." Proposed new §285.81 provides technical requirements for the design, permitting, and operation of OSSFs serving single family residences which have a reduction based on the presence of a graywater reuse system or a combined reuse system. The proposed rule is limited to single family residences based on the limitations of statutory language in THSC, §366.012(a)(2)(B). Additionally, from a technical perspective, graywater generation proportions from a residence are relatively well understood and defined. However, non-residence proportions of graywater are not as well defined and are subject to varying patterns of wastewater generation over time as building activity changes. This uncertain nature of present and future graywater generation in non-residences does not lend itself to OSSF reductions.

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 BOD₅) and all graywater sources have no BOD₅ concentration.

Proposed new §285.81(e) and (f) establish the qualifications needed to design OSSFs in this section and the BOD₅ effluent quality that must be achieved by the reduced OSSF. The requirements are consistent with previously adopted sections of Chapter 285.

Proposed new §285.81(g) requires property owners to set aside an area for future OSSF expansion should the property owner abandon the graywater or combined reuse system at a later date or if required by the OSSF permitting authority to expand the OSSF. The area must meet the setbacks required by §285.91(10) and shall not be used for surface improvements.

Proposed new §285.81(h) prohibits property owners from applying graywater or alternative onsite water to the surface of their reduced OSSF disposal field. This action can overload the OSSF disposal area.

Proposed new §285.81(i) prohibits any physical connection between the graywater or combined reuse system and the OSSF since the OSSF is not designed to receive graywater.

Proposed new §285.81(j) requires three days of graywater storage when a graywater or combined reuse system is used in combination with a reduced OSSF. The requirement for storage is necessary so the property owner will not apply graywater during saturated landscape conditions.

Proposed new §285.81(k) provides a mechanism to alert buyers, upon transfer of the property, of the limitations of the OSSF and their responsibilities for operating the OSSF and the graywater or combined reuse system.

Proposed new §285.81(l) requires that, at the discretion of the OSSF permitting authority,

a property owner convicted or found in violation of any statute for improperly operating their graywater or combined reuse system shall expand their OSSF and have it permitted to dispose of graywater.

Fiscal Note: Costs to State and Local Government

Jeffrey Horvath, Analyst in the Chief Financial Officer Division, determined that for the first five-year period the proposed rules are in effect, no fiscal implications are anticipated for the agency and for other units of state or local government as a result of the administration or enforcement of the proposed rules.

The proposed rules would implement HB 1902, 84th Texas Legislature, 2015. The bill requires TCEQ to develop standards to allow the reuse of graywater for toilet and urinal flushing. The bill also creates a new regulatory classification for "alternative onsite water" which is defined 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 allows an adjustment in the drainfield size of an OSSF if used in conjunction with a graywater reuse system and requires TCEQ to develop a regulatory guidance manual to explain the graywater and alternative onsite water regulations.

The commission proposes to repeal §285.81 and replace it with a new §285.81. The requirements of the repealed section are proposed to be incorporated into Chapter 210, Subchapter F in a concurrent rulemaking. The proposed new §285.81 provides technical requirements for the design, permitting, and operation of OSSFs serving single family residences which have a reduction based on the presence of a graywater reuse system or a combined reuse system. The proposed rule is limited to single family residences based on the limitations of statutory language in THSC, §366.012(a)(2)(B).

There are no additional permits required by the proposed rulemaking. A permit will be issued for the OSSF no matter whether the homeowner applies for a reduced OSSF or chooses a non-reduced OSSF. Any permits or inspections by local authorities will be similar for either a reduced or non-reduced OSSF. Therefore, no fiscal implications are anticipated for the agency or other units of state and local government.

The proposed rulemaking offers an option of a reduced OSSF if a single family residential property owner has a graywater system which is in compliance with Chapter 210, Subchapter F. This is strictly an option to the property owner and, therefore, will not result in required additional costs.

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

Public Benefits and Costs

Mr. Horvath also determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rulemaking will be compliance with state law and the potential for a reduction in the demand for potable water that could assist the state in meeting future water supply needs.

No fiscal implications are anticipated for businesses or individuals as a result of the administration and enforcement of the proposed rules. The proposed rulemaking provides for the operation of a reduced OSSF as an option for certain private single family OSSF owners.

Proposed new §285.81 provides technical requirements for the design, permitting, and operation of OSSFs serving single family residences which have a reduction based on the presence of a graywater reuse system or a combined reuse system. The proposed rule is limited to single family residences based on the limitations of statutory language in THSC, §366.012(a)(2)(B).

