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Chapter 285 - On-Site Sewage Facilities

Rule Project No. 2003-056-317-WT

The Texas Commission on Environmental Quality (commission or TCEQ) adopts amendments to §285.80 and §285.81. Section 285.81 is adopted *with change* to the proposed text as published in the

August 13, 2004 issue of the *Texas Register* (29 TexReg 7871). Section 285.80 is adopted *without*

*change* and the text will not be republished.

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

The legislature passed House Bill 346 in 1993 which required rules to be developed by the commission

and the Texas State Board of Plumbing Examiners for graywater use in Texas. The commission adopted rules under this chapter in June 2001 that allow water from clothes-washing machines as the

only graywater to be discharged without going through an on-site sewage facility (OSSF). Water from

other sources in a residence was not included in the use of graywater.

In 2003, the 78th Legislature passed House Bill 2661 which amended Texas Water Code (TWC), §26.0311, and Texas Health and Safety Code (THSC), §341.039 and §366.012. These amendments

modify the definition of graywater and require the commission to adopt and implement standards for the

use of graywater and to address the separation of graywater in a residence served by an OSSF system.

To implement this legislation, the commission concurrently amended 30 TAC Chapter 210, Use of

Reclaimed Water; Chapter 285; and 30 TAC Chapter 317; Design Criteria for Sewerage Systems.

Adopted amendments to Chapter 210 and Chapter 317 are also published in the Adopted Rules section

of this issue of the *Texas Register*.

#### SECTION BY SECTION DISCUSSION

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House Bill 2661 amended THSC, §341.039, Graywater Standards. THSC, §341.039(a), requires the

commission to adopt and implement minimum standards for the use and reuse of graywater.

Currently,

the commission's rules regarding graywater use and on-site sewage systems are in Chapter 285, Subchapter H. The commission modified Subchapter H to incorporate the amendments made to the

THSC by House Bill 2661.

The commission changed the name of Subchapter H from "Treatment and Disposal of Greywater" to

"Disposal of Graywater" to more accurately reflect the contents of the subchapter. Additionally, throughout the subchapter the commission changed the spelling of the word graywater from

"greywater" to "graywater" to be consistent with the statutory spelling in House Bill 2661.

Adopted §285.80, General Requirements, provides the general requirements for installing or using a

graywater system. These criteria are incorporated from THSC, §341.039, as amended by House Bill

2661. The commission changed the name of the section from “Treatment and Disposal of Greywater”

to “General Requirements” to more accurately reflect the contents of the section. The current language

in §285.80 is deleted because House Bill 2661 deleted the statutory provision that required the commission and the Texas State Board of Plumbing Examiners by rule to implement minimum standards for the use and reuse of graywater.

Adopted §285.80(a) defines graywater as wastewater from showers; bathtubs; hand washing lavatories;

sinks that are not used for disposal of hazardous or toxic ingredients; sinks not used for food preparation or disposal; and clothes-washing machines. This definition is from THSC, §341.039(e),

and TWC, §26.0311(a), as amended by House Bill 2661.

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Adopted §285.80(b) excludes from the definition of graywater wastewater from the washing of material, including diapers, soiled with human excreta, or wastewater that has come into contact with

toilet waste. This definition is from THSC, §341.039(e), and TWC, §26.0311(a), as amended by House Bill 2661.

Adopted §285.80(c) requires that construction of a graywater system, including the storage and disposal

systems, comply with Chapter 285 and any requirements of the local permitting authority. THSC, §366.032, Order or Resolution; Requirements, states that if the local governmental entity's order or

resolution adopts more stringent standards for on-site sewage disposal systems than this chapter or the

commission's standards and provides greater public health and safety protection, the authorized agent's

order or resolution prevails over this chapter or the standards. Subsection (c) also specifies that, for the

purposes of this subchapter, a graywater system begins at the graywater stub-out of a single family

dwelling. The commission adopts these amendments to be consistent with existing language in Chapter

285.

Adopted §285.81, Criteria for Disposal of Graywater, provides the criteria for use of graywater. The

criteria are incorporated from THSC, §341.039, as amended by House Bill 2661. The commission changes the title of this section from “Criteria for Discharge of Laundry Greywater” to “Criteria for

Disposal of Graywater” to more accurately reflect the contents of the section.

Adopted §285.81(a) specifies that an owner using less than 400 gallons of graywater each day does not

need a permit or an inspection if the graywater originates from a single family dwelling and if the graywater system is designed so that 100% of the graywater can be diverted to the owner's OSSF

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system during periods of non-use of the graywater system. THSC, §341.039, as amended by House

Bill 2661, refers to “private residence,” not “single family dwelling.” In the adopted rules, the commission uses the term “single family dwelling” in place of the term “private residence.”

