

Texas on Tap

February 2021

Rural Water System Operators: Your Lifeline from the Pipeline

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Your Texas Rural Water News Source

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Rural Water System Operators: Your Lifeline from a Pipeline

Do you know what it takes to bring safe, clean water to your faucet every day? Most people have a general idea about where their water comes from, but most do not know the intricate processes involved with sourcing, treating and distributing the water in their communities. Of the various roles at your local utility, the water operator is arguably the most critical – they are the first line of defense in public health.

Since the 1950s, Texas has required all public water systems to have at least one licensed water operator on staff. In Texas, licensing

requirements are managed by the Texas Commission on Environmental Quality (TCEQ), and operators can be licensed in a variety of areas, including water, wastewater, distribution and reuse. There are several levels of licensure for an

operator. As their experience and expertise expands, a water operator can advance from a “D” to an “A” license. The required training courses include math and chemistry, which are necessary to ensure proper chemical dosages. Water operators must renew their license every three years, requiring continuing education hours to keep them current and knowledgeable in their field.

Your system’s water operators maintain and repair the pipes, valves, pumps, controls, engines and other equipment used to produce water. They also run the equipment and control the processes that clean our drinking water. Once the water leaves the treatment plant, it goes into the distribution system that brings that water to the members of the community. Water operators

monitor the miles of pipes and pumps, as well as any storage tanks, in the distribution system.

One major task of water operators is to disinfect our drinking water and maintain a disinfection residual, usually a form of chlorine, in the distribution system. A residual is a low level of the disinfectant that remains in the water after its initial application to protect against waterborne contaminants.

Operators sample and test the water at various points during treatment and distribution to ensure the treatment processes are working



correctly to maintain water quality. In addition to daily tests to measure the disinfectant residual, the operator takes monthly bacteriological samples from the distribution system and has those samples tested by a state-approved laboratory.

Rural water operators can monitor the activity of water in their service area using Supervisory Control and Data Acquisition (SCADA) software, which interacts with devices such as sensors, valves, pumps, and motors. Using this technology, the operator can check for any irregularities that will clue the operator to issues in the system.

If the system receives a customer complaint, the water operator flushes dead-end mains and distribution lines. Fire hydrants and flush valves

are designed to catch “trash” in the water and provide a place to remove it from the distribution system. Once the flushing starts, the operator cannot stop flushing until the water is clear and the desired residual is reached.

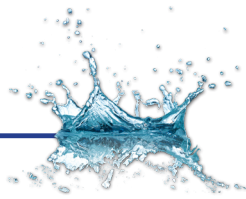
Other daily duties for an operator could include repairing leaks found in the line, maintaining customer meters, responding to utility locates and servicing taps. Other tasks could include adding new services, obtaining easements for pipe routing, collecting GPS data on assets, or hauling around equipment.

Regardless of what the task entails, everything the water operator does every day is so the community served by the water system can

have safe, clean drinking water. Your water system has an operator on call 24 hours a day, 7 days a week to make repairs and respond to emergencies so you can trust in the availability and quality of your water. Most people don't think of the water operator when they think of essential or critical workers, but these individuals cannot work remotely to perform these crucial tasks that make such a large impact on our daily lives. When an operator becomes ill, it is crucial for another licensed person to step in and maintain all operations. This is always the case but is especially important to acknowledge during a pandemic that has disrupted the workforce and has put our critical water operators at risk.

