



# **Graywater and Alternative On-Site Water: A Guide for Agricultural Users**

*This regulatory guidance provides an overview of the requirements for the use of graywater and alternative on-site water by agricultural users. It is based on state laws and Texas Commission on Environmental Quality (TCEQ) rules. But it does not replace these laws and regulations, which take precedence over any information contained herein. In addition, local permitting authorities may have more stringent requirements.*

## **Contents**

**Overview**.....2

**Definitions (from 30 TAC 210.82)** .....2

**Who is subject to the requirements found in 30 TAC 210, Subchapter F?**..... 3

**How will these requirements affect me?**.....3

**Alternative Water Reuse Systems**.....3

**Graywater Reuse Systems**.....6

**Combined Reuse Systems** .....9

**What are the requirements for *E. coli* and Total Suspended Solids (TSS)?**..... 12

**Sampling Overview** ..... 12

**Table 1. Agricultural Sampling Guide**..... 14

**Resources to ensure that my system is properly constructed and maintained?**..... 15

**Standards and Codes** ..... 15

**Recommendations and Best Management Practices**..... 15

**Where can I find more information and assistance?**..... 16

## Overview

TCEQ rules found in [30 Texas Administrative Code \(TAC\) 210, Subchapter F](#), and [30 TAC 285, Subchapter H](#), affect the use of graywater and alternative on-site water. These rules aim to lessen Texas' demand on freshwater resources and encourage and expand the allowable uses of recycled water.

These subchapters do not authorize the use of state water, as defined in [Subchapter A of 30 TAC 297](#), "Water Rights."

Several terms have been defined in [30 TAC 210, Subchapter F](#), and an excerpt from this rule has been provided below for your reference.

You can find all of these 30 TAC rules at [tceq.texas.gov/goto/view-30tac](http://tceq.texas.gov/goto/view-30tac).

## Definitions (from [30 TAC 210.82](#))

(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—wastewater from showers, bathtubs, handwashing lavatories, sinks that are used for disposal of household or domestic products, sinks that are not used for food preparation or disposal, and clothes-washing machines. 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.

## Who is subject to the requirements found in **30 TAC 210, Subchapter F**?

If you use graywater or alternative on-site water, or a combination of the two, at an agricultural facility, you may need to follow the requirements in Subchapter F.

Please note that rainwater is included in the definition of alternative on-site water. If you use a rainwater-harvesting system, you may be subject to this subchapter.

You are not subject to this subchapter if you use treated wastewater (also known as reclaimed water). Treated wastewater is regulated under **30 TAC 210, Subchapters A-E**.

## How will these requirements affect me?

The impact of these requirements depends on the type of system that is installed at your agricultural facility. This section provides an overview of the requirements for alternative water reuse systems, graywater reuse systems, and combined reuse systems. Refer to the subsection that applies to your system type to learn more about how these rules apply to you.

If you reuse water at a residence or industrial facility, commercial facility, or institution, visit <[www.tceq.texas.gov/goto/waterreuse](http://www.tceq.texas.gov/goto/waterreuse)> to learn more about how these rules will affect you.

## Alternative Water Reuse Systems

### *What can be collected in an alternative water reuse system?*

These systems can store and distribute water from one or more of the following sources:

- rainwater
- stormwater (rainfall runoff, snowmelt runoff, and surface runoff and drainage)
- air-conditioner condensate
- foundation drain water
- swimming-pool backwash and drain water (cannot be used within five days of adding shock chemicals or acid treatment)
- reverse-osmosis reject water (except if generated at an agricultural facility that is also a public water system (PWS). Reverse-osmosis reject water generated at a PWS cannot be used in an alternative on-site water system, but may be authorized under 30 TAC 210, Subchapter E, or an individual permit)

If your system contains, stores, or distributes a combination of alternative on-site water and graywater, refer to the “Combined Reuse Systems” subsection of this guide.

### ***What can the water from an alternative water reuse system be used for?***

Water from an alternative water reuse system can be used for, but is not limited to, the following purposes:

- landscape irrigation
- gardening and composting
- foundation stabilization
- toilet or urinal flushing

### ***Do I need to obtain authorization from the TCEQ to use an alternative water reuse system?***

No. If you operate and maintain your system in compliance with the rules, you do not need approval from the TCEQ.