Small Business and Micro-Business Assessment

No adverse fiscal implications are anticipated for small or micro-businesses as a result of the proposed rules. The proposed rules do not impose any new requirements for any business or individual. The design, permitting, and operation of OSSFs serving single family residences which have a reduction based on the presence of a graywater reuse

system or a combined reuse system is optional. If a business or individual wants to reuse alternative onsite water or graywater and reduce the drainfield for their OSSF, they would be required to comply with the requirements in the proposed rules.

Small Business Regulatory Flexibility Analysis

The commission reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules are necessary in order to comply with state law and are not expected to result in adverse fiscal implications for small or micro-businesses.

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

TCEQ reviewed the proposed rulemaking in consideration of the regulatory analysis of major environmental rules required by Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to Texas Government Code, §2001.0225(a) because it does not meet the definition of a "major environmental rule" as defined in Texas Government Code, §2001.0225(g)(3). The following is a summary of that review.

Texas Government Code, §2001.0225 applies to a "major environmental rule" adopted by a state agency, the result of which is to exceed standards set by federal law, exceed express requirements of state law, exceed requirements of delegation agreements between the state and the federal government to implement a state and federal program, or adopt a rule solely under the general powers of the agency instead of under a specific state law. A "major environmental rule" is 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.

As the Author's/Sponsor's Statement of Intent makes clear, the 84th Texas Legislature, 2015, 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. By updating decades-old statutory provisions governing graywater disposal and reuse with new technologies and systems that expand the possibilities for safe reuse of graywater on commercial, industrial, and domestic properties, the statutory changes from HB 1902 would ideally result in less demand for freshwater resources for water needs that do not require freshwater standards. More specifically, the Statement of Intent articulates that "by clarifying the existing {Texas Health and Safety Code (THSC)} standards and expanding the scope and uses of graywater and alternative onsite water {and ensuring that the Texas Water Code conforms to these changes}, C.S.H.B. 1902 could act as another part of the solution to Texas' water challenges."

To encourage the use of graywater systems, which helps to prevent a health and safety crisis due to a lack of water for drinking and other essential purposes, HB 1902 amends the THSC to direct TCEQ to adopt rules that allow for an adjustment in the size of a drainfield of an OSSF if used in conjunction with a graywater reuse system. Additionally, the proposed rulemaking adds language to §285.80 for terms for graywater reuse systems and combined reuse systems that are consistent with proposed amendments in a concurrent rulemaking involving Chapter 210, Subchapter F. As part of the same rulemaking, the commission proposes to repeal §285.81 and replace it with a new §285.81. The requirements of the repealed section are being incorporated into Chapter 210, Subchapter F, in a concurrent rulemaking.

Therefore, the specific intent of the proposed rulemaking, which amends and repeals TCEQ rules, is to implement the legislative amendments in HB 1902, which eliminates duplicate provisions with other chapters in the title, and requires the commission to adopt rules to allow an adjustment in the size of a drainfield of an OSSF if used in conjunction with a graywater or combined reuse system. All of which aim to prevent a health and safety crisis due to a lack of water for drinking and other essential purposes. The proposed 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. Accordingly, the commission concludes that the proposed rulemaking does not meet the definition of a "major environmental rule."

Even if this rulemaking was a "major environmental rule," this rulemaking meets none of the criteria in Texas Government Code, §2001.0225, for the requirement to prepare a full Regulatory Impact Analysis. First, this rulemaking is not governed by federal law. Second, it does not exceed state law but rather creates new minimum standards and corresponding processes under state law to ensure efficient regulatory oversight, while comprehensively protecting the state's natural resources. Third, it does not come under a delegation agreement or contract with a federal program, and finally, it is not being proposed under the TCEQ's general rulemaking authority. This rulemaking is being proposed under a specific piece of state legislation from HB 1902, Texas Legislature, 2015, which directs TCEQ to undertake this rulemaking in an effort to reasonably fulfill an obligation mandated by state law to implement the OSSF program under THSC, Chapter 366.

Therefore, the commission does not adopt the rule solely under the commission's general powers. The commission invites public comment on the Draft Regulatory Impact Analysis Determination.

Written comments on the Draft Regulatory Impact Analysis Determination may be submitted to the contact person at the address listed under the Submittal of Comments section of this preamble.