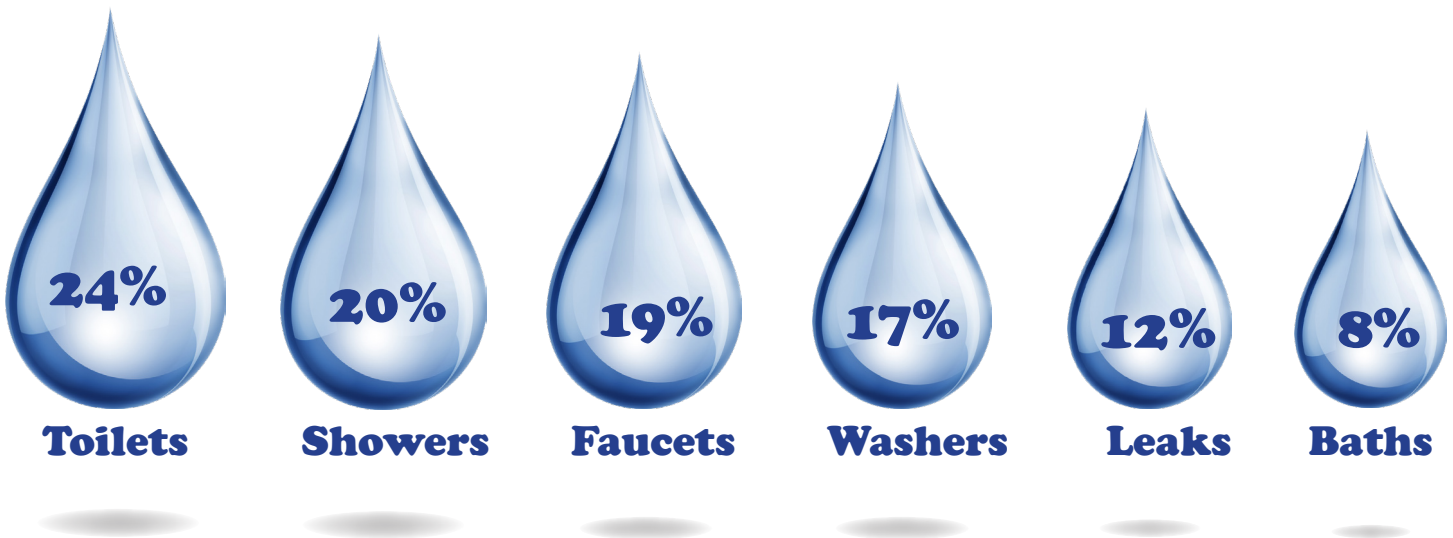
So next time you see a water operator out in the field, say “HI” and let them know that you see and value their work. Providing you with safe, clean water is the most rewarding part of the job.

Home WATER Use



Where did my water go?

The water industry estimates that an average person uses roughly 2,500 -3,000 gallons of water monthly, so a family of 4 would use 10,000 -12,000 gallons for bathing, cooking, washing, recreation and watering. Below you'll find approximate percentages of water use per month.





**Know what's below.
Call before you dig.**

There are millions of miles of water pipelines and other underground utilities in Texas, possibly some in your yard that you are unaware of. Whether your next project involves planting shrubs or installing a new fence, it is always best to pick up the phone to call 811 and your local water system so they can come out, free of charge, to check for underground utilities. The safest way to dig is to know what's below.

According to the Common Ground Alliance, which was formed to join all 50 states in an effort to prevent damage to the 20 million miles of underground utilities and infrastructure, a utility line is damaged every 6 minutes in the United States. This damage can cause service disruptions to your home, neighborhood or even cause severe injury. All too frequently, homeowners put themselves and their neighbors at risk by skipping the necessary step of calling 811.

Damage that occurs from hitting underground utilities includes the following:

- Electrical lines and cable damage — you risk personal injury from being

electrocuted, as well as electricity interruption in your neighborhood.

