2020

Water Quality Report

FORT WORTH®

FORT WORTH®

Here For YOU!

Compromised immune systems may be more vulnerable

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791.

On the cover: Water samples being taken at our Rolling Hills Water Treatment plant.

Message From the Director

Providing safe, reliable and affordable drinking water to our customers is our top priority.

This report provides details about our drinking water's quality in 2020. Sometimes the requirements for this report make the information hard to understand. Please contact us at either 817-392-4477 or wpe@fortworthtexas.gov if you have questions.

The most important thing you need to know is that the quality of our drinking water is very good.

It takes a team of dedicated employees to make that possible. The team includes treatment operators, mechanics, maintenance workers, chemists, microbiologists, engineers, accountants, customer service representatives, office staff and many others.

The pandemic required adapting how we get our jobs done. Our staff has shown resiliency and perseverance as they worked to keep safe water flowing to your homes and businesses.

In addition to the required information, please read the stories about Fort Worth's efforts to improve the environment and protect our water supply.

With kind regards,

Chris Harder, Director
Fort Worth Water

Fresh Start for Citizen Scientists

A volunteer citizen scientist program that for three decades has researched water quality in Texas waterways is getting a fresh start in Fort Worth.

Leading the city's Texas Stream Team is Kayla Miller, a senior environmental specialist in water quality monitoring in Fort Worth's Code Compliance Department.

Miller started Fort Worth's partner program in the fall of 2019 at the request of Cody Whittenburg, Fort Worth's environmental program manager. Miller is a certified citizen scientist and instructor.

Currently, she has two high school students conducting research, one at a spot along the Trinity River and the other at an unnamed tributary that feeds into the Trinity on the city's southwest side. The Fort Worth Nature Center & Refuge in far north Fort Worth is also monitoring three sites on its property.

Expanding the program slowed during the pandemic in 2020, but efforts to grow the team are again underway, Miller said.

"Basically, anyone who is interested qualifies," Miller said. "I have probably a dozen people who have reached out to me interested in training. I have one mom who wants to monitor with her 10-year-old daughter."

Housed at the Meadows Center for Water and the Environment at Texas State University in San Marcos, the Texas Stream Team has more than 11,000 citizen scientists trained to collect surface water and environmental quality data that is used to protect the 191,000 miles of Texas waterways, according to their website.

The team is comprised of community members, students, educators, academic researchers, environmental professionals, and, public and private sector partners. They monitor water conditions at more than 400 sites annually.

Citizen scientists monitor basics such as dissolved oxygen, pH, and temperature to advanced skills monitoring of nitrate-nitrogen, orthophosphate, turbidity and *E. coli*.

Citizen scientists pick their research location and collect data once a month, which takes about two hours, Miller said. The volunteers are asked to participate for a minimum of one year, she said.

"To get data we can use, it needs to be long-term," she said.

Miller submits the local data to the Texas Stream Team database.

The data can be used in many ways, such as a warning to potential problems in a waterbody, to track water quality trends and to develop watershed protections plans.

Photo: Two citizen scientists pulling water sample from Trinity River

Removing Litter Impacts Water Quality

Fort Worth's surface waters are a valuable resource for drinking water, flood control, economic development, recreation and aesthetics. Minimizing pollution reduces public costs for cleaning waterways and helps provide affordable clean, safe drinking water for all residents.

Litter is a pervasive surface water-quality issue. The goal of the city's litter program is to change behaviors to reduce the prevalence of litter in the waterways. The Code Compliance Environmental Quality Division and Keep Fort Worth Beautiful plan and coordinate strategic comprehensive litter control initiatives across the city.

One of the most exciting new initiatives in 2021 is the fundraising effort to build a solar-powered waterwheel trash interceptor for the Trinity River. A waterwheel can collect and remove up to 50,000 pounds of solid waste per day, the equivalent of 2-1/2 garbage trucks.

Contact Enviromental@FortWorthTexas.gov for more information on the city's litter abatement programs.