### ***What are the operating requirements for an alternative water reuse system?***

Although you are not required to obtain authorization from the TCEQ, you are required to make sure that your system conforms to all of the following standards:

#### **General System Requirements**

- The system is operated so that it does not allow ponding, pooling, or runoff across property lines or onto any paved surface (unless the overflow is caused by an inflow of rainwater or stormwater).
- The activity does not create a nuisance, threaten human health, or damage the quality of surface or groundwater.
- There is no physical connection that would allow overflow from the alternative water reuse system to enter an organized wastewater collection system or on-site sewage facility (OSSF).
- In the case of a facility that is a customer of, or is, a PWS, and in which the alternative water reuse system is physically connected to the potable water plumbing at the facility, the facility must have an appropriate backflow prevention assembly or adequate air gap [30 TAC 290.44(h)] to prevent contamination of the drinking water.

Even if your alternative water reuse system is not physically connected to the potable water plumbing, there may still be a potential for contamination to the PWS. Your PWS may require that you have periodic Customer Service Inspections (for example, once per year) to verify whether or not an actual, or potential for, contamination exists

[30 TAC 290.46(j)] and to ensure that the separation is maintained. For more information on the hazards of cross-connections and backflows, visit <[www.tceq.texas.gov/goto/ccc](http://www.tceq.texas.gov/goto/ccc)>.

- The alternative on-site water is generated and used on-site.

### Spray Distribution System Requirements

Any spray distribution system is operated and maintained properly, as summarized below [30 TAC 210.82(b)(5)(A)-(F)]:

- Sprays only at times when people and pets are not actively using the sprayed area.
- Sprays at a rate that will not cause ponding or puddling in the area, or runoff to other properties.
- Does not allow spray to drift off the property.
- Does not spray while it is raining, when the ground is frozen, or within 24 hours after one-half inch or more of rain.
- Does not connect to a potable water or raw water (e.g., untreated well water) irrigation system unless an appropriate backflow prevention assembly is installed. (For more information on the hazards of cross-connections and backflows, visit <[www.tceq.texas.gov/goto/ccc](http://www.tceq.texas.gov/goto/ccc)>.)
- Is inspected and repaired as needed to prevent discharges to water in the state or to other properties.

### Flushing Water and Piping Requirements

- The water used for toilet or urinal flushing meets the *Escherichia coli* (*E. coli*) and total suspended solids (TSS) limits as summarized in “Table 1. Agricultural Sampling Guide” [30 TAC 210.82(b)(8)(A)-(B)].
- The piping meets the requirements for water that is used for toilet or urinal flushing, as summarized below [30 TAC 210.82(b)(8)(C)]:
  - All exposed piping must be either purple pipe or painted purple and must be stenciled in yellow with the words “NON-POTABLE WATER.”
  - Piping carrying alternative on-site 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.
  - *Note:* These piping requirements do not apply to rainwater-harvesting systems that are used for potable water—as long as they are approved by the TCEQ and comply with the water-distribution requirements found in 30 TAC 290.44.

## ***Are there any monitoring or record-keeping requirements for an alternative water reuse system?***

If you use alternative on-site water at an agricultural facility, you are not required to monitor or keep records.

If you use the alternative on-site water for toilet or urinal flushing, however, you are subject to *E. coli* and TSS limits. If that is the case, it is recommended that you hire qualified personnel to collect and analyze samples at least once every three months.

Use “Table 1. Agricultural Sampling Guide” as a quick reference to determine which sampling requirements and recommendations apply to you. For additional information, you can consult the next section, “What are the requirements for *Escherichia coli* (*E. coli*) and Total Suspended Solids (TSS)?”

## **Graywater Reuse Systems**

### ***What can be collected in a graywater reuse system?***

These systems can store and distribute water from one or more of the following sources:

- showers
- bathtubs
- handwashing lavatories
- sinks that are used for the disposal of household or domestic products (for example, laundry-room or janitor’s-closet sinks)
- sinks that are not used for food preparation or disposal
- clothes-washing machines

Graywater reuse systems cannot contain, store, or distribute any of the following:

- alternative on-site water from any source
- wastewater from the washing of material soiled with human excreta, including diapers
- wastewater that has come into contact with toilet waste

### ***What can the water from a graywater reuse system be used for?***

Water from a graywater reuse system may be used at an agricultural facility for the following purposes:

- operational processes
- landscape maintenance

- dust control
- irrigation of fields
- toilet or urinal flushing
- other similar uses as outlined in [30 TAC 210.85\(d\)\(6\)](#)

### ***Do I need to obtain authorization from the TCEQ to use a graywater reuse system?***

No. You are not required to obtain authorization from the TCEQ to use graywater at an agricultural facility.