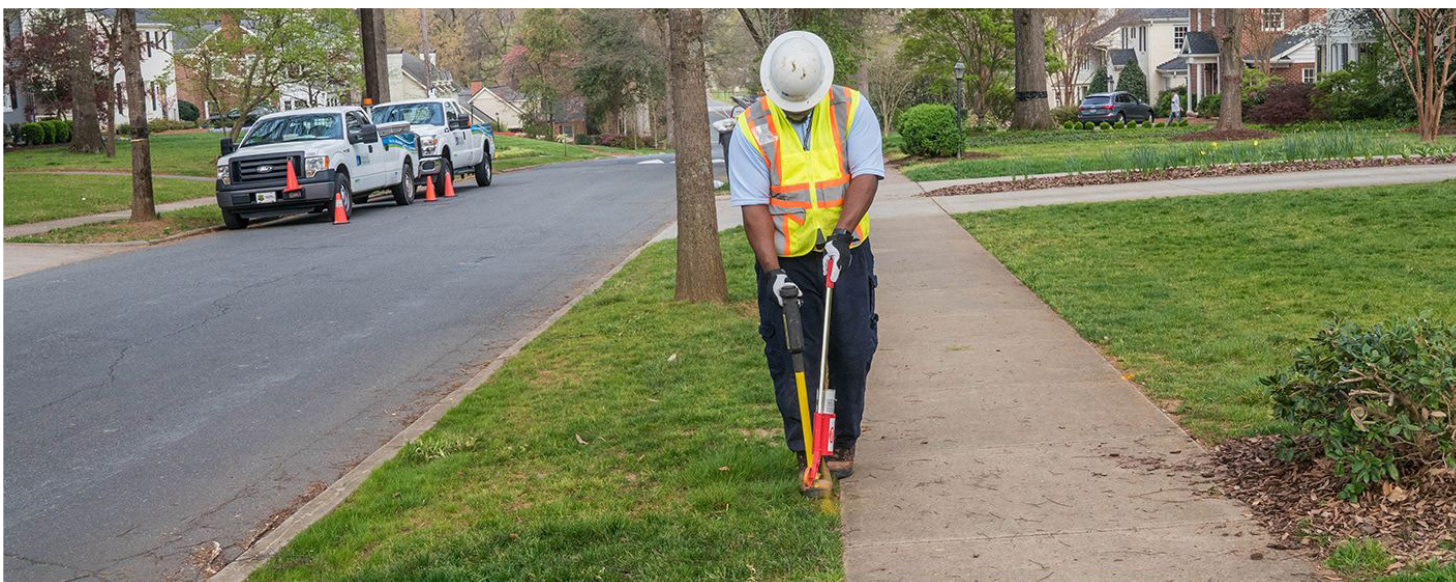
- Gas and oil line damage — this has the potential to be fatal for you and your neighbors.
- Water line damage — This can cause service disruptions for you and your neighbors as well as the potential to cause severe water damage.
- Sewer line damage — Potential health risks associated with sewer line damage include the releasing of toxins that contain methane which could lead to the risk of explosion and asphyxiation. Additionally, severe environmental damage is possible by creating an illicit discharge.
- Financial penalties can also be assessed if the proper procedures are not followed.

If you or a hired contractor plan to do excavation in your yard, Texas law requires that you contact 811 at least two business days before digging. A good rule of thumb is to give them a call 7 days prior to allow more than enough time for a response. Often times

your local water provider is not a part of the 811 system so it's a great idea to call them separately so they can check for water and sewer lines as well.

The process to start a locate request is very easy and starts with just a simple call. You will be asked to provide your name and information pertaining to the work such as location. Additionally, you will be required to mark the work area with either white paint or white flags so that the locator can clearly identify the excavation location.

Any time you perform an excavation that results in damage to a utility you should always immediately notify 811. If so, you must stop working immediately and wait for the utility operator to respond. If you cause damage to a gas, electric or sewer utility line its best to leave the immediate area and call 911. Never start a vehicle or any gas- or diesel-powered equipment after a line has been damaged as this has the potential to cause an explosion.



Texas 811 will then begin the process of notifying all effected utilities in your area. Once the utility locator is on-site, they will mark the area with different color flags to indicate the types of utility lines that are present. The best practice is to carefully dig within 18 inches of each flag. Due to environmental factors, the utility locator will never provide an exact depth of utility lines. Keep in mind that some utility lines may not be very deep, so it is important to use extreme caution even while digging with a shovel or pick.