“Singlefamily

dwelling” is defined in §285.2(66) as: “A structure that is either built on or brought to a site, for use as a residence for one family. A single family dwelling includes all detached buildings located

on the residential property and routinely used only by members of the household of the single family

dwelling.” The commission adopts this change to make clear that graywater from all buildings located

on the residential property may be used under this section.

Adopted subsection (a) also specifies that a graywater system may only be connected to the OSSF system if the connection is in the line between the house stub-out for the OSSF and the OSSF treatment

tank and the discharge from the graywater system enters the OSSF system through two backwater valves or backwater preventers. The commission includes backwater valves or backwater preventers to

prevent contamination of the graywater system by the OSSF system. This will help ensure that toilet

waste or other types of wastewater that are not defined as graywater in TWC, §26.0311(a), do not commingle with the graywater system. Additionally, the graywater must be stored in tanks and the

tanks must be clearly labeled as nonpotable water; must restrict access, especially to children; and must

eliminate habitat for mosquitoes and other vectors. These requirements are from THSC, §341.039(c).

While THSC, §341.039(c)(4), requires tanks, the statute is silent with regard to tank specifications.

However, THSC, §341.039(a), requires the commission to adopt and implement minimum standards

for the use and reuse of graywater. THSC, §341.039(b), and TWC, §26.0311(c), require that the domestic use of graywater not be a nuisance and not damage the quality of surface water or

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groundwater in the state. Additionally, THSC, §341.039(c)(6) and (7), require that the graywater be

used without the formation of ponds or pools and that graywater not create surface runoff across the

property lines or onto any paved surface. Thus, the commission is adopting two requirements that are

not specifically enumerated in the statute to implement these statutory provisions. These requirements

are: 1) the tanks are able to be cleaned; and 2) the tanks meet certain structural requirements.

If the tanks cannot be cleaned, solid materials could clog the lines or increase the biomat buildup at the

end of the line if graywater is discharged directly onto the ground. A clogged line could lead to a

backup or overflow of the system, and a buildup of biomat could cause odor and prevent the graywater

from soaking into the ground, causing ponding, pooling, or runoff. Furthermore, the commission adopts that the tanks must meet the structural integrity requirements of current American Water Works

Association (AWWA) standards to ensure the structural integrity of the tanks. These provisions will

help to ensure that graywater use is not a nuisance and does not damage the quality of surface water or

groundwater in the state as required by THSC, §341.039(b).

Finally, adopted subsection (a) would require that a graywater system use piping clearly identified as a

nonpotable water conduit, including identification through the use of painted purple pipe, purple pipe,

pipe taped with purple metallic tape, or other methods approved by the executive director; that the graywater be applied at a rate that will not result in ponding or pooling or will not cause runoff; and

that the graywater disposal system not be used as a spray distribution system. These provisions are

from THSC, §341.039.

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Adopted §285.81(b) specifies that no reduction in the size of the OSSF system will be allowed when

using a graywater system. THSC, §341.039(c)(3), requires that graywater be collected using a system

that overflows into an on-site wastewater treatment and disposal system. To meet this requirement, a

full-sized OSSF system must be installed to contain the entire wastewater flow for the house; thus, no

reduction in the size of an OSSF system is allowed under these adopted rules.

Adopted §285.81(c) encourages builders of single family dwellings to install plumbing in new housing

to collect graywater from allowable sources, and design and install a subsurface graywater system around the foundation of new housing to minimize foundation movement or cracking. This provision is

from THSC, §341.039(d).

Adopted §285.81(d) includes the allowable uses for graywater. This subsection specifies that the graywater system may only be used around the foundation of new housing to minimize foundation

movement or cracking; for gardening; for composting; or for landscaping at a single family dwelling.

These requirements are from THSC, §341.039.

Adopted §285.81(e) requires all aspects of the permitting, planning, construction, operation, and maintenance for any proposed graywater system that does not meet the requirements of subsection (a) of

this section to meet the requirements of Chapter 285. The commission adopts this requirement because

there are potentially graywater systems that will not be able to meet the requirements outlined in

subsection (a); therefore, this provision provides notice that these graywater systems must meet the applicable requirements of Chapter 285.  
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Adopted §285.81(f) requires the installer of the graywater system to advise the owner of basic operating and maintenance procedures, including any effects on the OSSF system. Providing information to the owner about operating and maintenance procedures will help the owner prevent the graywater system and the OSSF system from failing or causing a nuisance. The commission adopts this requirement to implement THSC, §366.012(b).