### ***What are the operating requirements for a graywater reuse system?***

You are required to make sure that your system conforms to all of the following standards:

#### **General System Requirements**

- The system is operated so that it does not allow ponding, pooling, or runoff.
- The activity does not create a nuisance, threaten human health, or damage the quality of surface or groundwater.
- In the case of a facility that is a customer of a PWS or is a PWS, and in which the graywater reuse system is physically connected to the potable water plumbing at the facility, the facility must have an appropriate backflow prevention assembly or adequate air gap [30 TAC 290.44(h)] to prevent contamination of the drinking water.

Even if your graywater reuse system is not physically connected to the potable water plumbing, there may still be a potential for contamination to the PWS. Your PWS may require that you have periodic Customer Service Inspections (for example, once per year) to verify whether or not an actual, or potential for contamination exists [30 TAC 290.46(j)] and to ensure that the separation is maintained. (For more information on the hazards of cross-connections and backflows, visit [www.tceq.texas.gov/goto/cc](http://www.tceq.texas.gov/goto/cc).)

#### **Graywater-Specific Requirements**

- The graywater originates from the agricultural facility and is used on-site.
- The graywater does not overflow onto the ground under any circumstance.
- The system is designed and constructed so that when it is not in use or has reached maximum capacity, 100 percent of the graywater can be diverted to a wastewater collection system or an on-site sewage facility (OSSF) with a designed capacity to accept the graywater, unless prohibited by [30 TAC 285, Subchapter H](#).

- Any graywater that flows into a wastewater collection system or OSSF enters the system through either one air gap or two backflow valves or backflow preventers. (For more information on the hazards of cross-connections and backflows, visit <[www.tceq.texas.gov/goto/ccs](http://www.tceq.texas.gov/goto/ccs)>.)
- The system meets the requirements outlined in [30 TAC 285, Subchapter D](#), for piping connecting graywater to an OSSF.
- Graywater destined for irrigation or other agricultural purposes may be treated to that standard (which makes it acceptable for use in operational processes).
- The water used for landscape maintenance, dust control, irrigation of fields, and other similar uses meets the *Escherichia coli* (*E. coli*) limits as summarized in “Table 1. Agricultural Sampling Guide” [[30 TAC 210.85\(d\)\(2-4, 6\)](#)].

### **Flushing Water and Piping Requirements**

- The water used for toilet or urinal flushing meets the *E. coli* and total suspended solids (TSS) limits as summarized in “Table 1. Agricultural Sampling Guide” [[30 TAC 210.85\(d\)\(5\)\(A\)-\(B\)](#)].
- The piping meets the requirements for water that is used for toilet or urinal flushing, as summarized below [[30 TAC 210.85\(d\)\(5\)\(C\)](#)]:
  - All exposed piping must be either purple pipe or painted purple and must be stenciled in yellow with the words “NON-POTABLE WATER.”
  - Piping carrying graywater 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.

### ***I’ve had a graywater system for some time. Do I need to comply with these rules?***

If your graywater system was installed before Dec. 29, 2016, you must comply with the requirements that were in effect when your system was installed.

### ***Can I reduce the size of my on-site sewage facility (OSSF) if I use a graywater reuse system?***

No. According to [30 TAC 285.81\(a\)](#), the potential reduction of an OSSF applies only to single-family residences.

### ***Are there any monitoring or record-keeping requirements for a graywater reuse system?***

If you use graywater at an agricultural facility, you are subject to monitoring requirements found in [30 TAC 210.85\(d\)](#)—based on the type of use or activity. Use “Table 1. Agricultural Sampling Guide” as a quick reference to determine which sampling requirements and recommendations apply to you.



If your graywater is required to meet *E. coli* limits in the rule, you are required to monitor for *E. coli* monthly, maintain records on-site for five years, and have these records readily available for review during an inspection.

For additional information, you can consult the section titled “What are the requirements for *Escherichia coli* (*E. coli*) and Total Suspended Solids (TSS)?”

## Combined Reuse Systems

### ***What can be collected in a combined reuse system?***

These systems can store and distribute a combination of graywater and alternative on-site water from one or more sources.