Photo & statistics courtesy of Clearwater Mills LLC www.clearwatermills.com

Initiatives

- Engaging tens of thousands of volunteers in cleanup events
- Abating hundreds of illegal dumping sites
- Installing surveillance cameras at illegal dump sites
- Placing floatable litter and debris collection devices on local waterways
- Contributing to regional and statewide litter initiatives to protect watersheds
- Providing safe alternatives for the disposal of tires, bulk waste, household hazardous waste, electronics, compostable materials, yard waste and recyclable goods
- Supporting a city street sweeping program to keep litter and contaminants out of storm drains
- Inventorying trash/recycling bins in public places and securing grant funding to strategically place new containers
- Enforcing city ordinances
- Studying solutions to existing and new litter issues, including microplastics

Drinking Water Quality Test Results

Compound	Measure	Year	Violation	MCL	Your water	Public Health Goal	Common Sources of Substance
Turbidity	NTU	2020	No	TT=1	0.3		Soil runoff (Turbidity is a measure of the cloudiness of water. It is monitored because it is a good indicator of the effectiveness of the filtration system.)
				TT= Lowest monthly % of samples ≤ 0.3 NTU	99.9%	N/A	

Compound	Year	Violation	MCL	Your water	Range	Public Health Goal	Common Sources of Substance
Total Coliforms (including fecal coliform & E. coli)	2020	No	TT = 5% of monthly samples are positive	1.7%	0 to 1.7%	0	Coliforms are naturally present in the environment as well as feces; fecal coliforms and E. coli only come from human and animal fecal waste.

Compound	Measure	Year	Violation	MCL	Your water	Range	Public Health Goal	Common Sources of Substance
Beta/photon emitters	pCi/L	2020	No	50	6.8	0 to 6.8	0	Decay of natural and man-made deposits
Arsenic	ppb	2020	No	10	1.5	0 to 1.5	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Atrazine	ppb	2020	No	3	0.1	0 to 0.1	3	Runoff from herbicide used on row crops
Barium	ppm	2020	No	2	0.06	0.05 to 0.06	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	ppb	2020	No	100	3.3	0 to 3.3	100	Erosion of natural deposits; discharge from steel and pulp mills
Cyanide	ppb	2020	No	200	159	0 to 159	200	Discharge from plastic and fertilizer factories; discharge from steel and metal factories
Fluoride	ppm	2020	No	4	0.52	0.15 to 0.52	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	ppm	2020	No	10	0.58	0.19 to 0.58	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen)	ppm	2020	No	1	0.02	0.01 to 0.02	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Bromate	ppb	2020	No	10	4.79	0 to 11.4	0	By-product of drinking water disinfection
Haloacetic Acids	ppb	2020	No	60	10.6	3 to 23	N/A	By-product of drinking water disinfection
Total Trihalomethanes	ppb	2020	No	80	21.0	1.37 to 56	N/A	By-product of drinking water disinfection

Compound	Measure	Year	Violation	MRDL	Your water	Range	Public Health Goal	Common Sources of Substance
Chloramines	ppm	2020	No	4	3.5	1 to 11	4	Water additive used to control microbes

Compound	MCL	Year	Violation	High	Low	Average	Public Health Goal	Common Sources of Substance
Total Organic Carbon	TT = % removal	2020	No	1	1	1	N/A	Naturally occurring

It is used to determine disinfection by-product precursors. Fort Worth was in compliance with all monitoring and treatment technique requirements for disinfection by-product precursors. **A removal ratio of 1 in Specific Ultra Violet Absorbance calculations is considered passing.**

Information About Drinking Water

Contaminants found in drinking water may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact customer service at 817-392-4477.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

Microorganism Testing Shows Low Detections in Raw Water

Tarrant Regional Water District monitors raw water at all intake sites for *Cryptosporidium*, *Giardia Lamblia* and viruses. The source is human and animal fecal waste in the watershed.