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

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

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

#### FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed this rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to §2001.0225 because it does not meet the definition of a "major environmental rule" in that statute. Major environmental rule means a rule, the specific intent of which, is to protect the environment or reduce

risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The intent of this rulemaking is to implement legislative amendments that modify the definition of graywater and require the commission to adopt and implement standards for the use of graywater and to address the separation of graywater in a residence served by an OSSF system. The adopted amendments to §285.80 and §285.81 set out both the general requirements that an individual must follow when voluntarily installing or using a graywater system and the criteria for using graywater. The adopted amendments in this rulemaking do not adversely affect, in a material way, the economy, a section of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. In addition, the amendments are not subject to Texas Government Code, §2001.0225, because they do not meet the four criteria specified in §2001.0225(a). Texas Government Code, §2001.0225(a), applies to a rule adopted by an agency, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, Texas Commission on Environmental Quality Page 9 Chapter 285 - On-Site Sewage Facilities Rule Project No. 2003-056-317-WT unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law. The adopted amendments to Chapter 285 do not meet any of these requirements. First, these revisions do not exceed a standard set by federal law as there are no federal requirements for these rules. As a result, there are no applicable standards set by federal law that could be exceeded by these rules. Second, these revisions do not exceed an express requirement of state law, but are being adopted to implement state law, including the requirement that graywater use not be a nuisance and not damage the quality of surface water or groundwater in the state. Therefore, the rulemaking does not exceed an express requirement of state law. Third, the commission is not a party to a delegation agreement with the federal government concerning a state and federal program that would be applicable to requirements set forth in these rules. Therefore, there are no delegation agreement requirements that could be exceeded by these rules. Fourth, the rules were not developed solely under the commission's general powers, but rather were developed to implement the specific requirements of House Bill 2661, amending TWC, §26.0311, and THSC, §341.039 and §366.012. Therefore, the commission does not

adopt these rules solely under the commission's general powers. Thus, the commission concludes that a

regulatory analysis is not required in this instance because the adopted rules do not meet the criteria of a

major environmental rule as defined by Texas Government Code, §2001.0225.

#### TAKINGS IMPACT ASSESSMENT

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The commission performed an assessment of these rules in accordance with Texas Government Code,

§2007.043. The specific purpose of this rulemaking is to implement House Bill 2661 which amended

TWC, §26.0311, and THSC, §341.039 and §366.012. These amendments modify the definition of graywater and require the commission to adopt and implement standards for the use of graywater and to

address the separation of graywater in a residence served by an OSSF system. The adopted graywater

rules are voluntary. Thus, the commission's assessment indicates that Texas Government Code, Chapter 2007, does not apply to this rulemaking because the promulgation and enforcement of these

rules will not create a burden on private real property.

#### CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the adopted rulemaking and found that it 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 preliminary consistency determination for the adopted rules in

accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22 and found the rulemaking is consistent with the applicable CMP goals and policies.

The CMP goals applicable to the adopted rules include to protect, preserve, restore, and enhance the

diversity, quality, quantity, functions, and values of coastal natural resource areas; to ensure sound

management of all coastal resources by allowing for compatible economic development and multiple

human uses of the coastal zone; to ensure and enhance planned public access to and enjoyment of the

coastal zone in a manner that is compatible with private property rights and other uses of the coastal

zone; and to balance these competing interests.

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The specific CMP policy applicable to the adopted rules requires that rules governing OSSFs shall

require those systems to be located, designed, operated, inspected, and maintained so as to prevent

release of pollutants that may adversely affect coastal waters.

These adopted rules will protect coastal areas by setting minimum standards for graywater use and addressing the separation of graywater in residences served by an on-site sewage disposal system. These adopted rules define graywater as wastewater from clothes-washing machines, showers, bathtubs, handwashing lavatories, and sinks that are not used for the disposal of hazardous or toxic ingredients.

The term "graywater" does not include wastewater that has come in contact with toilet waste; wastewater from the washing of material, including diapers, soiled with human excreta; or wastewater from sinks used for food preparation or disposal. These adopted rules are developed to reduce the possibility of contamination into coastal waters by ensuring that graywater use in all areas of the state, including coastal areas, does not create a nuisance and does not damage the quality of surface water or groundwater in this state.

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

#### PUBLIC COMMENT

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A public hearing was held in Austin on September 8, 2004. The comment period closed at 5:00 p.m.

on September 13, 2004. The commission received written and/or oral comments from: City of Austin,

Austin Water Utility (COA Utility); Lower Colorado River Authority (LCRA); San Antonio Water

System (SAWS), Texas Cooperative Extension (TCE), and two individuals.

COA Utility, LCRA, SAWS, and TCE generally supported the proposed rules but raised issues or suggested changes to the rules as specified in the RESPONSE TO COMMENTS section of this preamble.

