

ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By
The City of Baytown



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.

Source Water Description

Our drinking water is obtained from SURFACE water sources. The raw water provided to the City of Baytown comes from the Baytown Area Water Authority by way of the Coastal Water Authority Canal. The Texas Commission on Environmental Quality (TCEQ) completed an assessment of our source water (Trinity River), and 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 detection of these contaminants will be found in this report. For more information on source water assessments and protection efforts at our system, please contact us during usual business hours.

If you have any questions about this report or concerning your water utility, please contact the Baytown Area Water Authority by calling (281) 420-5310 or writing to 7425 Thompson Rd, Baytown, TX 77521.

Community Participation

We want our valued customers to be informed about your water utility. You can attend a scheduled Public meeting on Wednesday July 20, 2022, at 4:00 PM, in the Baytown City Hall Council Chambers, 2401 Market St. For more information, please call (281) 420-5310.

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 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.

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

—Benjamin Franklin

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 business hours.

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.



QUESTIONS? For any drinking water questions or more information about this report, please call LaTanya Henderson, Field Supervisor, at (281) 420-5310.

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 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 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.

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing of them responsibly. To find a convenient drop-off location near you, please visit <https://bit.ly/3IeRyXy>.



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 667,736,472 gallons of water. If you have any questions about the water loss audit, please call Tim Lancon at (281) 420-5317.

Level 1 Assessment Update

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year, we were required to conduct one Level 1 assessment, which was completed. In addition, we were required to take two corrective actions, and we completed both of these actions.

Treatment Train Description

The Baytown Area Water Authority treats your water using conventional coagulation, sedimentation, disinfection, and filtration to remove or reduce possible harmful contaminants that may be in the source water. Ferric Chloride and a coagulant aid, Cationic Polymer, achieve coagulation. The treated water is then filtered through anthracite coal, sand, and gravel. Disinfection is achieved by the addition of ammonia and chlorine, which form monochloramines.

Additional Information

1. Source water name: City of Baytown
Wells:
 - Park St. Well (1208 Park, Baytown, TX 77520)
 - Decker Well (5801 Decker, Baytown, TX 77520)
 - Red Bud Well (99 Caldwell, Baytown, TX 77520)
 - James Street Well (607 East James Street, Baytown, TX 77520)
2. Length of time used: 36 hours
3. Wells were put in service due to a Winter Storm in February 2021.
4. Contact: Tim Lancon, (281) 420-5317.

About Our Violations

Type of Violation: Chlorite Chemical Monitoring

Time Period of Violation: September 2021

The BAYTOWN AREA WATER AUTHORITY water system has violated the monitoring/reporting requirements set by the TCEQ in Chapter 30, Section 290, Subchapter F. Public water systems are required to collect and submit chemical samples of water provided to their customers and report the results of those samples to the TCEQ on a regular basis.

We failed to monitor and/or report the following constituents: Chlorite

We are taking the following actions to address this issue:

The U.S. Environmental Protection Agency (U.S. EPA) has established the MCL for chlorite to be 1.0 milligrams per liter (mg/L) based on the average of a three-sample set, and has determined that it is a health concern at levels above the MCL. We are currently following the requirements of our Sample Site Plant based on TCEQ guidelines for collecting and testing of Chlorite.

Type of Violation: Chlorine Monitoring, Routine (DBP), Major

Time Period of Violation: July 1, 2021 - September 30, 2021

The City of Baytown water system has violated the monitoring/reporting requirements set by Texas Commission on Environmental Quality (TCEQ) in Title 30, Texas Administrative Code (30 TAC), Section 290, Subchapter F. Public water systems are required to properly disinfect water before distribution, maintain acceptable disinfection residuals within the distribution system, and report the results of that monitoring to the TCEQ on a quarterly basis.

We failed to submit our Disinfection Quarterly Operating Report for the period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

We are taking the following actions to address this issue:

The City of Baytown failed to submit the third quarter Disinfectant Level Quarterly Operating Report (DLQOR) to TCEQ as required by December 10, 2021. This reporting violation occurred during a transitional period (Q3 of 2021) relative to positions responsible for submission of the reporting required. We are currently following the requirements of our sample site plan based on TCEQ guidelines to ensure that our DLQOR reports are completed and submitted on time.

Type of Violation: Lead and Copper Initial or Routine Tap Sampling

Time Period of Violation: June 1, 2021 - September 30, 2021

The City of Baytown has violated the monitoring and reporting requirements set by TCEQ in Chapter 30, Section 290, Subchapter F. Even though these were not emergencies, as our customer, you have the right to know what happened and what we are doing (or did) to correct the situations.

We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

We are taking the following actions to address this issue:

The City has worked with TCEQ to reschedule the required sampling. Samples will be collected between June 1, 2022, through September 30, 2022.

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.

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 have been found in our water system.

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

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.

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).

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



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only 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 often than once per year because the concentrations of the 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
Atrazine (ppb)	2021	3	3	0.20	0.20–0.20	No	Runoff from herbicide used on row crops
Barium (ppm)	2021	2	2	0.0451	0.0451–0.0451	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters ¹ (pCi/L)	2021	50	0	6.8	5.6–6.8	No	Decay of natural and man-made deposits
Chloramines (ppm)	2021	[4]	[4]	4.0–0.90	0.90–4.0	No	Water additive used to control microbes
Combined Radium (pCi/L)	2021	5	0	1.5	1.5–1.5	No	Erosion of natural deposits
Cyanide (ppb)	2021	200	200	180–180	180–180	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	2021	4	4	0.75	0.75–0.75	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	26.59–37.0	26.59–37.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	0.54–0.54	0.54–0.54	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Simazine (ppb)	2021	4	4	< detection limit	< detection limit	No	Herbicide runoff
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2021	80	NA	32.3–61.7	32.3–61.7	No	By-product of drinking water disinfection
Total Coliform Bacteria ² (Positive samples)	2021	TT	NA	2	NA	No	Naturally present in the environment
Total Organic Carbon (ppm)	2021	TT	NA	4.92–6.89	4.92–6.89	No	Naturally present in the environment
Turbidity ³ (NTU)	2021	TT	NA	0.55	0.03–0.55	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)	2018	1.3	1.3	0.48	0/60	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2018	15	0	2.7	1/60	No	Lead services lines; Corrosion of household plumbing systems including fittings and fixtures; Erosion of natural deposits

¹The 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.

²A Level 1 Assessment was conducted.

³Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of disinfectants.