A close-up photograph of water being poured from a glass pitcher into a clear glass. The water is captured in mid-pour, creating a dynamic splash and ripples. The background is a warm, textured wooden surface. The overall color palette is dominated by the clear blue of the water and the warm browns of the wood.

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018

Presented By
Littlefield MWS



Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.



Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the Source Water Assessment Plan, our water system had a susceptibility rating of medium. If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular office hours.



Important Health Information

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.



Where Does My Water Come From?

The City of Littlefield water is pumped by wells from the Ogallala Aquifer. The City of Littlefield's water source, which is located 12 miles north of Littlefield, consists of 7,360 acres of water rights. The maximum production from the well field with the current eight wells is approximately 4 million gallons per day. Under a contract with the City of Lubbock, the City of Littlefield is able to receive emergency water from the Bailey County well field if disruption of Littlefield's main water supply occurs. Lubbock's Bailey County well field also pumps water from the Ogallala Aquifer.

Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means that only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on the taste, odor, or color of drinking water, please contact our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

We remain vigilant in delivering the best-quality drinking water

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Kevin Skinner, Director of Utilities, at (806) 385-9202.

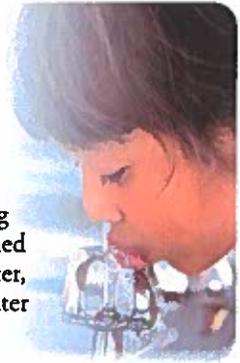


Community Participation

You are invited to participate in our city council meetings about your drinking water. We meet on the fourth Tuesday of each month at 6:00 p.m.

Lead in Home Plumbing

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. This water supply is responsible for providing high-quality drinking water, but we 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 flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.



Water Loss Audit

In the water loss audit submitted to the Texas Water Development Board during the year covered by this report, our system lost an estimated 52,602,850 gallons of water. If you have any questions about the water loss audit, please call the Department of Utilities at (806) 385-9202.

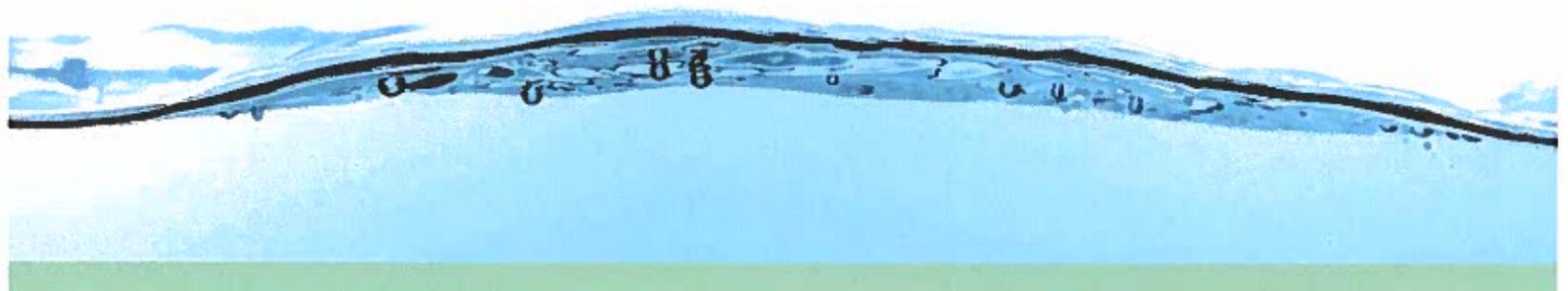
Water Conservation Tips

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Emergency/Supplemental Water Sources

In 2018, the City of Littlefield used 1,346 (Kgal) of water for a period of 2 days from the City of Lubbock's Bailey County well field for emergency use while the City of Littlefield's main water supply line was undergoing repairs. If you would like water quality information for the City of Lubbock, contact Kevin Skinner at (806) 385-9202.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2018. Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

The percentage of Total Organic Carbon (TOC) removal was measured each month, and the system met all TOC removal requirements set.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL (MRDL)	MCLG (MRDLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2016	15	0	2	2-2	No	Erosion of natural deposits
Arsenic (ppb)	2018	10	0	3.9	3.9-3.9	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2018	2	2	0.097	0.097-0.097	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters' (pCi/L)	2016	50	0	5.7	5.7-5.7	No	Decay of natural and man-made deposits
Chlorine' (ppm)	2018	[4]	[4]	0.96	0.40-1.64	No	Water additive used to control microbes
Chromium (ppb)	2018	100	100	1.7	1.7-1.7	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	2017	4	4	2.1	2.1-2.1	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]' (ppb)	2018	60	NA	4	3.9-4	No	By-product of drinking water disinfection
Nitrate (ppm)	2018	10	10	4	3.63-4	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]' (ppb)	2018	80	NA	6	6-6.39	No	By-product of drinking water disinfection
Uranium (ppb)	2016	30	0	5.2	5.2-5.2	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	1.3	0.157	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2017	15	0	0	0/20	No	Lead services lines; Corrosion of household plumbing systems including fittings and fixtures; Erosion of natural deposits

¹ The MCL for beta particles is 4 mrem/year. The U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

² The value in the Amount Detected column is the average of all samples collected over a year.

³ The value in the Amount Detected column is the highest average of HAA5 sample results collected at a location over a year.

⁴ The value in the Amount Detected column is the highest average of all TTHMs sample results collected at a location over a year.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

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.

NA: Not applicable

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).