The two individuals generally did not support the proposed rules and raised issues or suggested changes

to the rules as specified in the RESPONSE TO COMMENTS section of this preamble.

#### RESPONSE TO COMMENTS

##### *General*

One individual commented that allowing construction of graywater disposal systems with no requirement for permit, no design criteria, and no inspection is a very bad idea. This individual stated

that it is impossible to eliminate the introduction of many potentially dangerous pathogens into graywater. To safeguard public health and to protect the environment, the management of water containing pathogens clearly should be regulated.

**The commission responds that THSC, §341.039, and TWC, §26.0311 do not allow the commission**

**to require a permit for the domestic use of less than 400 gallons of graywater each day if the graywater use meets the requirements in THSC, §341.039, and TWC, §26.0311.**

**Additionally,**

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**the commission responds that THSC, §341.039, and TWC, §26.0311, do not require treatment for**

**graywater. The commission did not include treatment requirements because the statutes do not**

**provide for any treatment requirements; therefore, to include these provisions in the rules would**

**be inconsistent with statutory requirements. The commission made no change to the rules based**

**on this comment.**

LCRA suggested that graywater systems be required to operate using a minimum vertical separation of

at least two feet from the point of graywater application to the top of the seasonally high groundwater

table. LCRA stated that this is consistent with the separation distance from wastewaters to a seasonally

high groundwater table under the existing Chapter 285 rules.

**The commission proposed the amendments to Chapter 285 to implement the changes in THSC,**

**§341.039. The revisions to this section of the THSC do not specify a minimum vertical separation**

**distance between the point of graywater application and the top of the seasonally high groundwater table. Additionally, the original legislation for graywater in the 78th legislative session specified that the graywater be collected using a system that maintained a certain vertical**

**distance between the system and the highest seasonal water table. This requirement, however,**

**was dropped from the final legislation and, therefore, the commission did not include a similar**

**requirement in its proposed rules. The commission made no change to the rules based on this**

**comment.**

One individual commented that these rules should not encourage the use of graywater systems “to minimize foundation movement or cracking” for two reasons: 1) not all foundations can benefit from

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the addition of moisture to the perimeter of the foundation; and 2) foundations placed on high shrink/swell soils may not benefit from, and could actually be damaged, by the application of moisture

to the perimeter of the foundation.

**The commission responds that THSC, §341.039, requires that the commission, by rule, incorporate this provision into the rule. The commission made no change to the rules based**

**on**

**this comment.**

*General: Tanks*

SAWS commented that storage tanks should be optional and not a required component of graywater systems. Additionally, SAWS commented that the language in House Bill 2661 that references tanks does so to establish standards that ensure such tanks will not pose a threat to public safety and should not be construed as a mandate that graywater must be stored in tanks.

**The commission disagrees that the mention of tanks in THSC, §341.039(c)(4), is solely to establish requirements to eliminate threats to public safety. While THSC, §341.039(c)(4), does establish requirements to protect public safety, it also establishes tanks as one of the requirements that a domestic user of less than 400 gallons of graywater per day must meet to avoid obtaining a permit for graywater use from the commission. THSC, §341.039(c)(4), expressly prohibits the commission from requiring a permit for the “domestic use of less than 400 gallons of graywater each day if the graywater is stored in tanks that. . .” (Emphasis added.) Since THSC, §341.039(c)(4), expressly requires storing graywater in a tank as an element that domestic users of less than 400 gallons of graywater per day must meet if they want to use their graywater without a**

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**permit from the commission, the commission has included this as a requirement in its proposed rules. The commission made no change to the rules based on this comment.**

SAWS commented that the proposed rules should enumerate the tank standards that relate to specific material and/or operational criteria rather than referring to the AWWA standards for homeowners who elect to use tanks in their graywater system. Specifically, SAWS commented that if a tank is included in a graywater system the tank should be constructed of non-metallic material because metallic tanks are prone to corrosion and rust.

**The commission responds that the reference to the AWWA standards allows graywater users flexibility in selecting a tank for their graywater system. The commission has not developed standards for tanks but instead uses standards set by the industry since standards can vary based on many elements related to tank design, including the type of material used to construct the tank; the location of installation; size of the tank; and the type of natural elements to which the tank is exposed. Additionally, the commission disagrees that tanks for graywater systems should be constructed of non-metallic material. For example, a steel tank would be acceptable for a**

**graywater system if the tank meets AWWA standards. The commission made no change to the rules based on this comment.**

One individual asked how the use of a tank that meets the AWWA standards will be monitored. One individual asked how the requirement in §285.81(a)(5) that does not allow ponding or pooling is going to be monitored. Additionally, this individual asked what criteria will be used to determine the loading rate.