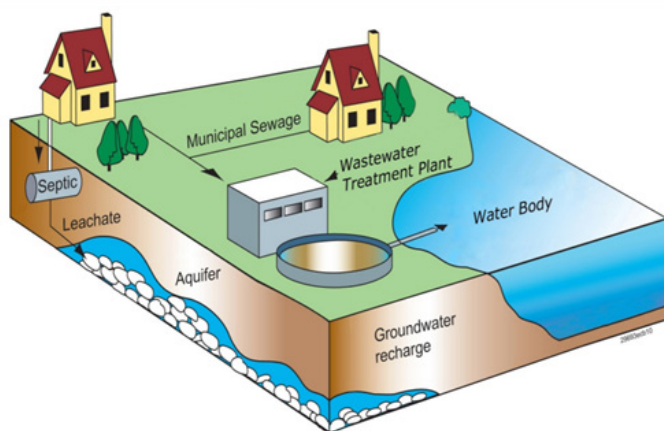
You have a great responsibility to protect the life and health of your family and neighbors. When in doubt or before any excavation project, whether it's as simple as planting a tree or as involved as building a pool, always call 811 and your local water provider. The service is always free and the life you save could be you own!

How to Keep Pharmaceuticals Out of Our Water Supply

“What do I do with my unused medicines?”

That's a question that is often asked. This has become a hot topic in the last several years, as we're hearing more about medicines showing up in our drinking water sources.

Pharmaceuticals that are unwanted by the consumer are not regulated as hazardous wastes. Therefore, it's imperative that as consumers we must take action to properly dispose of these pharmaceuticals. While there are a few pharmaceuticals on the market that meet the definition of hazardous waste



under the Federal Resource Conservation and Recovery Act, the Act exempts household hazardous waste from the U.S. Environmental Protection Agency's (EPA's) disposal requirements. However, it is still imperative that everyone aid in the proper disposal of medicines to ensure drinking source waters are not contaminated.

First, let us talk about how medicines can end up in our drinking water sources. In homes that use septic tanks, prescription and over-the-counter drugs flushed down the toilet can leach into the ground and seep into our ground water/aquifers.

In areas where residences are connected to wastewater treatment plants, prescription and over-the-counter drugs poured down the sink or flushed down the toilet can pass through the treatment system and enter rivers, streams and lakes. Due to prohibitive costs and lack of technology, municipal wastewater systems do not remove medicines before the treated water is released into the outfall. This means those medicines may flow downstream to serve as sources for community drinking water supplies. Just like wastewater treatment plants, water treatments plants are generally not equipped to routinely remove medicines.

The best option for disposal is collecting all unwanted or expired prescription and over-the-counter drugs and dispose through a drug take-back program. EPA is currently recommending incineration as the preferred disposal method for household drug take-back programs, because they believe that incineration will safely address environmental concerns. EPA has designated April 24 as this year's National Drug Take Back Day.

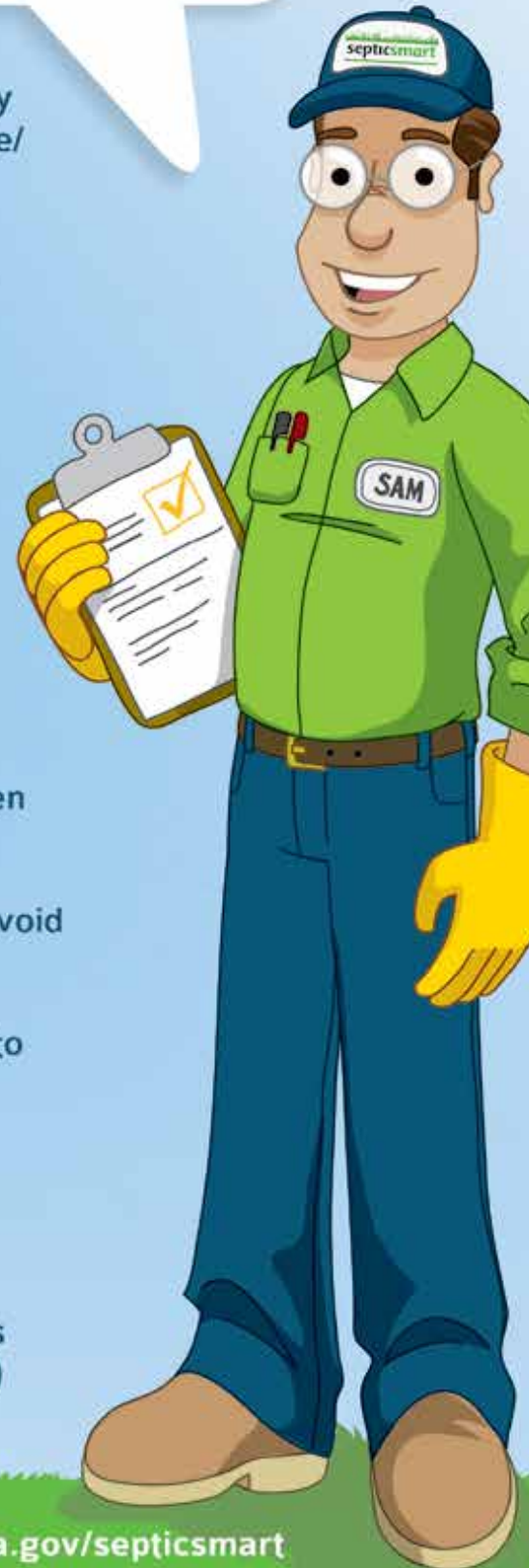
Consumers are encouraged to participate in this event. To locate a collection site near you go to: <https://apps2.deadiversion.usdoj.gov/pubdispsearch/spring/main?execution=e1s1>, enter your city name and zip code, you will receive a listing of all available options. Many CVS, Walgreens and other pharmacies have a year-round drug take back service. To locate one near you simply go to www.googlemaps.com. Enter “drug take back locations near me” in the search, and you will receive addresses and phone numbers of those pharmacies that participate.