Takings Impact Assessment

TCEQ evaluated the proposed rulemaking and performed an analysis of whether it constitutes a taking under Texas Government Code, Chapter 2007, which applies to governmental actions which affect private property. The following is a summary of that analysis.

The specific purpose of the proposed rulemaking is to implement the legislative amendments in HB 1902, which eliminates duplicate provisions with other chapters in 30 TAC and directs the commission to adopt rules to allow an adjustment in the size of a drainfield of an OSSF if used in conjunction with a graywater or combined reuse system. All of which aim to prevent a health and safety crisis due to a lack of water for drinking and other essential purposes. The proposed rulemaking substantially advances this stated purpose by proposing language in amended Chapter 285 to expand and encourage the allowable indoor and outdoor use and reuse of treated graywater and alternative onsite water by allowing for a reduction in the size of an OSSF's drainfield.

Promulgation and enforcement of the proposed rules will not be a statutory or constitutional taking of private real property because, as the commission's analysis indicates, Texas Government Code, Chapter 2007, does not apply to these proposed rules because the rules do not impact private real property. Additionally, the public has access to vast quantities of graywater as the public themselves are the producers of their own graywater. Specifically, the proposed rulemaking does not apply to or affect any landowner's rights in any private real property because it does not burden

(constitutionally), restrict, or limit any landowner's right to real property or reduce any property's value by 25% or more beyond that which would otherwise exist in the absence of the regulations. For graywater, there are no real property rights that have been granted for use of an individual's own graywater. These actions will not affect or burden private real property rights because the graywater and alternative onsite water are generated onsite and used onsite by the same individual.

Even if there were real property rights issued for graywater produced by the public, the commission's analysis indicates that Texas Government Code, Chapter 2007, does not apply to these proposed rules. Texas Government Code, §2007.003(b)(4), (11)(B), and (13)(A) - (C) state that the chapter does not apply to governmental actions reasonably taken to fulfill an obligation mandated by state law, to regulate OSSF, to respond a real and substantial threat to public health and safety, to significantly advance the health and safety purpose, and to not impose a greater burden than is necessary to achieve the health and safety purpose. All of the above exemptions apply to the proposed rulemaking. This rulemaking is proposed pursuant to the specific requirements of THSC, Chapter 366, which requires the commission to adopt rules to protect the environment and the health and safety of Texas citizens by encouraging use of graywater or combined reuse systems by amending the OSSF regulations to allow for a reduction in the size of an OSSF's drainfield. The proposed rulemaking encourages the use of graywater or combined reuse systems to respond to a real and substantial threat to public health and safety in the form of a lack of water for drinking and other essential purposes and encouraging use of graywater or combined reuse systems advances a health and safety purpose by

making efforts to address Texas' water challenges. Finally, the proposed rulemaking imposes no greater burden than is necessary to achieve the health and safety purpose, the proposed rules are similar to the predecessor rules for OSSFs and do not establish a greater burden for most types of systems. Because this is an action that is taken in response to a real and substantial threat to public health and safety; is designed to significantly advance the health and safety purpose; and does not impose a greater burden than is necessary to achieve the health and safety purpose, this action is exempt according to the provisions of Texas Government Code, §2007.003. Lack of water for drinking and other essential purposes would be a health and safety crisis. This rulemaking could help to lessen the demand for freshwater resources for water needs that do not require freshwater standards, resulting in more drinking water and water for essential purposes.

Consistency with the Coastal Management Program

The commission reviewed the proposed rulemaking and found that the rulemaking 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 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 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.

The specific CMP policies applicable to these proposed rules include Nonpoint Source Water Pollution and require, under the THSC, Chapter 366 (governing on-site sewage disposal systems) 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 proposed rules will ensure that OSSFs will perform properly when receiving only blackwater and, therefore, the rules are consistent with the CMP policies.

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 proposed rules do not relax current treatment or disposal standards.

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

The commission will hold a public hearing on this proposal in Austin on August 16, 2016, at 2:00 p.m. in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Sandy Wong, Office of Legal Services at (512) 239-1802 or 1-800-RELAY-TX (TDD). Requests should be made as far in advance as possible.

Submittal of Comments

Written comments may be submitted to Ms. Sherry Davis, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: <http://www1.tceq.texas.gov/rules/ecomments/>. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2015-028-210-OW. The comment period closes on August 22, 2016. Copies of the proposed rulemaking can be obtained from the commission's website at http://www.tceq.texas.gov/rules/propose_adopt.html. For further information, please

contact James McCaine, Program Support Section, (512) 239-4777.