### ***What can the water from a combined reuse system be used for?***

Water from a combined reuse system may be used at an agricultural facility for the following purposes:

- operational processes
- landscape maintenance
- dust control
- irrigation of fields
- toilet or urinal flushing
- other similar uses as outlined in [30 TAC 210.85\(d\)\(6\)](#)

### ***Do I need to obtain authorization from the TCEQ to use a combined reuse system?***

No. You are not required to obtain authorization from the TCEQ if you use a combination of graywater and alternative on-site water at an agricultural facility.

### ***What are the operating requirements for a combined reuse system?***

You are required to make sure that your system conforms to all of the following standards:

#### **General System Requirements**

- The system is operated so that it does not allow ponding, pooling, or runoff.
- The activity does not create a nuisance, threaten human health, or damage the quality of surface or groundwater.
- In the case of a facility that is a customer of a PWS or is a PWS, and in which the combined reuse system is physically connected to the potable water plumbing at the facility, the facility must have an

appropriate backflow prevention assembly or adequate air gap [30 TAC 290.44(h)] to prevent contamination of the drinking water.

Even if your combined reuse system is not physically connected to the potable water plumbing, there may still be a potential for contamination to the PWS. Your PWS may require that you have periodic Customer Service Inspections (for example, once per year) to verify whether or not an actual, or potential for contamination exists [30 TAC 290.46(j)] and to ensure that the separation is maintained. (For more information on the hazards of cross-connections and backflows, visit <[www.tceq.texas.gov/goto/cc](http://www.tceq.texas.gov/goto/cc)>.)

### Requirements Specific to Combined Reuse Systems

- The graywater and alternative on-site water originate from the agricultural facility and is used on-site.
- The water from a combined reuse system does not overflow onto the ground under any circumstance.
- The system is designed and constructed so that when it is not in use or has reached 80 percent capacity, 100 percent of the graywater—prior to entering the combined reuse system—can be diverted to a wastewater collection system or an on-site sewage facility (OSSF) with a designed capacity to accept the graywater, unless prohibited by 30 TAC 285, Subchapter H.
- Any graywater that flows into a wastewater collection system or OSSF enters the system through either one air gap or two backflow valves or backflow preventers. (For more information on the hazards of cross-connections and backflows, visit <[www.tceq.texas.gov/goto/cc](http://www.tceq.texas.gov/goto/cc)>.)
- The system meets the requirements outlined in 30 TAC 285, Subchapter D, for piping connecting graywater to an OSSF.
- Graywater and alternative on-site water destined for irrigation or other agricultural purposes may be treated to that standard (which makes it acceptable for use in operational processes).
- The water used for landscape maintenance, dust control, irrigation of fields, and other similar uses meets the *Escherichia coli* (*E. coli*) limits as summarized in “Table 1. Agricultural Sampling Guide” [30 TAC 210.85(d)(2-4, 6)].

### Flow Requirements

- Combined reuse systems that store stormwater, rainwater, or foundation water are equipped with an automatic shutoff system to stop the inflow of water from these sources when the storage tank reaches 80 percent capacity.
- Flows are diverted from alternative on-site water sources before they enter an OSSF, in accordance with 30 TAC 285.80(f).

### Flushing Water and Piping Requirements

- The water used for toilet or urinal flushing meets the *E. coli* and total suspended solids (TSS) limits as summarized in “Table 1. Agricultural Sampling Guide” [30 TAC 210.85(d)(5)(A)-(B)].

- The piping meets the requirements for water that is used for toilet or urinal flushing, as summarized below [30 TAC 210.85(d)(5)(C)]:
  - All exposed piping must be either purple pipe or painted purple and must be stenciled in yellow with the words “NON-POTABLE WATER.”
  - Piping carrying graywater or alternative on-site 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.

### ***Can I reduce the size of my on-site sewage facility (OSSF) if I use a combined reuse system?***

No. According to 30 TAC 285.81(a), the potential reduction of an OSSF applies only to single-family residences.

### ***Are there any monitoring or record-keeping requirements for a combined reuse system?***

If you use a combination of graywater and alternative on-site water at an agricultural facility, you are subject to monitoring requirements found in 30 TAC 210.85(d)—except when the water is used for operational processes or irrigation of fields that are not used for edible crops or milking animals. Use “Table 1. Agricultural Sampling Guide” as a quick reference to determine which sampling requirements and recommendations apply to you.

If your graywater and alternative on-site water is required to meet *E. coli* limits in the rule, you are required to monitor for *E. coli* monthly, maintain records on-site for five years, and have these records readily available for review during an inspection.