The 2020 sampling showed occasional low level detections of *Cryptosporidium* and *Giardia lamblia* in some but not all of the water supply sources. No viruses were detected.

Cryptosporidium and *Giardia Lamblia* are removed through disinfection and/or filtration.

TCEQ Assesses Raw Water Supplies for Susceptibility

Fort Worth uses surface water from Lake Worth, Eagle Mountain Lake, Lake Bridgeport, Richland Chambers Reservoir, Cedar Creek Reservoir, Lake Benbrook and the Clear Fork Trinity River.

Fort Worth owns Lake Worth. The U.S. Army Corps of Engineers is responsible for Benbrook Lake. The other four lakes are owned and operated by Tarrant Regional Water District.

The Texas Commission on Environmental Quality completed an assessment of Fort Worth's source waters. TCEQ classified the risk to our source waters as high for most contaminants.

High susceptibility means there are activities near the source water or watershed that make it very likely that chemical constituents may come into contact with the source water. It does not mean that there are any health risks present.

Tarrant Regional Water District, from which Fort Worth purchases its water, received the assessment reports.

For more information on source water assessments and protection efforts at our system, contact Stacy Walters at 817-392-8203.

Further details about the source-water assessments are available in the Texas Commission on Environmental Quality's Drinking Water Watch database at www.bit.ly/TCEQDWW2020.

Photo: Two Pretreatment employees take sample from a water testing site

Secondary Constituents

These items do not relate to public health but rather to the aesthetic effects. These items are often important to industry.

Compound	Measure	Your water
Bicarbonate	ppm	108 to 131
Calcium	ppm	37.9 to 50.8
Chloride	ppm	19.3 to 37.6
Conductivity	µmhos/cm	324 to 440
pH	units	8.2 to 8.4
Magnesium	ppm	4.24 to 8.12
Sodium	ppm	18 to 26.9
Sulfate	ppm	20.6 to 36.5
Total Alkalinity as $CaCO_3$	ppm	108 to 131
Total Dissolved Solids	ppm	181 to 277
Total Hardness as $CaCO_3$	ppm	112 to 160
Total Hardness in Grains	grains/gallon	7 to 9

