

Protecting the

Drinking Water

You Provide

A Guide for
Owners and
Operators of
Gas Stations



Contact Information

Complete and keep readily available. This information must also be provided to your state's drinking water program.

Drinking Water System Owner: _____

Address: _____

Telephone: _____

Drinking Water System Operator: _____

Address: _____

Telephone: _____

Certified Laboratory: _____

Contact Person: _____

Address: _____

Telephone: _____

Pump Company: _____

Contact Person: _____

Address: _____

Telephone: _____

Treatment Equipment Repair Company: _____

Contact Person: _____

Address: _____

Telephone: _____

In Case of Emergency

Dial 911 for police, fire, or medical emergencies.

State Drinking Water Program: _____

Address: _____

Telephone: _____

State Underground Storage Tank Agency: _____

Address: _____

Telephone: _____

Local Underground Storage Tank Contact _____

Address: _____

Telephone: _____

UST Repair Contractor: _____

Address: _____

Telephone: _____

What's in this guide?



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Why is this guide important?

This guide was prepared for owners and operators of gas stations whose drinking water comes from a private well on the premises. Because there is always the potential for an underground storage tank to leak and contaminate your private well, it is important that you understand how to maintain safe and sanitary drinking water operations at your facility.

Businesses that have a drinking water well face regulatory responsibilities quite different from those that get their water from a municipal system. If your well provides water to 25 or more people per day for more than 60 days each year, you operate what is called a transient non-community public water system (TNC). Your water system is considered a TNC if there is public access to the water supply even if you don't intend to provide water for drinking. A sink in a restroom, for example, would qualify as a point of access. TNC systems are most likely present in areas not serviced by public water. Examples include campgrounds, motels, gas stations, convenience stores, rest areas, restaurants, and golf courses.

A TNC well is classified as a public drinking water supply, and there are various things that you need to do to ensure that you're meeting drinking water regulations and protecting the health of those who drink your water or otherwise come into contact with it. The most direct means of contact is drinking from a drinking fountain or bathroom faucet, but contact can be made in many ways, such as consuming coffee or ice made with well water or even preparing food with utensils washed with water from the tap. One or all of these means of contact are typically found at gas stations.

As an owner/operator of a public water system, you have special responsibilities. It is critical that you understand what those responsibilities are, and how you can best meet them. This guide will provide the information you need.

What are the responsibilities of a TNC Water System Owner or Operator?

Register – As an owner/operator of a public water system, you must register your system’s contact information with the state drinking water program, and notify the state if any contact information changes. Fill out page two of this guide to compile the necessary information.

Test – As per federal regulations, your water must be regularly tested for three kinds of contaminants: coliform bacteria, nitrates, and nitrites. Most states will provide you with a sampling schedule to help you meet their water quality monitoring requirements on time. In addition, you may consider optional testing for volatile organic compounds (VOCs), including fuel oxygenates such as MtBE.

It is strongly recommended that you contract with a certified water system operator or laboratory to collect the samples for you. In fact, your state may require that samples be collected by a certified operator, which means you may not be able to collect your own samples unless you pass a certification exam. Check with your state drinking water program to determine the rules that apply to you. In all cases, samples must be analyzed by a state-certified laboratory.



Report – The laboratory that performs your water quality testing will report the results directly to your state’s drinking water program. To ensure that proper reporting occurs, you must enter into a written agreement with an accredited laboratory to process your samples. This agreement requires that the lab submit the results of all water quality analyses, along with your system identification, to the state agency. The lab must submit results within two business days of completing the analyses, and within 24 hours if the analyses detects contamination. Public notices are often required if there is a contamination issue or you miss a sampling deadline.

Inspect - Every five years, the state will contact you to schedule an appointment for a site visit, referred to as a “sanitary survey.” This visit is conducted by a state employee or state contractor with your cooperation. During the detailed field inspection, you (or the operator of the system) must be present to provide access to the facility, answer questions, and provide records as requested.