As a last resort, if you happen to live in an area where there is no convenient location in which

continued on page 8

Top 10 Ways to Be a Good Septic Owner

- ✓ Have your system inspected every three years by a qualified professional or according to your state/local health department's recommendations
- ✓ Have your septic tank pumped, when necessary, generally every three to five years
- ✓ Avoid pouring harsh products (e.g., oils, grease, chemicals, paint, medications) down the drain
- ✓ Discard non-degradable products in the trash (e.g., floss, disposable wipes, cat litter) instead of flushing them
- ✓ Keep cars and heavy vehicles parked away from the drainfield and tank
- ✓ Follow the system manufacturer's directions when using septic tank cleaners and additives
- ✓ Repair leaks and use water efficient fixtures to avoid overloading the system
- ✓ Maintain plants and vegetation near the system to ensure roots do not block drains
- ✓ Use soaps and detergents that are low-suds, biodegradable, and low- or phosphate-free
- ✓ Prevent system freezing during cold weather by inspecting and insulating vulnerable system parts (e.g., the inspection pipe and soil treatment area)



to drop off your medications, you can still do your part by following these steps:

1. Take the prescription drugs out of their original containers.
2. Mix drugs with an undesirable substance, such as cat litter or used coffee grounds.
3. Put the mixture into a disposable container with a lid, such as an empty margarine tub, or into a sealable bag.
4. Conceal or remove any personal information, including Rx number on the empty containers by covering it with permanent marker or duct tape, or by scratching it off.
5. The sealed container with the drug mixture and the empty drug containers can now be placed in the trash.

list may be especially harmful and, in some cases, fatal if used by someone other than the person for whom they were prescribed. Opioids are a good example of such a drug.

Immediately flushing these medicines down the toilet helps to keep children, pets and other individuals safe by making sure these drugs are not accidentally ingested, touched or misused.

Please note that FDA's flush list indicates which old, unwanted, expired or unused medicines to immediately flush when take-back options are not readily available. Links in the flush list direct you to specific disposal instruction in each medicine's label. To access this list go to: <https://www.fda.gov/drugs/disposal-unused-medicines-what-you-should-know/drug-disposal-flush-potentially-dangerous-medicine#FlushList>.

Protect Our Water Supply.

Don't flush:
-Medication
-Cosmetic products
-Personal care products

Studies have shown our drinking water to contain traces of pharmaceuticals, including antibiotics and medicines used to treat anxiety, epilepsy, heart problems, infection, etc.