Potential Raw Water Impurities

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

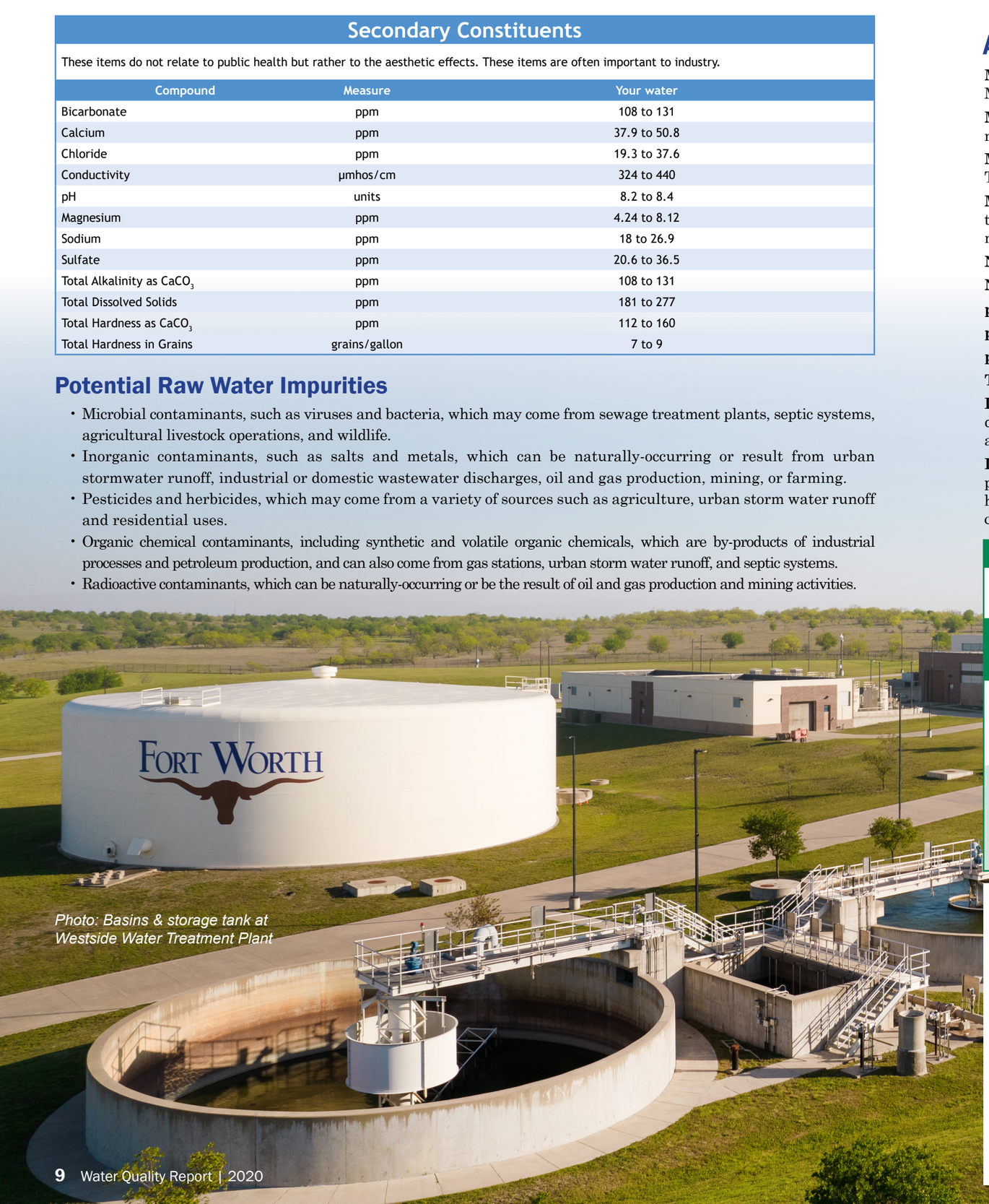


Photo: Basins & storage tank at Westside Water Treatment Plant

Abbreviations Used in Tables

MCL: Maximum Contaminant Level – the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal – the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL: Maximum Residual Disinfectant Level – the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfectant Level Goal – the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A - not applicable/does not apply

NTU – Nephelometric Turbidity Unit; a measure of water turbidity or clarity

pCi/L – Picocuries per liter; a measure of radioactivity

ppb – Parts per billion or micrograms per liter (µg/L)

ppm – Parts per million or milligrams per liter (mg/L)

TT: Treatment Technique – a required process intended to reduce the level of a contaminant in drinking water

Level 1 assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria were found. Fort Worth was not required to conduct a Level 1 assessment in 2020.

Level 2 assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an Escherichia coli (E. coli) maximum contaminant level (MCL) violation has occurred and/or why total coliform bacteria were found on multiple occasions. Fort Worth was not required to conduct a Level 2 assessment in 2020.

Unregulated Contaminants

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Compound	Measure	MRDL	Public Health Goal	Average	Range of Detects	Common Sources of Substance
Bromoform	ppb	Not regulated	0	0.85	0 to 3.53	By-products of drinking water disinfection; not regulated individually but regulated as a group called Total Trihalomethanes
Bromodichloromethane	ppb	Not regulated	0	2.93	3.18 to 17.5	
Chloroform	ppb	Not regulated	70	3.05	3.10 to 24.7	
Dibromochloromethane	ppb	Not regulated	60	2.73	1.59 to 11.8	
Dibromoacetic Acid	ppb	Not regulated	N/A	1.33	1.70 to 3	By-products of drinking water disinfection; not regulated individually but regulated as a group called Haloacetic Acids
Dichloroacetic Acid	ppb	Not regulated	0	4.11	4.20 to 11	
Monobromoacetic Acid	ppb	Not regulated	N/A	0.02	0 to 1	
Monochloroacetic Acid	ppb	Not regulated	70	0.49	1 to 5	
Trichloroacetic Acid	ppb	Not regulated	20	0.1	0 to 5	

Conservation First

In 2020 saved **2.6** billion gallons

Per capita usage **152** gallons per day

In 2020, Fort Worth saved 2.6 billion gallons of water. A much higher number of gallons, when compared to the 51 million gallons from 2019, and due to the inclusion of reuse water, not included in the past.