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**The commission responds that THSC §341.039, and TWC, §26.0311, do not allow the commission to require a permit for the domestic use of less than 400 gallons of graywater each day if the graywater use meets the requirements in THSC, §341.039, and TWC, §26.0311.**

**The commission did not include monitoring requirements or loading rate requirements because**

**the statute does not provide for any monitoring procedures or loading rate requirements; therefore, to include these provision in the rules would be inconsistent with statutory requirements.**

**The commission anticipates that the users of graywater will follow the requirements as laid out in**

**the commission's rules. However, if the requirements are not followed, one of the means of monitoring these rules will come in the form of citizen complaints to the commission regarding the**

**inappropriate use of graywater. The commission made no change to the rules based on this comment.**

*General: Backflow Prevention*

SAWS commented that the requirements for backflow prevention as proposed do not seem appropriate

because an airgap on the line leading to an OSSF or sewer main will potentially create an odor problem.

SAWS suggested a backwater valve designed to withstand the harsh environment created by sewage

would provide a better and more reliable safety measure. COA Utility commented that the term "backflow preventer" should be replaced by "backwater valve" throughout Chapter 210 and Chapter

285. TCE commented that "backflow preventer" should be replaced with a "check valve" or

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something similar to avoid confusion which could arise between a plumbing inspector and another type

of inspector.

**The commission agrees that an airgap could potentially create an odor problem and, therefore, did not include an airgap as part of its backflow prevention requirements in the proposed rules.**

**The commission responds that to avoid confusion with plumbing codes the commission agrees to change the term “backflow preventer” to “backwater valve or backwater preventer” in §§210.83(a), 210.84(b), 210.85(b), and 285.81(a)(2)(B). A check valve is a type of backwater valve; however, the commission decided to use the term backwater valve or backwater preventer to allow maximum flexibility for the graywater systems.**

*General: Purple Pipe*

SAWS commented that the commission should consider allowing identification of graywater system

pipings by a means other than the use of the color purple. SAWS stated that the system requirements

and treatment methods are different for Type I and Type II reclaimed water versus graywater. SAWS

commented that color-coding both types of systems using purple can create confusion. SAWS suggested that other standards of identification exist.

**The commission responds that THSC, §341.039(c)(5), establishes purple pipe, purple tape, or similar markings for graywater as one of the requirements that a domestic user of less than 400**

**gallons of graywater per day must meet to avoid the requirement of a permit for graywater use**

**from the commission. THSC, §341.039(c)(5), expressly prohibits the commission from requiring a**

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**permit for the “domestic use of less than 400 gallons of graywater each day if the graywater uses**

**pipings clearly identified as a nonpotable water conduit, including identification through the use of**

*purple pipe, purple tape, or similar markings. . .”* (Emphasis added.) Since THSC, §341.039(c)(5), expressly requires purple pipe, purple tape, or similar markings as an element

**that domestic users of less than 400 gallons of graywater per day must meet if they want to use**

**their graywater without a permit from the commission, the commission has included this as a**

**requirement in its proposed rules. The commission made no change to the rules based on this**

**comment.**

COA Utility commented to reduce confusion between reclaimed water and graywater that the proposed

rules should refer to the Uniform Plumbing Code, Appendix G, which states that graywater pipes should have “continuous tape stating: Danger, Unsafe Water.”

**The commission proposed the amendments to Chapter 210 and Chapter 285 to implement the**

**changes in THSC, §341.039, and TWC, §26.0311. The revisions to these sections of the THSC**

**and the TWC do not reference the Uniform Plumbing Code, Appendix G, as an option for**

identifying pipes that carry graywater. THSC, §341.039(c)(5), expressly prohibits the commission from requiring a permit for the “domestic use of less than 400 gallons of graywater each day if the graywater uses piping clearly identified as a nonpotable water conduit, including identification through the use of purple pipe, purple tape, or similar markings. . .” (Emphasis added.) Since THSC, §341.039(c)(5), expressly requires purple pipe, purple tape, or similar markings as an element that domestic users of less than 400 gallons of graywater per day must meet if they want to use their graywater without a permit from the commission, the commission has included this as

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**a requirement in its proposed rules. The commission made no change to the rules based on this comment.**

One individual asked how anyone will know if purple pipe is not used since no permit, inspection, or oversight is required.

**The commission responds that THSC, §341.039, and TWC, §26.0311, do not allow the commission to require a permit for the domestic use of less than 400 gallons of graywater each day if the graywater use meets the requirements in THSC, §341.039, and TWC, §26.0311. The commission did not include an inspection or oversight requirement because the statutes do not provide for any inspection or oversight procedures; therefore, to include these provisions in the rules would be inconsistent with statutory requirements. The commission made no change to the rules based on this comment.**

*General: Guidance*

LCRA encouraged the commission to conduct an extensive public education program regarding these new graywater rules.

