

ANNUAL WATER QUALITY REPORT

Reporting Year 2021

Presented By
City of Beaumont Water
Utilities Department



Este reporte incluye información importante sobre el agua para tomar.
Para asistencia en español, favor de llamar al teléfono (409) 866-0026.

PWS ID#: TX1230001

We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Surface Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to an aeration tank, which allows for oxidation of the high iron levels that are present in the water. The water then goes to a mixing tank, where polyaluminum chloride and soda ash are added. The addition of these substances causes small particles (called floc) to adhere to one another, making them heavy enough to settle into a basin, from which sediment is removed. Chlorine is then added for disinfection. At this point, the water is filtered through layers of fine coal and silicate sand to remove suspended particles and turbidity, allowing clear water to emerge.

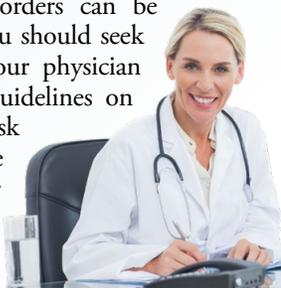
Chlorine is added to inactivate any harmful bacteria that may be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, ammonia, fluoride, and phosphate are added before the water is pumped to the distribution system.

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 2,451,382,757 gallons of water. If you have any questions about the water loss audit, please call Mr. John Pippins at (409) 785-4702.

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.



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 water 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 supplies' susceptibility to contamination by the identified potential sources.

“

When the well is dry, we know the worth of water.

—Benjamin Franklin

”

The results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this annual report. Anyone wishing to review the SWAP report may call (409) 866-0026 or (409) 880-3785.

Public Meetings

The Water Utilities Department is part of the city government and follows not only federal and state regulations but also ordinances established by the city council. The city council normally meets each Tuesday at City Hall, 801 Main Street, Beaumont, at 1:30 p.m. You are invited to participate in our public forum and voice your concerns about our drinking water. You may also contact the council members at (409) 880-3770.

QUESTIONS? For questions about the information in this report, please contact Mr. Troy Pierce, Water Production Superintendent, at (409) 730-4414.

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, which 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 which 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 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.



Where Does My Water Come From?

The City of Beaumont has two sources of water: well water pumped from the Chicot Aquifer at three different well sites located in Hardin County and surface water from the Neches River. Well water is chloraminated before it is pumped to the city. Surface water receives a more complex treatment, including filtration and chloramination. The City of Beaumont inspects and analyzes both sources of water daily to insure compliance with all federal and state requirements. The water plant is operated 24 hours a day, seven days a week to give you the best quality water possible.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. Sometimes the city has water line breaks. When they occur, the color comes from iron and mineral deposits inside the pipe that have become dislodged. After the water line is repaired, the water will clear, and you may run your faucet to clear the discolored water in your home's pipes. To report a water line break or discolored water, please call 311.

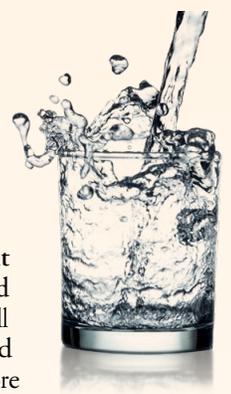


Table Talk

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.



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 two 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 epa.gov/safewater/lead.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). 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 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
Barium (ppm)	2021	2	2	0.04	0.04–0.04	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2021	[4]	[4]	3.04	0.80–4.12	No	Water additive used to control microbes
Cyanide (ppb)	2021	200	200	120	120–120	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	21	ND–25.7	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	0.3	0.09–0.3	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2021	1	1	0.22	0.22–0.22	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria (positive samples)	2021	TT	NA	5	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2021	80	NA	35	19.4–44.1	No	By-product of drinking water disinfection
Turbidity ¹ (NTU)	2021	TT	NA	0.90	0.03–0.90	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2021	TT = 95% of samples meet the limit	NA	96	NA	No	Soil runoff

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)	2021	1.3	1.3	0.099	0/47	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2021	15	0	3.5	0/47	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2021	200	NA	210	210–210	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2021	300	NA	15	NA	No	Runoff/leaching from natural deposits
Iron (ppb)	2021	300	NA	10	NA	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2021	50	NA	40	NA	No	Leaching from natural deposits
Sulfate (ppm)	2021	300	NA	65	NA	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES ²

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2021	8.72	6.9–11.3	By-product of drinking water disinfection
Chloroform (ppb)	2021	20.85	8.6–31.1	By-product of drinking water disinfection

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 which, if exceeded, triggers treatment or other requirements which 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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

SCL (Secondary Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

¹Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

²Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.



BY THE NUMBERS

The number of Americans who receive water from a public water system.

300
MILLION

1
MILLION

The number of miles of drinking water distribution mains in the U.S.

The number of gallons of water produced daily by public water systems in the U.S.

34
BILLION

135
BILLION

The amount of money spent annually on maintaining the public water infrastructure in the U.S.

The number of active public water systems in the U.S.

151
THOUSAND

199
THOUSAND

The number of highly trained and licensed water professionals serving in the U.S.

The age in years of the world's oldest water, found in a mine at a depth of nearly two miles.

2
BILLION