On average, during 2020 each Fort Worth resident used 152 gallons of water per day, an increase of 5 gallons a day from the 147 gallons per day recorded in 2019. Experts attribute the increase to people working from home, using more water, and staying virus-free due to the COVID-19 pandemic.

Getting the Lead Out

Five years ago, Fort Worth decided to locate and then remove all city-owned lead service lines.

As of March 31, the utility has surveyed 86 percent of the nearly 276,000 water meters citywide and 98.5 percent of the meters inside Loop 820, where the bulk of the lead lines are found.

Replacing the lead lines is 78 percent completed. The City Council recently approved spending an additional $400,000 on the project, which began about five years ago. So far, 1,444 of the 1,830 lead service lines identified are replaced.

The service line is the piping that connects the home or business to the water main. The city and the property owner share ownership of the service line.

The city owns the portion from the main to the water meter, including the water meter. The property owner is responsible for the portion from the meter to the point it enters the home or business, as well as all the plumbing in the home or building.

Eliminating lead service lines may not eliminate lead in drinking water. The plumbing materials used in the home or business could contain lead, such as solder, pipes, faucets (brass) and fittings.

Lead dissolves into water over time through corrosion – a dissolving or wearing of metal caused by a chemical reaction between water and plumbing materials. Fort Worth adjusts the water's pH to control this reaction.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

Fort Worth is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by running your faucet for 30 seconds to two minutes before using water for drinking or cooking.

If you are concerned about lead in your water, you can have it tested. The test is free for Fort Worth customers with known lead service lines. If you do not have a known lead service line, the cost is $15 per water sample. Email MyWaterAccount@FortWorthTexas.gov or call 817-392-4477 to make arrangements.

Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Visit www.FortWorthTexas.gov/departments/water/lead for tips to reduce your exposure to lead in drinking water and more information about Fort Worth's program.

Corrosion Control

To meet the requirements of the Lead and Copper Rule, Fort Worth achieves corrosion control through pH adjustment.

Lead and Copper Testing

Contaminant	Measure	Year	Violation	Action Level	90th percentile	# of sites exceeding action level	Public Health Goal	Common Sources of Substance
Lead	ppb	2020	No	15	7.7	1	0	Corrosion of household plumbing systems; erosion of natural deposits
Copper	ppm	2020	No	1.3	0.4	0	1.3	

90th Percentile Value:
90 percent of the samples were at or below this value. EPA considers the 90th percentile value the same as an "average" value for other contaminants. Lead and copper are regulated by a treatment technique that requires systems to control the corrosiveness of their water. If more than 10 percent of tap water samples exceed the action level, water systems must take additional steps.

Action Level:
The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Why Backflow Matters to Water Quality

Did you ever wonder why they install faucets so far above sinks? The reason is to create an airgap that keeps the water in the sink from flowing back into the faucet, causing backflow. So what is backflow?

Water flows from a faucet, showerhead, or sprinkler system because of pressure. Backflow happens when water flows the wrong direction through the pipes, usually from a loss of pressure on the supply-line side or by pressure increases on the customer side. Causes include water line breaks, repairs or shut-offs.

Also of concern are cross-connections, points of physical connection between drinking water and an actual or potential contamination hazard. Common cross-connections include:

- Submerging garden hoses into buckets, pools, spas, tubs or sinks
- Attaching garden hoses to chemical sprayers
- Connecting private wells and irrigation systems to public water supply lines
- Flooding events

An essential part of providing clean, safe drinking water to Fort Worth Water customers is ensuring one-way flow of disinfected, treated drinking water from the city's water distribution system to the home. Backflow and cross-connections can carry potential contaminants into the drinking water system, threatening public health and safety.