**The commission responds that agency staff has provided educational presentations on the proposed graywater rules in Austin, Dallas, Kingsville, Round Rock, San Antonio, and Waco.**

**Additionally, agency staff has been working with industry associations regarding these rules. The commission made no change to the rules based on this comment.**

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COA Utility commented that the commission should develop a guidance document for non-permitted

systems using less than 400 gallons per day. Additionally, COA Utility commented that §210.83(b) and

§285.81(c) and (h)(7) “should be removed from the statute and placed in the guidance document.”  
**The commission responds that it declines, at this time, to develop a guidance document for these**

**rules. As long as users of less than 400 gallons of domestic graywater meet the requirements in**

**Chapter 210 and Chapter 285, they have flexibility to meet the requirements in whatever manner**

**is most cost-effective. Additionally, if domestic graywater users have questions about the manner**

**in which they have chosen to meet the graywater requirements, agency staff is available to respond to their questions.**

**The commission declines to remove §210.83(b) and §285.81(c) from the rule language. These rule**

**sections implement TWC, §26.0311(b)(2), and THSC, §341.039(d), which encourage builders “to**

**install plumbing in a manner that provides the capacity to collect graywater from all allowable**

**sources and to design and install a subsurface graywater system around the foundation of new**

**housing in a way that minimizes foundation movement or cracking.” TWC, §26.0311(b), and**

**THSC, §341.039(a), require that “the commission *by rule*. . .” implement the provisions found in**

**TWC, §26.0311(b)(2), and THSC, §341.039(d). (Emphasis added.)**

**The commission declines to remove §285.81(h)(7) and place in a guidance document since no**

**guidance document is being developed at this time. The commission made no change to the rules**

**based on this comment.**

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*Chapter 210*

One individual commented that §210.82(a) and §210.80(b) are mutually exclusive and therefore nonsensical.

**The commission responds that the rules do not contain §210.80(b). The commission assumes that**

**the commenter meant to refer to the requirements in §210.82(a) and §210.82(b). These requirements are from THSC, §341.039(e), and TWC, §26.0311(a). The commission declines to**

**change this definition because to alter this definition in the rules would be inconsistent with statutory requirements. The commission made no change to the rules based on this comment.**

One individual commented that §210.83(a) is not enforceable and, as such, should be eliminated. Since

there is no permit, no plan review, no inspection, nor any continuing monitoring, there will rarely be

time where a flow in excess of 400 gallons per day is noted and corrected.

**The commission declines to delete §210.83(a). The commission responds that THSC, §341.039,**

**and TWC, §26.0311 do not allow the commission to require a permit for the domestic use of less than 400 gallons of graywater each day if the graywater use meets the requirements in THSC, §341.039, and TWC, §26.0311. The commission anticipates that the users of graywater will follow the requirements as laid out in the commission’s rules. However, if the requirements are not followed, one of the means of monitoring this rule is citizen complaints to the commission regarding the inappropriate use of graywater. The commission made no change to the rules based on this comment.**

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One individual commented that §210.83(a)(3)(C) must have much more guidance provided. The individual also stated that at this time we are either breeding or harboring mosquitoes at an alarming rate in the pump tanks following aerobic treatment units. With that as a given, what will be required, that is not being required in OSSFs, to prevent a habitat for mosquitoes? Whatever will eliminate the habitat must be specifically identified to be followed.

**The commission responds that in the OSSF system described by the commenter the tanks should be sealed, thereby, preventing a mosquito habitat. For graywater systems, §210.83(a)(3)(C) requires that “the graywater is stored in tanks and the tanks eliminate habitat for mosquitoes and other vectors. . .” Additionally, §210.83(a)(5)(A) and (B) require that the graywater not pond or pool, or cause runoff across the property lines or onto any paved surface. As long as users of less than 400 gallons of domestic graywater meet the requirements in Chapter 210, they have flexibility to meet the requirements in whatever manner is most cost-effective. Further, if domestic graywater users have questions about the manner in which they have chosen to meet the graywater requirements, agency staff is available to respond to their questions. The commission made no change to the rules based on this comment.**

SAWS commented that in §210.83(a)(4) and §210.84(c)(4)(B) the use of the word “piping” is ambiguous. SAWS asked whether piping includes fittings that become an integral part of pipe on installation of such systems. SAWS stated that a clear regulatory definition of what is included within “piping” is essential to avoid inadvertent regulatory violations and to permit a thorough understanding of what the construction of such systems will require.