For additional information, you can consult the section titled “What are the requirements for *Escherichia coli* (*E. coli*) and Total Suspended Solids (TSS)?”

# What are the requirements for *Escherichia coli* (*E. coli*) and Total Suspended Solids (TSS)?

If you use water from an alternative water reuse system, graywater reuse system, or combined reuse system for toilet or urinal flushing, landscape maintenance, dust control, irrigation of fields, or for some other similar use, you may need to ensure that the water meets *E. coli* or TSS limits.

## Sampling Overview

### *Why is it important to sample for E. coli and TSS?*

*E. coli* can cause serious health problems for humans and high levels of TSS can cause problems within your plumbing and your irrigation equipment. The limits have been established to protect your health, plumbing, and irrigation equipment.

### *Who can collect and analyze samples?*

You will need to hire qualified personnel to collect and analyze your samples.

### *How do I locate a qualified lab?*

You can access a list of qualified labs in your area in just a few steps.

1. Visit the National Environmental Laboratory Accreditation Management System website at <lams.nelac-institute.org>.
2. Click the blue “Search” button.
3. Select “Texas Commission on Environmental Quality” from the “Accreditation Body” drop-down list.
4. Ensure “Yes” is selected in the “Is Active” drop-down list.
5. Select “Non-Potable Water” from the “Matrix” drop-down list.
6. Select either “*Escherichia coli*” or “Residue-nonfilterable (TSS)” from the “Analyte” drop-down list.
7. Click the “Search” button.
8. Enter the name of your city in the box below the “City” title and either click “Enter” on your keyboard or click the filter icon button. *Note:* You may have to enter the names of surrounding cities to find a lab in your area.
9. Select a lab in the resulting list to view additional details and contact information.

## What do my lab results mean?

When you receive your report from the lab, you can compare the sample results to the limits that are listed in the rule. You can also use the sampling guide provided below, in Table 1.

## Sample Types

Some reuse systems will have limits for single-grab samples and for the 30-day geometric mean.

### Single-Grab Sample

A single-grab sample is defined as an individual sample collected in less than 15 minutes [30 TAC 210.3(27)]. Once your single-grab sample is evaluated by a lab, you will receive a report with the results. The results for TSS will be provided in milligrams per liter (mg/L). *E. coli* results will be provided in most probable number (MPN) or colony-forming units (CFU) per 100 milliliter (mL).

These results can be compared to the limits in the rule.

#### For example:

***E. coli* Rule Limit:** Less than 2.2 CFU per 100 mL

***E. coli* Lab Results:** 3.2 CFU per 100 mL

The comparison indicates that there are more bacteria in the water than the rule allows.

### Geometric Mean

The geometric mean is a type of average. The TCEQ has developed a Geometric Mean Calculator to help permitted wastewater treatment plants with *E. coli* sampling; however, it can also be used to determine whether your reuse system meets the applicable *E. coli* or TSS limits.

You can access the calculator online at <[www.tceq.texas.gov/goto/geomean](http://www.tceq.texas.gov/goto/geomean)>.

*Note:* All samples taken during a 30-day period will be used for the geometric-mean calculation. If only one sample is taken within a 30-day period, the lab data is the geometric mean.

## Sample Results

If your sample results are below the limits in the rule, they indicate that your reuse system is operating properly.

However, if your sample results exceed what is allowed in the rule, there may be a problem with your system or contamination in your sources of water. You should contact your system installer to ensure that your system is functioning properly to protect human health and your equipment.

**Table 1. Agricultural Sampling Guide**

Use	Parameter	Sample Type	Limit	Sample Frequency
• Toilet or Urinal Flushing (alternative water reuse systems only)	<i>E. coli</i>	30-day geometric mean	Less than 2.2 MPN <sup>1</sup> or CFU <sup>2</sup> per 100 mL <sup>3</sup>	Recommended every 3 months
		Maximum single grab	Less than 200 MPN or CFU per 100 mL	
• Toilet or Urinal Flushing (graywater & combined reuse systems only)	<i>E. coli</i>	30-day geometric mean	Less than 2.2 MPN or CFU per 100 mL	Required once per month
		Maximum single grab	Less than 200 MPN or CFU per 100 mL	
• Toilet or Urinal Flushing (all reuse system types)	TSS	30-day geometric mean	Less than 10.0 mg/L <sup>4</sup>	Recommended every 3 months
		Maximum single grab	Less than 30.0 mg/L	
• Landscape Maintenance & Other Uses: Public Access (graywater & combined reuse systems only) • Irrigation of Fields: Edible Crops & Pastures for Milking Animals (graywater & combined reuse systems only)	<i>E. coli</i>	30-day geometric mean	Less than or equal to 20 MPN or CFU per 100 mL	Required once per month
		Maximum single grab	Less than or equal to 75 MPN or CFU per 100 mL	
• Landscape Maintenance & Other Uses: Restricted Access (graywater & combined reuse systems only) • Dust Control (graywater & combined reuse systems only)	<i>E. coli</i>	30-day geometric mean	Less than or equal to 200 MPN or CFU per 100 mL	Required once per month
		Maximum single grab	Less than or equal to 800 MPN or CFU per 100 mL	