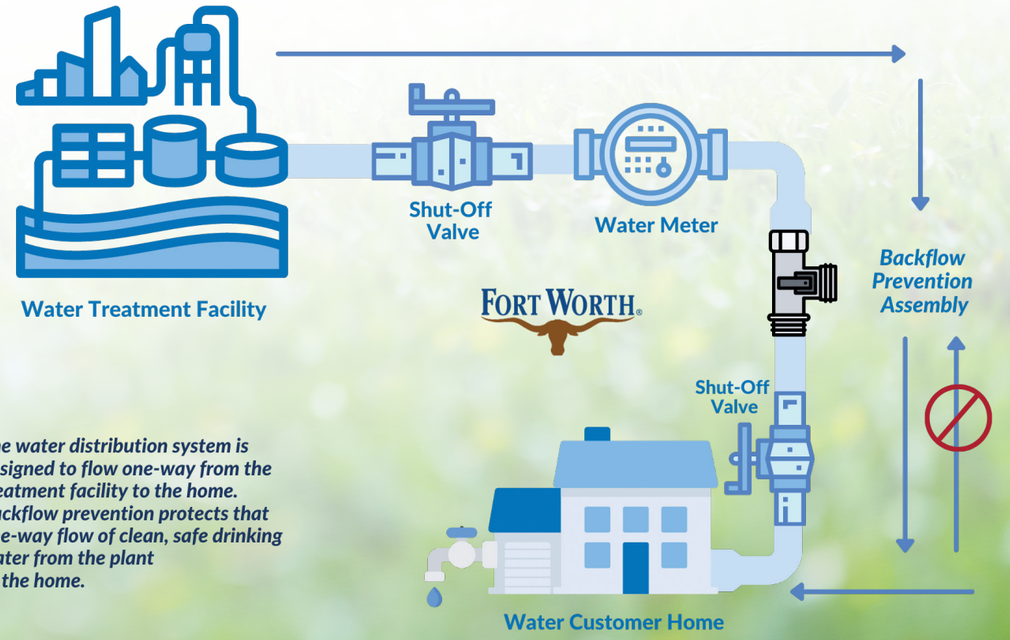
Preventing backflow requires installing the appropriate backflow-prevention assembly device between the water supply and potential sources of pollution.This creates a closed flow system that prevents water from flowing backward through the pipes.

Residential installations of these devices include between the water meter and the shut-off valve, and on hose bibs, irrigation systems, fire sprinkler systems connecting to the city water supply, and more.

Customers can protect the city's water distribution system from potential contamination by:

- Installing appropriate equipment or ensuring appropriate air gap is in place unobstructed at all backflow cross-connections
- Having systems regularly inspected by a licensed backflow professional
- Never submerging hoses into sources filled through water lines; including swimming pools, sinks, toilets, bathtubs, dishwashers and washing machines

Visit: www.FortWorthTexas.gov/departments/water/backflow to learn more about backflow and cross connections.



The water distribution system is designed to flow one-way from the treatment facility to the home. Backflow prevention protects that one-way flow of clean, safe drinking water from the plant to the home.

Despite Pandemic, TakeBack Was Successful

Too often, unused and expired prescription drugs find their way into our waterways and water supply, often times after being washed down the sink or flushed down the toilet. This is dangerous and potentially tragic.

That is why it was great to see hundreds of Fort Worth residents clean out their medicine cabinets and turn in prescription drugs during the October 2020 national TakeBack Meds event.

Nationwide, people turned in 839,543 pounds of unused and expired pharmaceuticals, according to the Drug Enforcement Administration.

In Fort Worth, 1,073 pounds of pharmaceuticals were brought to seven collection sites and in Texas, 65,791 pounds of drugs were turned in.