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**The commission responds that the term “piping” includes fittings and appurtenances. Because**

**the statute does not define “piping,” to include this definition in the rules would be inconsistent with statutory requirements. Therefore, the commission has made no change to the rules based on this comment.**

*Chapter 285*

SAWS commented that the conditions for the use of laundry graywater should remain as they are in existing Chapter 285, Subchapter H. SAWS stated that it is without benefit to add a storage tank requirement for laundry graywater use.

**The commission responds that THSC, §341.039(e), defines graywater as “wastewater from clothes-washing machines, showers, bathtubs, hand-washing lavatories, and sinks that are not used for disposal of hazardous or toxic ingredients.” THSC, §341.039(c), subjects graywater use to additional requirements and does not exempt laundry graywater from the new requirements; therefore, the commission has included wastewater from clothes-washing machines in the types of graywater subject to the proposed requirements.**

**However, §285.81(h) and (i) allow people currently using laundry graywater to continue their use of graywater without subjecting them to the new provisions unless the graywater system is altered, creates a nuisance, or discharges graywater from any other source than a clothes-washing machine.**

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**The commission responds that THSC, §341.039(c)(4), establishes tanks as one of the requirements that a domestic user of less than 400 gallons of graywater per day must meet to avoid the necessity of obtaining a permit for graywater use from the commission. THSC, §341.039(c)(4), expressly prohibits the commission from requiring a permit for the “domestic use of less than 400 gallons of graywater each day *if the graywater is stored in tanks that. . .*” (Emphasis added.) Since THSC, §341.039(c)(4), expressly requires storing graywater in a tank as an element that domestic users of less than 400 gallons of graywater per day must meet if they want to use their graywater without a permit from the commission, and because the statute defines wastewater from clothes-washing machines as graywater, the commission has included a tank as part of the requirements in its proposed rules. The commission made no change to the rules based on this comment.**

TCE commented that the commission should add process water to the definition of graywater in §285.80.

**The commission responds that it has taken the definition of graywater directly from THSC,**

**§341.039, and to alter this definition in the rules would be inconsistent with statutory requirements. The commission made no change to the rules based on this comment.**

One individual commented that the definition of graywater in §285.80(a) and §285.80(b) does not work.

This individual stated that water that is used to wash hands, bodies, and undergarments will contain fecal material.

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**The commission agrees that in some instances water used to wash hands, bodies, and undergarments could contain fecal material. However, the definition of graywater in TWC, §26.0311(a)(1) and (2), and THSC, §341.039(e)(1) and (2), specifies that graywater does not include wastewater that has come in contact with toilet waste or from the washing of material, including diapers, soiled with human excreta. The commission made no change to the rules based on this comment.**

Referencing §285.81(a), COA Utility commented that the commission should require residents who install a graywater system producing less than 400 gallons of graywater per day to provide written notification to the local authorized agent.

**The commission responds that the amendments to Chapter 285 implement the changes in THSC, §341.039. THSC, §341.039(c), specifically states that “the commission may not require a permit for the domestic use of less than 400 gallons of graywater each day. . .” None of the amendments to the THSC from House Bill 2661 authorize the commission to require written notification to the local authorized agent for the use of less than 400 gallons of graywater each day. Because the statute does not provide for written authorizations to the local authorized agents, to include these provisions in the rules would be inconsistent with statutory requirements. Therefore, the commission made no change to the rules based on this comment.**

**However, §285.80(c) states that the construction of a graywater system must comply with any requirements of the local permitting authority. THSC, §366.032, states that if a local governmental entity’s order, ordinance, or resolution adopts more stringent standards for on-site**

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**sewage disposal systems than this chapter or the commission’s standards and provides greater public health and safety protection, the authorized agent’s order or resolution prevails over this chapter or the standards. Therefore, if properly adopted, a local permitting authority may adopt**

**more stringent requirements, such as a requirement that graywater users notify their local permitting authority in writing of their graywater use.**

One individual asked how the 400 gallons per day limit in §285.81(a) is going to be monitored. **The commission anticipates that the users of graywater will follow the requirements as laid out in**

**the commission's rules. However, if the requirements are not followed, one of the means of monitoring this rule is citizen complaints to the commission regarding the inappropriate use of graywater. The commission made no change to the rules based on this comment.**

One individual asked how the requirement in §285.81(a)(2) that requires the graywater system to be

designed so that 100% of the graywater can be diverted to the owner's OSSF during periods of non-use

and that the system may only be connected to an OSSF under certain requirements will be monitored.

Additionally, the individual asked if a provision has been made to notify the buyer of the property that

this system is only allowed under certain circumstances.