Maintain and Keep Records - You are required to keep on file copies of all official testing reports, sanitary survey records, and public notices or violation reports, according to the table below. After the specified time has passed, you may dispose of the records. Note: If you sell the property, you must transfer all water system records to the new owner and notify the state.

Ask – If you have questions about your responsibilities or about modifying your drinking water system, do not hesitate to contact the state drinking water program. Changes such as adding or removing treatment, extending pipes, or drilling a new well may require state review and approval. However, most routine

maintenance, including repairs and piping or valve replacements, can be completed without design engineer oversight or approval from the state. You should contact the state for a full description of its requirements and any further instructions before making any changes to your system.

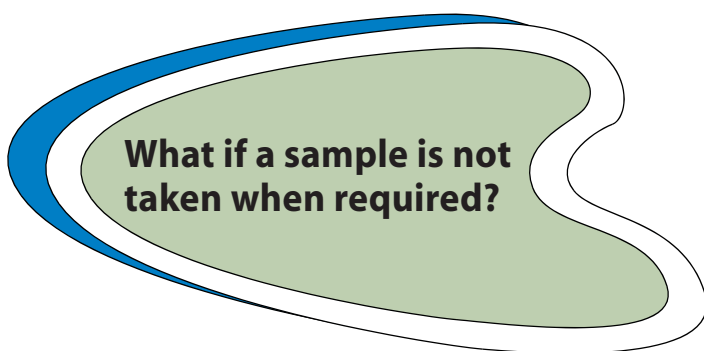
Record Type	Keep Record on File for:
Bacteria Test	One Year
Nitrates/Nitrites Test	One Year
Sanitary Survey Records	Ten Years
Public Notices Issued	Three years
Optional Tests	One year - recommended

What testing is required and what testing is strongly recommended?

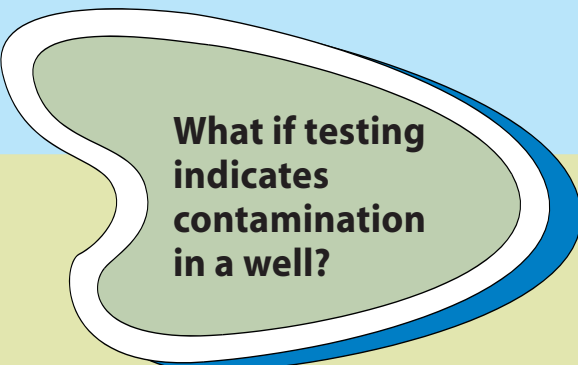
Bacteria – Coliform bacteria are common in the natural environment. They are found in the intestines of warm-blooded animals (including humans), and in plants, soil, air, and water. Although coliform bacteria are usually not harmful, their presence in water may indicate that the water is polluted and may contain more serious disease-causing organisms. TNCs must test for coliform bacteria every three months. Additional testing may be required depending on the type and size of your system. Consult your sampling schedule to determine the amount of monitoring required and the appropriate sampling locations.

Nitrates/Nitrites – These are inorganic chemicals found in fertilizer, sewage, and animal waste. In infants less than six months of age and in the elderly, high levels of nitrates and nitrites in drinking water have caused serious illness and even death. Increasing levels can indicate problems in your wellhead area and require further investigation. TNCs are required to monitor for nitrates every year. Check your state's sampling schedule to determine the testing requirements for nitrites, which vary by state.

Volatile organic compounds – VOCs are a group of chemicals, some of which can be found in fuel and can pose a threat to human health. While seldom required, testing for VOCs is a common and strongly recommended way to determine if a well is contaminated with petroleum compounds. It is important to test for VOCs, including contaminants such as benzene and the fuel oxygenate MtBE, because a positive result may indicate a leak from your underground storage tank system has contaminated the groundwater and soil in your vicinity. You must notify the state of test results indicating any VOC contamination.