Storing unwanted and expired medications at home increases the risk for drug abuse or overdose. And, improper drug disposal can contaminate the soil if the medicines are thrown out in the trash.

While you might think our wastewater treatment plant takes care of those flushed medications, it does not. Most treatment plants, including Fort Worth's Village Creek Reclamation Facility, are not equipped to remove pharmaceuticals from the wastewater.

Since 2011, the DEA has hosted 20 national take back collection events, taking in more than 14.5 million pounds of medicine.

Fort Worth began its efforts in November 2010, when the water utility, Code Compliance and police hosted the city's first event.

In the past decade, Fort Worth has collected 35,665 pounds of medicines. Fort Worth residents turned in 1,073 pounds of medicine during the most recent collection event (April 24, 2021).

Residents who don't want to wait for the next national collection event can use any of the 12 year-round collection sites located around Fort Worth.

To find a location near you visit www.meddropbox.org.

What can I bring to a medication drop box?

NOT ACCEPTED

- Oxygen tanks and nebulizers
- Needles
- Thermometers
- IV bags & any other equipment or syringes used to administer medications

ACCEPTED (at most locations)

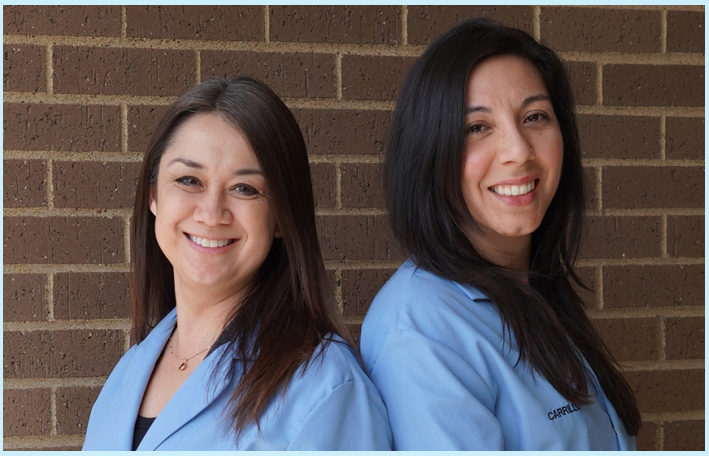
- All prescribed & over-the-counter medicines
- Veterinary medications
- Vitamins, minerals and samples

What Is This Report?

Fort Worth Water annually presents data to its residents on the quality of its drinking water with a Consumer Confidence Report. The Texas Commission on Environmental Quality requires this report. The report shows how Fort Worth continues to deliver high-quality drinking water. The report also addresses where Fort Worth gets its raw water and information on water quality.

If you have questions regarding this report, please contact us at 817-392-4477 or wpe@fortworthtexas.gov and we will get those answers for you.

Want to Know More About Water?



Fort Worth Water has employees who volunteer to talk at Career Day presentations as well as work events for the department, city and community. The H2O Heroes talk about a typical work day, education training requirements and what students need to focus on in studies to have a career with the water department.

If you are interested in a school or community group presentation, email: wpe@FortWorthTexas.gov

Contact Us

Water Customer Service

817-392-4477
7 a.m. — 7 p.m. Monday—Friday
24-Hour Emergencies select Option 1

Water Bill Payment Portal:
www.FortWorthTexas.gov/paywaterbill

Water Administration

Fort Worth City Hall
200 Texas Street, 2nd floor
Fort Worth, TX 76102
www.FortWorthTexas.gov/water
www.SaveFortWorthWater.org

The Water Department is part of the City of Fort Worth, Texas. Council meetings are open to the public and take place three times a month, on Tuesdays, in the council chambers at City Hall. See the City Calendar for meeting dates and times.
www.FortWorthTexas.gov/calendar/council

Other Resources

Environmental Protection Agency
www.epa.gov
Texas Commission on Environmental Quality
www.tceq.texas.gov
Texas Water Development Board
www.twdb.texas.gov
American Water Works Association
www.awwa.org
Drink Tap
www.drinktap.org

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