SUBCHAPTER H: DISPOSAL OF GRAYWATER

§285.80 and §285.81

Statutory Authority

The amended section and new section are proposed under Texas Water Code (TWC), §5.013 and §5.102, which establish the commission's general jurisdiction and provides general powers of the commission over other areas of responsibility as assigned to the commission under the TWC; TWC, §5.103 and §5.105, which require the commission to adopt any rule or policy necessary to carry out its powers and duties under the TWC and other laws of the state; 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; and 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 Texas Commission on Environmental Quality in the public interest. Lastly, Texas Health and Safety Code (THSC), §341.039 and §366.012, which specifically direct the commission to adopt and implement rules related to the expanded use of graywater and alternative onsite water; THSC, §341.039, which directs the commission to adopt and implement minimum standards for the indoor and outdoor use and reuse of treated graywater and alternative onsite water; THSC, §366.012, which directs the commission to adopt rules to allow for an adjustment in the size required of an on-site sewage disposal system if the system is used in conjunction with a graywater or combined reuse system that complies

with the rules adopted under THSC, §341.039; and THSC, §366.011, which establishes the commission's authority over the location, design, construction, installation, and proper functioning of on-site sewage disposal systems.

The sections are adopted under the authority granted to the TCEQ by the Texas Legislature in THSC, Chapter 366. Specific statutory authorization derives from House Bill (HB) 1902, which amended TWC, §26.0311, and THSC, §341.039 and §366.012(a), relating to Standards for Control of Graywater, Standards for Graywater and Alternative Onsite Water, and Rules Concerning On-Site Disposal Sewage Disposal Systems.

The amendments implement the statutory amendments of HB 1902.

§285.80. General Requirements.

(a) For the purpose of this chapter, graywater [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.

[(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 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).

(d) A graywater reuse 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. Any alterations to an existing system must comply with this chapter; Chapter 210, Subchapter F of this title; and any more stringent requirements of the local permitting authority.

(e) No reduction in the size of the on-site sewage facility (OSSF) will be allowed when using a graywater reuse system unless the OSSF meets the conditions and requirements of §285.81 of this title (relating to Criteria for Disposal of Graywater).

(f) If the OSSF has been permitted to receive graywater from a facility and is not a reduced OSSF as described in §285.81 of this title, the graywater from either a graywater reuse system or a combined reuse system authorized under Chapter 210, Subchapter F of this title may, be connected to the OSSF to dispose of the graywater during periods when graywater is not being reused. If the reuse system is a combined reuse system as defined under Chapter 210, Subchapter F of this title, the flows from alternative onsite water sources must be diverted and shall not be allowed to enter the OSSF. Alternative water reuse systems as defined in Chapter 210, Subchapter F of this title, shall not be connected to the OSSF as OSSFs are not authorized nor designed to treat or dispose of flows from alternative onsite water sources. The piping connecting the graywater to the OSSF shall meet the applicable requirements of Subchapter D of this chapter (relating to Planning, Construction, and Installation Standards for 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 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

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

<u>Clothes-washing machine only</u>	<u>20</u>
<u>Showers, bathtubs, hand-washing lavatories, and sinks that are not used for the disposal of hazardous or toxic ingredients</u>	<u>30</u>
<u>Clothes-washing machines, showers, bathtubs, hand-washing lavatories, and sinks that are not used for the disposal of hazardous or toxic ingredients</u>	<u>50</u>

(c) Verification of plumbing entering the OSSF. A licensed master plumber shall document which sewage sources will be entering the OSSF. The documentation must be sealed, dated, and signed and be provided with the planning materials submitted to the OSSF permitting authority.

(d) Increased wastewater strength. When graywater is removed from the total sewage stream, the remaining sewage stream entering the OSSF will have a higher organic strength. The resulting increase in sewage strength shall be determined in accordance with Table II in Figure: 30 TAC §285.81(d) of this section.