If you miss a sampling deadline, it is important to notify the state immediately. Complete the required testing as soon as possible, and within thirty days issue a public notice informing customers that a sampling deadline was missed.



What if testing indicates contamination in a well?

If your water samples test positive for bacteria, you or your lab must notify the state, and the state will let you know what must be done to fix the problem. Some water quality violations are more serious than others.

If nitrates (concentration over 10 milligrams per liter (mg/L)), E. coli, or fecal coliform bacteria are found –

DO NOT DRINK THE WATER.

Immediately notify your employees and customers that the water is not safe to drink and contact your state drinking water program for further instructions.

The state will require you to take several actions:

- Explain the problem to your employees and customers as soon as possible, and issue a public notice to inform anyone who may have recently used your facility.
- Gather more water samples to confirm the contamination.
- Immediately find and eliminate the source of the contamination.

The state will work closely with you to make sure you complete these steps correctly. State staff will help to protect the health of you, your employees, and your customers. Once you've eliminated the contamination from your system and completed all public notice requirements, the state will consider your system in compliance.

Resources

Drinking Water

Connecticut: www.ct.gov/dph

Maine: www.maine.gov/dhhs/eng/water

Massachusetts: www.mass.gov/dep/water/drinking.htm

New Hampshire: www.des.state.nh.us/DWGB/

New York: www.health.state.ny.us/environmental/water/drinking

Rhode Island: www.health.ri.gov/topics/drinkingwater.php

Vermont: www.vermontdrinkingwater.org/wsd.htm

U.S. EPA Region 1: www.epa.gov/region1/eco/drinkwater

U.S. EPA National: <http://epa.gov/safewater>

Underground Storage Tanks

Connecticut: www.ct.gov/dep/ust

Maine: www.maine.gov/dep/rwm/ust

Massachusetts UST: www.mass.gov/dfs/osfm/fireprevention/ust

LUST: <http://mass.gov/dep/cleanup>

New Hampshire UST: www.des.state.nh.us/orcb/ustprog.htm

LUST: www.des.state.nh.us/orcb/irs.asp

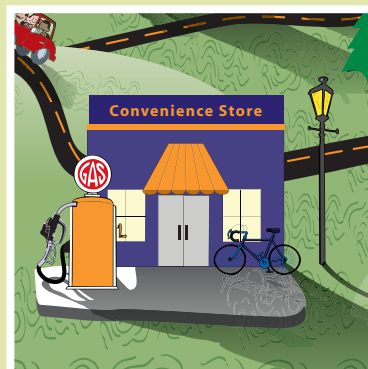
New York: www.dec.ny.gov/chemical/287.html

Rhode Island: www.dem.ri.gov/programs/benviron/waste

Vermont: www.anr.state.vt.us/dec/wastediv/ust/home.htm

U.S. EPA Region 1: www.epa.gov/region1/topics/cleanup/ustorage.html

U.S. EPA: <http://epa.gov/oust>



It is easier to prevent contamination than to clean it up. There are many things that you can do to prevent leaks and avoid shutting off your water supply.

Check Your System!

Even though many tank system components are underground, there are several operation and maintenance checks an owner/operator can do to make sure the system is running properly.

Ask yourself: Have all applicable state tank installation, maintenance, and monitoring requirements been met?

Do the inventory records match up? Are spill buckets clean of water, oil, and debris? Are all alarms set up properly and monitored adequately? Is the tank system eligible for coverage from a state fund or is the tank insurance policy up to date?

Prevent Leaks During A Fuel Delivery!

Overfilling a tank during a fuel delivery is a common way for leaks to occur. Since deliveries can happen at any time, an owner/operator might not be present during a delivery. What can you do to prevent leaks?

Know what type of overfill protection you have. This can be an overfill alarm, automatic shutoff device, ball float valve, or vent alarm. Make sure your protection system is operating correctly, be aware of the location of any alarms, and train employees on what to do if an alarm goes off.

