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

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

§210.81, Applicability

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

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

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

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

§210.82, General Requirements

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

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

The definition of "Alternative onsite water" in §210.82(a)(1) includes the same sources of water that are in the definition provided in THSC, §341.039(e), except cooling tower blowdown. The 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) limit 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 improves 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 OSSF. The design, construction, and operation of OSSFs are regulated by Chapter 285 of this title (relating to On-Site Sewage Facilities). [For the purpose of this subchapter, the term "Site" has the same meaning as defined in Chapter 305, Subchapter A of this title (relating to General Provisions).]

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

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

§210.82. Definitions and General Requirements.

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

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

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

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

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

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

[(1)] showers, [;]

[(2)] bathtubs, [;]

[(3)] handwashing lavatories, [;]

[(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 [mililiters] (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 [mililiters] (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.