**The commission anticipates that the users of graywater will follow the requirements as laid out in**

**the commission's rules. However, if the requirements are not followed, one of the means of monitoring this rule is citizen complaints to the commission regarding the inappropriate use of**

**graywater. The commission made no change to the rules based on this comment.**

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**The commission responds that THSC, §341.039, does not require that notification be given to a**

**buyer that the graywater system is located on the property. The commission did not include a**

**requirement for notification to the buyer regarding the graywater system because the statute does**

**not provide for this; therefore, to include this provision in the rules would be inconsistent with**

**statutory requirements.**

One individual stated that §285.81(a)(2)(B) requires the discharge from a graywater system to enter the

OSSF through two backflow preventers. This individual asked how a problem can be detected before it

occurs if a permit and inspection are not required.

**The commission responds that THSC, §341.039, does not allow the commission to require a permit for the domestic use of less than 400 gallons of graywater each day if the graywater use**

**meets the requirements in THSC, §341.039.**

**The commission did not include an inspection requirement because the statutes do not provide for**

**any inspection procedures; therefore, to include these provisions in the rules would be inconsistent**

**with statutory requirements. The commission made no change to the rules based on this comment.**

One individual stated that §285.81(a)(5) does not allow graywater to create a nuisance or damage the quality of surface or groundwater. This individual asked how a violation could be detected before it occurs since no permit, inspection, or oversight is required.

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**The commission responds that THSC, §341.039, does not allow the commission to require a permit for the domestic use of less than 400 gallons of graywater each day if the graywater use meets the requirements in THSC, §341.039. The commission did not include an inspection or oversight requirement because the statute does not provide for inspection or oversight; therefore, to include a provision regarding inspection or oversight in the rules would be inconsistent with statutory requirements. The commission made no change to the rules based on this comment.**

One individual asked how §285.81(d)(2), which requires that graywater only be used for gardening

except on the edible parts of crops intended for human consumption, will be monitored.

**The commission responds that in §285.81(d)(2), it has deleted the language “except that it may not**

**be used such that the edible parts of crops intended for human consumption come into direct**

**contact with graywater.” Therefore, this is not a requirement that the commission will need to**

**monitor. The commission made this change to more closely track the language in THSC, §341.039(c)(2).**

**The commission anticipates that the users of graywater will follow the requirements as laid out in**

**the commission’s rules. However, if the requirements are not followed, one of the means of monitoring this rule is citizen complaints to the commission regarding the inappropriate use of**

**graywater. The commission made no change to the rules based on this comment.**

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One individual commented that a problem currently exists with graywater being discharged where the

ground is wet. This individual stated that §285.81(h)(6) makes this worse because of the potential for

untreated wastewater to be discharged to the ground’s surface.

**The commission responds that in the current rules §285.81 requires that the disposal area not**

**create a public health nuisance; §285.81 requires that no ponding occur in the disposal area; and**

**§285.81 requires that laundry graywater not be discharged if the soil is wet. The commission**

**retained these requirements in the proposed §285.81(h) for current graywater users.**

**Graywater**

**use that begins after the effective date of these rules is subject to similar requirements in §285.81.**

**The commission did not include treatment requirements in the proposed rules because THSC,**

**§341.039, does not provide for any treatment requirements; therefore, to include these provisions**

**in the rules would be inconsistent with statutory requirements. The commission made no change**

**to the rules based on this comment.**

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## **SUBCHAPTER H: DISPOSAL OF GRAYWATER**

### **§285.80, §285.81**

#### **STATUTORY AUTHORITY**

The amended sections are adopted under the authority granted to the commission by the Texas Legislature in THSC, Chapter 366. The amended sections implement THSC, §366.012(a)(1), which

requires the commission to adopt rules consistent with the policy defined in TWC, §26.0311, and THSC, §341.039 and §366.012, relating to Standards for Control of Graywater, Graywater Standards,

and Rules Concerning On-Site Disposal Systems. Specific statutory authorization derives from House

Bill 2661, which amended TWC, §26.0311, and THSC, §341.039 and §366.012. The amendments are

also adopted under the general authority granted in TWC, §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under

the TWC and other laws of the state; TWC, §5.103 and §5.105, which authorize the commission to

adopt rules and policies necessary to carry out its responsibilities and duties under TWC,

§5.013(14)(b); and TWC, §7.002, which authorizes the commission to enforce provisions of the TWC

and the THSC.

#### **§285.80. General Requirements.**

(a) Graywater is defined as wastewater from:

(1) showers;

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(2) bathtubs;

(3) handwashing lavatories;

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

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

(6) clothes-washing machines.

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

(c) Construction of a graywater system, including storage and disposal systems, must comply with this chapter and any more stringent requirements of the local permitting authority. For the

purposes of this subchapter, a graywater system begins at the graywater stub-out of a single family dwelling.

**§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:

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(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

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(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.

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(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).

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(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.

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(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.