Order the right amount of gas! Check inventory records carefully to clarify how much gas is needed to appropriately fill your tank. A tank should be filled to only about 90 percent capacity. Exceed that and you could overfill the tank, which may result in a hazardous spill.

Check your spill buckets after delivery to see if they contain water, oil, or debris. If so, remove and dispose of the contents properly.

Keep Customers and Employees Aware!

Customers fueling their vehicles are also a source of leaks. Post signs instructing them not to top off their tanks and to notify employees if a spill occurs.

Train employees on how to respond to a spill. They should know how to stop a release (emergency pump shutoff switches should be plainly labeled), who to call when a spill occurs, how to secure the area, what materials to use to manage and clean up a spill, and where those materials are located. Your stock of spill materials should include:

- Containment devices, such as absorbent pads, containment booms and pillows.
- Absorbent material made specifically for spilled fuel or other suitably absorbent material such as cat litter, sand, and sawdust. Be sure to properly dispose of used absorbent material.
- Mats or other material capable of keeping fuel out of storm drains.
- Caution tape, traffic cones, and warning signs.
- Protective equipment and safety gear for employees.
- Spill/release plans that are up-to-date and available to staff.

Whenever possible, cover fueling areas with a canopy and ensure that fueling occurs on a concrete dispensing pad that is pitched to avert runoff. Minor spills can happen during fueling, and it is vital to prevent rain from mixing with fuel spills and transporting it to storm drains. Fueling areas should never be washed down unless the water is collected and disposed of properly. You should never allow wash-off water to run into a storm drain.

After a spill, test your water if you suspect contamination. If you find contamination, follow the steps on page xxxx.

**How can a well
be protected
from fuel
contamination?**

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Taking action to protect your drinking water source is your responsibility as a public water supply owner/operator. Many land-use activities can pollute a drinking water supply, so protecting the land around your water source is your first line of defense against contamination.

Always keep in mind the following steps:

- Know exactly where your well is located and ensure that it is protected from damage by cars, snowplows, etc.
- Avoid excessive use of pesticides, fertilizers, and other chemicals on your property, especially near the wellhead.
- Move dumpsters or other equipment not related to the water system away from the well.
- Slope the area around the well to keep surface runoff draining away from the well. Ensure that well caps are watertight and vents are properly screened.
- Store and dispose of hazardous chemicals and wastes properly, never dumping them onto your property or down drains.
- If you have a septic system, do not discharge petroleum products or hazardous chemicals into it and make sure it is maintained in good condition.
- Know that floor drains, such as those in service bays, may not discharge petroleum products or hazardous waste or chemicals into a septic system or a dry well. Liquids from floor drains that discharge to a sewer must flow through an oil/water separator and the discharge must be in compliance with local sewer ordinances. Floor drains and oil water separators no longer in use must be closed in accordance with state and local regulatory requirements.
- Be aware of potential sources of contamination on neighboring properties, such as manufacturing facilities and dry cleaners, and consider testing for contaminants associated with these activities.