- 
1. MPN - most probable number
  2. CFU - colony-forming units
  3. mL - milliliter
  4. mg/L - milligrams per liter
-

# Are there resources available to help me ensure that my system is properly constructed and maintained?

Yes. You can find a list of standards and codes below to help you navigate through the design, installation, construction, and plumbing standards.

In addition, a list of key recommendations and best management practices have been compiled in this section to help you design and operate your system in a way that is protective of human health and the environment.

## Standards and Codes

**American Water Works Association (AWWA).** According to [30 TAC 210.25\(i\)](#), storage tanks must be designed, installed, and constructed in accordance with the current AWWA standards. You can access additional information on these standards by visiting the AWWA website at [www.awwa.org](http://www.awwa.org).

**NSF International.** NSF International has standards and certification programs that help protect human health and the environment. Their publication *Onsite Residential and Commercial Water Reuse Treatment Systems* (NSF/ANSI 350) has recommendations specific to designing, constructing, operating, and maintaining reuse systems. For more information on the NSF, visit [www.nsf.org](http://www.nsf.org).

**International Association of Plumbing and Mechanical Officials (IAPMO).** IAPMO has developed the Uniform Plumbing Code (UPC), which is the standard code used for the installation and inspection of plumbing systems in the United States. You can access the latest UPC codes at [codes.iapmo.org](http://codes.iapmo.org).

## Recommendations and Best Management Practices

- Consider the amount of phosphorus, sodium, or boron in the laundry detergents you purchase. Product ingredients are listed on the labels in descending order, based on the quantity of each ingredient. To minimize environmental impacts, we encourage you to choose products that either don't have these ingredients at all or have them in small quantities (appearing lower in the ingredients list).
- Graywater and some types of alternative on-site water contain bacteria that can make you sick. You should minimize contact with these types of water. Use precautions to prevent children and pets from making contact with reused water.
- If your reuse system is connected to your potable water supply, pressure differences could create a backflow situation that has the potential to contaminate your drinking water—and possibly that of your neighbors. To protect your drinking water from contamination, check for accidental connections between your reuse system and your potable water supply. If a connection exists, ensure that appropriate backflow prevention is installed.

- The rule allows for flexibility in designing your reuse system, but it is recommended that you use established plumbing and treatment standards to comply with the rule and to ensure that your reuse system functions properly. Review “Standards and Codes,” above, for additional information on these standards.
- Prior to constructing a reuse system, it is recommended that you consult with your local permitting authority (typically either the city or county) and qualified individuals in your area to determine if there are additional requirements, recommendations, or best management practices applicable in your region of the state.
- Ensure that you receive adequate guidance from the designer of your reuse system to operate and maintain your system in compliance with state and local requirements.

## Where can I find more information and assistance?

The TCEQ’s Small Business and Local Government Assistance Section offers free, confidential assistance to help customers comply with state environmental regulations. Call us at 800-447-2827 or visit our webpage at <[TexasEnviroHelp.org](http://TexasEnviroHelp.org)>.

You may be eligible for a property tax exemption for the use of certain pollution control property—meaning a facility, device, or method for the control of air, water, or land pollution—installed to comply with environmental laws or rules. Visit <[www.tceq.texas.gov/airquality/taxrelief](http://www.tceq.texas.gov/airquality/taxrelief)> to learn more.

Rules that are referred to in this document are available online at <<http://www.tceq.texas.gov/goto/rules>>. For official copies of TCEQ rules, contact the Office of the Secretary of State by email at <[register@sos.texas.gov](mailto:register@sos.texas.gov)> or by phone at 512-305-9623.