**Stop
pharmaceutical
pollution.**

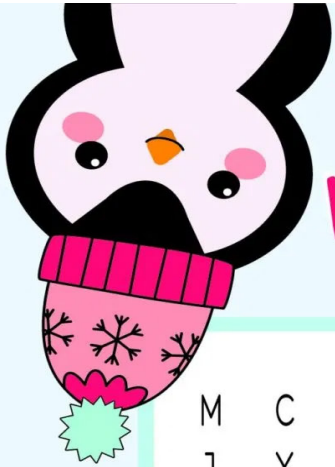


**Keep contaminants out of
our rivers, streams, and
drinking water!**

FDA recognizes that the recommendation to flush certain potentially dangerous medicines only when a take-back option is not readily available raises questions about the impact of the drugs on the environment and the contamination of surface and drinking water supplies. However, they believe that the known risk of harm to humans from accidental, and sometimes fatal, exposure to medicines on the flush list far outweighs any potential risk to the environment from flushing these leftover or unused medicines

With this said, the U.S. Food and Drug Administration (FDA) maintains a list of drugs they recommend flushing ONLY when an immediate drop-off disposal option is not readily available. The medicines on this flush

FIND THE WORDS AND WARM UP YOUR WINTER



WINTER WORD SEARCH

M	C	H	X	B	Z	P	Q	I	Y	E	M	M	A	M
J	X	O	S	N	O	W	F	L	A	K	E	C	S	Q
O	I	S	M	O	R	E	J	O	P	Z	D	Z	Q	Z
B	G	N	F	H	T	R	C	A	N	U	C	L	Y	R
E	L	D	S	Z	J	O	D	X	C	W	P	X	F	I
S	O	V	B	E	C	M	B	R	Q	K	Q	Y	D	D
H	O	U	I	T	P	S	P	L	P	T	E	B	C	F
O	U	V	O	T	N	N	N	T	I	A	D	T	E	R
V	S	H	S	F	F	O	A	O	C	Z	I	C	Y	O
E	R	W	G	R	S	W	I	P	W	F	Z	F	D	S
L	X	S	D	O	Q	M	R	C	R	B	M	A	U	T
M	U	E	Z	Z	L	A	F	A	I	A	A	Y	R	Y
L	L	I	C	E	G	N	C	L	U	C	M	L	A	D
S	E	L	X	N	A	S	O	D	F	D	L	Y	L	X
M	I	T	T	E	N	S	B	Z	N	D	L	E	O	B

BLIZZARD

FROSTY

FROZEN

HOT COCOA

ICICLE

ICY

IGLOO

JACKET

MITTENS

SCARF

SHOVEL

SLED

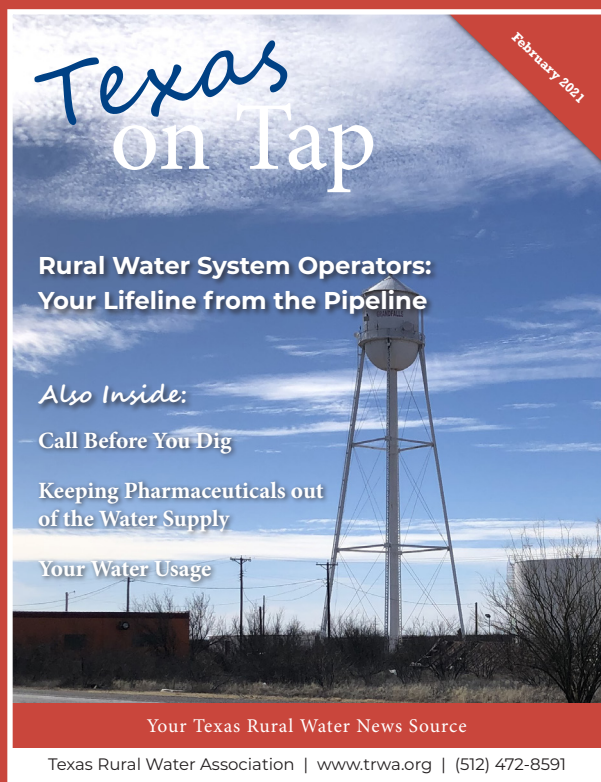
SNOWBALL

SNOWFLAKE

SNOWMAN



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