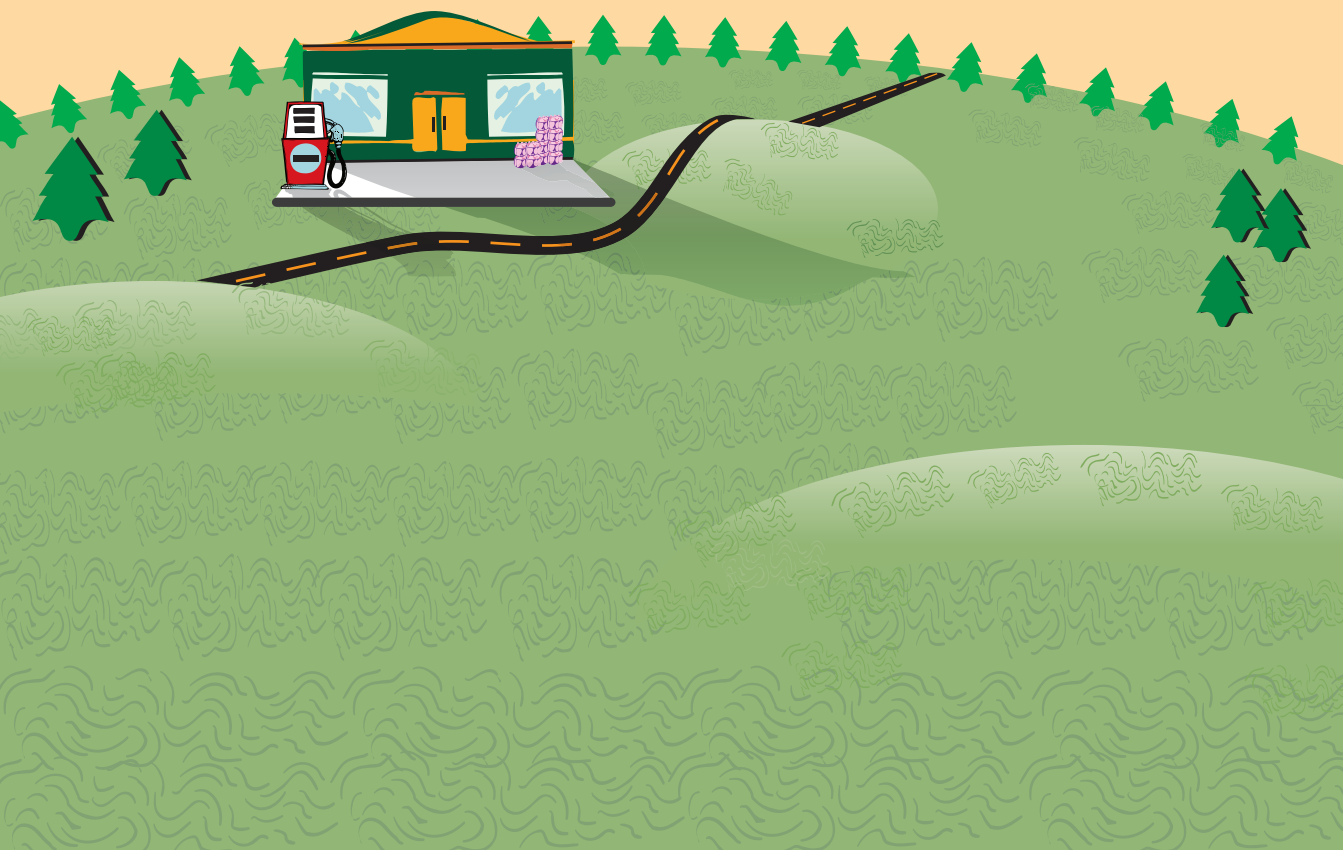
How can a well be protected from other sources of contamination?

If a surface spill or overfill occurs and is contained, immediately absorb and clean up the fuel. Contact your state's underground storage tank agency and drinking water program if you observe:

- A spill or overfill of fuel that causes a sheen on nearby surface water (flooded grass areas, streams, ponds, etc.) or exceeds the amount that your state has determined can be contained and cleaned up without notifying authorities. Minor spills (less than a gallon) generally do not need to be reported, but it is advisable to contact the state to determine its specific reporting requirements.
- A fuel release on your property or a release on surrounding properties. Be alert for fuel vapors in sewers, basements, and around utility lines, and for any signs of releases that may contaminate soil, surface water, or groundwater.
- Unusual operating conditions, such as water in tanks, unexplainable losses or gains in inventory, or erratic behavior of a dispenser.

Again, if you observe any of the above, you must contact both the tank and drinking water programs of your state. And remember, test your water if you suspect any contamination has occurred.

What if fuel is spilled on the ground?



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