Figure: 30 TAC §285.81(d)

Table II. Adjusted Organic Strength

<u>Sewage sources entering a graywater reuse system or a</u>	<u>Five-day Biochemical Oxygen Demand (BOD₅)</u>
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<u>combined reuse system</u>	<u>design strength for sewage entering on-site sewage facilities milligrams per liter (mg/l)</u>
<u>Clothes-washing machine only</u>	<u>375</u>
<u>Showers, bathtubs, hand-washing lavatories, and sinks that are not used for the disposal of hazardous or toxic ingredients</u>	<u>430</u>
<u>Clothes-washing machines, showers, bathtubs, hand-washing lavatories, and sinks that are not used for the disposal of hazardous or toxic ingredients</u>	<u>600</u>

(e) If the effluent disposal system does not require secondary treatment, either a professional sanitarian or a professional engineer shall demonstrate that the proposed treatment system will reduce the effluent quality down to 140 milligrams per liter five-day biochemical oxygen demand (mg/l BOD₅) prior to entering the effluent disposal system.

(f) If the effluent disposal system requires secondary treatment, then a professional engineer shall demonstrate that the proposed treatment system will reduce the effluent quality to the levels outlined in §285.32(e) of this title (relating to Criteria for Sewage Treatment Systems).

(g) If the effluent disposal system is reduced based on the presence of a graywater

reuse system or a combined reuse system, a reserve area equivalent to the reduced area shall be shown to be available for future construction of a disposal field should the graywater reuse system or combined reuse system be abandoned at a later date. The reserve area shall meet the setbacks required by §285.91(10) of this title (relating to Tables) and shall not be used for any surface improvements.

(h) Graywater or alternative onsite water, as defined in Chapter 210, Subchapter F of this title, shall not be applied to the surface of a reduced effluent disposal system.

(i) The reduced effluent disposal system is not sized to accommodate graywater. Therefore, there shall not be any physical connection between the graywater reuse system or the combined reuse system and any part of the OSSF without authorization from the OSSF permitting authority.

(j) In addition to the requirements outlined in Chapter 210, Subchapter F of this title, a graywater reuse system or a combined reuse system used in association with a reduced effluent disposal system under this section must have a storage tank capable of storing a volume of three days of graywater. The storage is necessary to prevent application of graywater during periods when the landscape is saturated.

(k) Before a license to operate is issued for a reduced effluent disposal system allowed under this section, an affidavit shall be properly filed and recorded in the deed records of the county. The affidavit must include the owner's full name, the legal

description of the property, a statement that the permit for the OSSF is transferred to the new owner upon transfer of the property, a statement that the effluent disposal system is reduced due to the presence of a graywater reuse system or a combined reuse system, a statement that the specified reserve area shall not contain surface improvements, and a statement that the graywater reuse system or combined reuse system cannot be connected to the OSSF without obtaining a permit from the OSSF permitting authority.

(l) If the property owner of a graywater reuse system or a combined reuse system on a property served by a reduced effluent disposal system is convicted under or found in violation of any statute for improperly operating the graywater reuse system or combined reuse system, the OSSF permitting authority may require the graywater to be connected to the OSSF. If the OSSF permitting authority requires the graywater to be connected to the OSSF, the effluent disposal system must be expanded to accommodate all the flow required in §285.91(3) of this title, and the expansion must be permitted by the OSSF permitting authority.

SUBCHAPTER H: DISPOSAL OF GRAYWATER

[§285.81]

Statutory Authority

The repeal is proposed under Texas Water Code (TWC), §5.013 and §5.102, which establish the commission's general jurisdiction and provides general powers of the commission over other areas of responsibility as assigned to the commission under the TWC; TWC, §5.103 and §5.105, which require the commission to adopt any rule or policy necessary to carry out its powers and duties under the TWC and other laws of the state; 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; and 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. Lastly, Texas Health and Safety Code (THSC), §341.039 and §366.012, which specifically direct the commission to adopt and implement rules related to the expanded use of graywater and alternative onsite water; THSC, §341.039, which directs the commission to adopt and implement minimum standards for the indoor and outdoor use and reuse of treated graywater and alternative onsite water; 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 directs the commission to adopt rules to allow for an adjustment in the

size required of an on-site sewage disposal system if the system is used in conjunction with a graywater or combined reuse system that complies with the rules adopted under THSC, §341.039 and 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 (HB) 1902, which amended TWC, §26.0311, and THSC, §341.039 and §366.012(a).

The repeal implements the statutory amendments of HB 1902.

[§285.81. Criteria for Disposal of Graywater.]

[(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 backwater valves or backwater 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;]

[(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 must 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 from residential clothes-washing machines, otherwise known as laundry graywater, directly onto the ground prior to the effective date of this rule, may continue this discharge 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 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 shall not be discharged to an area where 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.]